



**Pandit Deendayal Energy University**  
**SPE Student Chapter**

## **About SPE PDEU Student Chapter:**

SPE PDEU Student Chapter focuses on strengthening each associate's technical as well as applied knowledge about the industry and bridging the academia-industry gap by conducting enthralling events throughout the year such as distinguished guest lectures, SPE Weeks, captivating Workshops along with abundance of contests including the grand extravaganza PDEU SPE Fest! The chapter serves as a podium to petroleum enthusiasts for enhancing their skills and understandings about the oil and gas industry.

### **Mission:**

To enhance technical prowess in oil and gas industry and imbibe professionalism through various conclaves, conferences and other chapter activities.

### **Goal:**

Building a vibrant and dynamic student community of future leaders in Oil and Gas industry and fostering knowledge and wisdom to wield the sword of energy in prudent manner.

Empowering the future of the oil and gas industry

Oil & Gas Industry

# Annual Ceremony 2020

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**Chapter Name** : *SPE PDEU STUDENT CHAPTER*

**Chapter Code** : *6035*

**Platform** : *Microsoft Teams*

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SPE PDEU Student Chapter has always been a great platform to all the emerging Oil & Gas industrial professionals. SPE PDEU always believes in providing professional and personal development by conducting numerous event throughout the academic year. The Chapter organized Annual Ceremony wherein the office bearers handover their positions to the next batch members.

The ceremony was graced by the presence of numerous Oil and Gas professionals from the industry including the members of SPE India Section. Dr. R.K Vij, Director, School of Petroleum Technology, PDEU, Dr. Jatin Agarwal, Faculty Mentor and Dr. Bhawanisingh Desai, Faculty Advisor and all the faculties graced the ceremony with their presence.

Dr. Vij shared his experiences by remembering his past decades spent in the petroleum industry and motivated everyone by his speech. Later, Dr. Jatin and Dr. Bhawanisingh Desai also shared their words of wisdom and encouraged us by delivering a stimulating speech. The existing Office bearers shared their working experiences in the student chapter.

The ceremony concluded with the declaration of the new office bearers, pledged their oath to bring out the best from them and work with utmost dedication to make the chapter reach to the pinnacle of success.



Pandit Dadasaheb Phalke University  
SPE Student Chapter

# Core Committee 2020-21

**NEW  
YEAR**



**Yogini Lakhani**  
President

**NEW  
GOALS**



**Het Patel**  
Vice-President



**Jhanvi Desai**  
Treasurer



**Krupal Patel**  
Vice-President



**Rounak Jalali**  
Secretary



**Parth Patel**  
Treasurer



**Harsh Patel**  
Secretary



**Anish Singhi**  
Membership Chairperson



**Harsh Shah**  
Program Chairperson



**Jenisgiri Goswami**  
Membership Chairperson



**Kavya Patel**  
Communication Chairperson



**Hirensh Vaghela**  
Social Activities Chairperson



**Harjot Singh**  
Communication Chairperson

Core Committee 2020-21

# Quiz-O-Quarantine

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**Chapter Name** : *SPE PDEU STUDENT CHAPTER*

**Chapter Code** : 6035

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To make the quarantine period fruitful for SPE International's affiliates across the world, SPE PDEU Student Chapter organized Quiz-o-Quarantine: Online Quiz competition. The event was live for 36 hours from 7th April 2020, 12:01 AM to 8th April 2020, 11:59 AM.

The enthralling quiz was divided into two portals: Petroleum and Petrochemical. The Petroleum portal consisted of questions from the upstream branch whereas the Petrochemical portal consisted of questions from the Downstream and Chemical branch. The quiz consisted of head-scratching and mind-boggling questions from the oil and gas industry which had to be answered in a stipulated amount of time. Some of the questions tested their analytical and problem-solving skills. The questions tested the partakers' knowledge quotient and their fundamental awareness of the industry.

The quiz saw huge participation from universities across India and the world. Universities from Russia, England, Bangladesh, Kazakhstan, Azerbaijan, Greece, Indonesia, Bolivia, Argentina Tanzania, Malaysia, and Nigeria participated in the quiz. Prominent universities from India too participated in the quiz. It was an enthralling competition through which the partakers acquired novel information and broadened their knowledge horizons.





He divided the lecture series briefly into two subtopics:

- 1.) The Hope, Hype, the Current Reality and the Challenges ahead; the Digital Transformation of Oil and Gas Industry.
- 2.) The Digital Oilfield moves to the Edge

He opened the lecture series by emphasizing on the fact that presently we are Data Rich with data coming in from Manufacturing, IT Systems and Process Historians but we are Information poor as we often tend to analyse data manually in spreadsheets. He then discussed the numerous myths and truths associated with the digital transformation of the industry.

Dr. Crompton discussed a case study of ConocoPhillips an oil and gas major, wherein they used Data Analytics approach while drilling. This approach yielded significant results as there was drastic reduction of 50% in drilling days and alongside yielded some unconventional advantages like low cost experimentation, numerous operators and Abundant data to analyse.

He threw light on the challenges which are encountered while exploring shale plays. He concluded the first subtopic with a brief explanation on the Hope, Hype, current reality and Challenges of the digital Transformation.

He began the next subtopic with an explanation of Field Operations Network and First Mile Connectivity. He further delved deep into the subject matter and discussed IoT in the Oil Field and Edge Computer Architecture which includes cloud storages, IoT and the edge.

Dr. Jim also discussed OT/IT Convergence Maturity, Field Instrumentation and Well Head Measurements along with Onshore Pipeline SCADA environment.

As the lecture series came to an end, he listed and discussed 5 primary concerns of Industrial AI and why they would not be completely applicable in the very near future.

The Chapter is extremely thankful to Dr. Jim Crompton for enlightening us with his knowledge about the Digital Transformation of Oil and Gas Industry. We sincerely appreciate the time and patience he has taken to record the video lectures. We sincerely thank him for making our lockdown period fruitful.

# Petrobowl: University Qualifiers

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**Chapter Name** : *SPE PDEU STUDENT CHAPTER*

**Chapter Code** : 6035

**Date** : 11<sup>th</sup> May, 2020

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PetroBowl is an annual quiz competition organized by SPE International which puts teams from SPE Student Chapter from across the world against each other in a series of quick-fire rounds, answering technical and nontechnical industry-related questions. Since its inception in 2002, the contest has increased in size and popularity, and in 2015, it went global with the addition of six regional qualifier contests.

SPE PDEU student chapter organized the university qualifiers in the online format for the first time owing to the restrictions put in place due to the pandemic. The results from this round were used to shortlist the talented minds at Pandit Deendayal Energy University who would then represent the University at the Regional Qualifiers of Asia Pacific region held online on 29 and 30th of May 2020 by University of Petroleum and Energy Studies, Dehradun.

The registered students were sent questionnaire for the qualifier round through e-mail. The students had to revert back the answer sheet within a stipulated time. The students who scored the maximum points along with the lowest reply time were selected as the finalists.

The students who got selected for representing university in the regional qualifiers were:

- 1.Parag Bhoraniya
- 2.Smit Prajapati
- 3.Yashpalsinh Dayma
- 4.Pranav Hajariwala



## 5. Ayush Kumar Patel

Team PDEU consisting of these bright minds battled alongside 32 other universities to qualify as the finalists of the Asia Pacific Region. Despite putting up a relentless show, they fell short of a few points and crashed out of the competition.



## Stop the Spread: SPE Fights against COVID-19

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

**Chapter Code** : 6035

**Date** : 28<sup>th</sup> May, 2020

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The world has witnessed the chaos created by the mighty coronavirus. While most of us have been advised to stay at home and adhere to social distancing norms, frontline workers have been quietly assisting the country in its recovery and leading the fight against COVID-19 from the front lines. Initially, we have also observed the lack of awareness in public for corona virus' precautions and social distancing norms.

To spread awareness among the students of our university, the Chapter organized an awareness drive on an online platform owing to the protocols put in place by the authorities. The Office Bearers of the Chapter hosted the drive wherein they discussed about the protocols put in place and also explained the importance of them being placed.

We are also grateful to our COVID Warriors for being our nation's guiding light in the face of this adversity. The committee members were showing gratitude towards the medical staff, police officers as well as every other person working selflessly for society during that difficult times. By this, we requested the students to avoid unnecessary travelling and follow social distancing norms. We also requested them to ensure that their acquaintances follow the recommended precautions.



## Guest Lecture on “Post COVID-19 Career Activities in Oil and Gas Sector”

*“Productivity is never an accident. It is always the result of commitment to excellence, intelligent planning and focused effort.”*

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

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**Chapter Code** : 6035

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**Date** : 3 June, 2020

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**Time** : 3:30 PM – 5:30 PM

**Platform** : Zoom

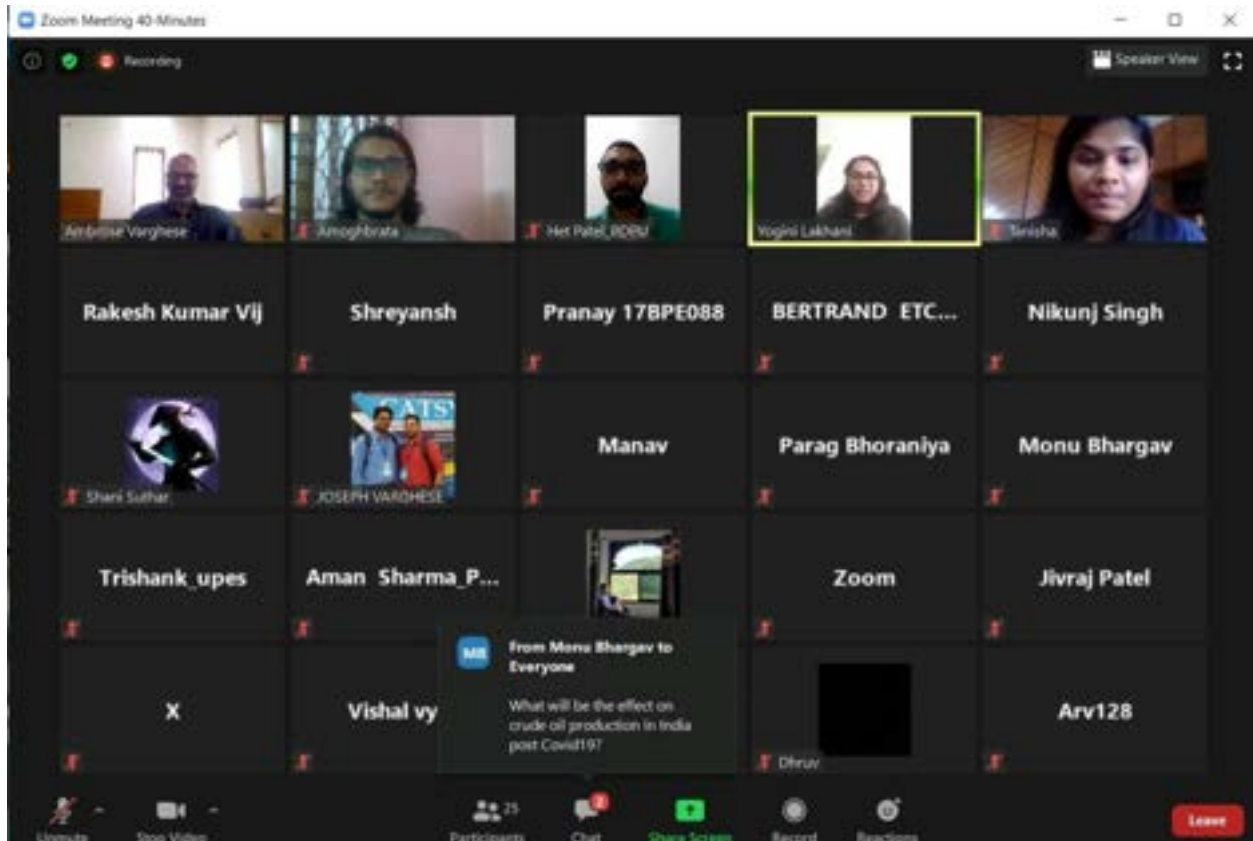
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SPE PDEU Student Chapter always aimed to make its affiliates updated to the current scenario of the world and hence, organized a guest lecture on “Post COVID-19 Career Activities in Oil and Gas Sector”.

All the senior faculties of different universities along with Dr. RK Vij, Director, School of Petroleum Technology, PDEU were invited. The chief guest and speaker for the event was Mr. Joy Varghese, Managing Director, RigTech Oilfield Training Center. The fruitful event was initiated by a brief speech on the challenges and achievements sweet-faced by the oil and gas industry due the COVID-19 pandemic.

On completion of this chief guest was cordially invited to share few words relating to their experiences and their view concerning the ongoing fatality. The event was more focused towards question answer type for active interaction between the participants. Every discussion happened was engaged with the fact of future scope of budding petroleum engineers and the adverse effect to the job market in the industry due to the pandemic.

Later, Mr. Varghese also discussed about what all fields can everyone prefer to get into the petroleum industry. Around 100 students from different universities all over actively participated in the event and cleared their doubts. On completion of this our faculty mentors Dr. Bhawanisingh Desai and Dr. Jatin Agrawal delivered vote of thanks for the event.



## Guest Lecture on “Impact of COVID-19 on Oil and Gas Industry: Indian Scenario” by Dr. R.K. Vij

*“It is better to fail in originality than to fail in success.”*

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 27 <sup>th</sup> June, 2020
<b>Time</b>	: 11:00 AM onwards
<b>Venue</b>	: Google Meet

SPE PDEU Student chapter was delighted to host an online webinar on the topic “Impact of Covid-19 on Oil & Gas Industry: Indian Scenario”. This webinar was hosted by honorable director of School of Petroleum Technology PDEU, Dr. R.K. Vij. He has 20+ years of experience in Oil & Gas industry and has published numerous research papers.

This webinar witnessed zealous participation from number of universities across the world. It covered all the important aspects of the oil & gas industry which included technical aspects like starting from the work station to the marketing of the oil & gas.

Dr. Vij put discussed the Covid-19 situation prevailing in different countries, its effect on the economies. He also mentioned how governments have been facing numerous problems to manage their respective states. He further discussed how the oil and gas industry had seen an extremely volatile phase with the oil prices plummeting to an all-time low.

In this session he had mainly focused on Indian scenario of the oil & gas industry and meticulously pointed out each and every aspect in all the sections. He also discussed about the spending plans of IOC's (International Oil Companies) and NOC's (National Oil Companies) on producing the oil & gas due to the pandemic. He had also explained about the capital expenditures (CAPEX), Storage crisis and global oil storages being filled to the brim.

This session had been very interactive and the webinar was ended by an Q&A session with very interactive question which was very beneficial for the students as well the industrial experts.





*Dr. Vij elucidating on the storage crisis*

## Guest Lecture on “Subsurface Data Management” by Ms. Sushma Bhan

*“Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.”*

**Chapter Name** : SPE PDEU STUDENT CHAPTER

**Chapter Code** : 6035

**Date** : 4th July 2020

**Time** : 09 : 00 AM

**Platform** : Microsoft Teams

SPE PDEU Student Chapter organized a webinar on “Subsurface Data Management” which was delivered by Ms. Sushma K. Bhan, Chief Data Officer, Shell Informational Technologies, Houston. As a Principal Technical Expert of data, she is accountable for Reservoir Engineering, Well Engineering and Production Technology global data standards, their implementation across assets and people development.

Ms. Bhan shared her insights on enabling the journey of digitalisation in the upstream by the means of data. She discussed the strategic objectives such as establishing digital governance, implementation of effective data governance, improving data literacy and digital mastery to supplement the same.

She then continued to talk about the importance of subsurface data management in enabling upstream sector's value generation and how businesses have an increased demand for data democratization and multidisciplinary data integration. She also put forward the advantages achieved by having reliable trusted data along with faster and efficient scalable solutions. Proper management and interpretation of the data generated during hydrocarbon exploration and development operations assists us in the efficient extraction of hydrocarbons.

Alongside this she also threw light on the fundamental global challenges that this poses such as difficulty in accessing technical data and lack of robust global discipline data ownership, particularly of multidisciplinary data.

The session along with being informative was also interactive. Ms. Bhan addressed students' questions and cleared their doubts regarding the standardized data management steps, its impacts and the challenges faced due to it.

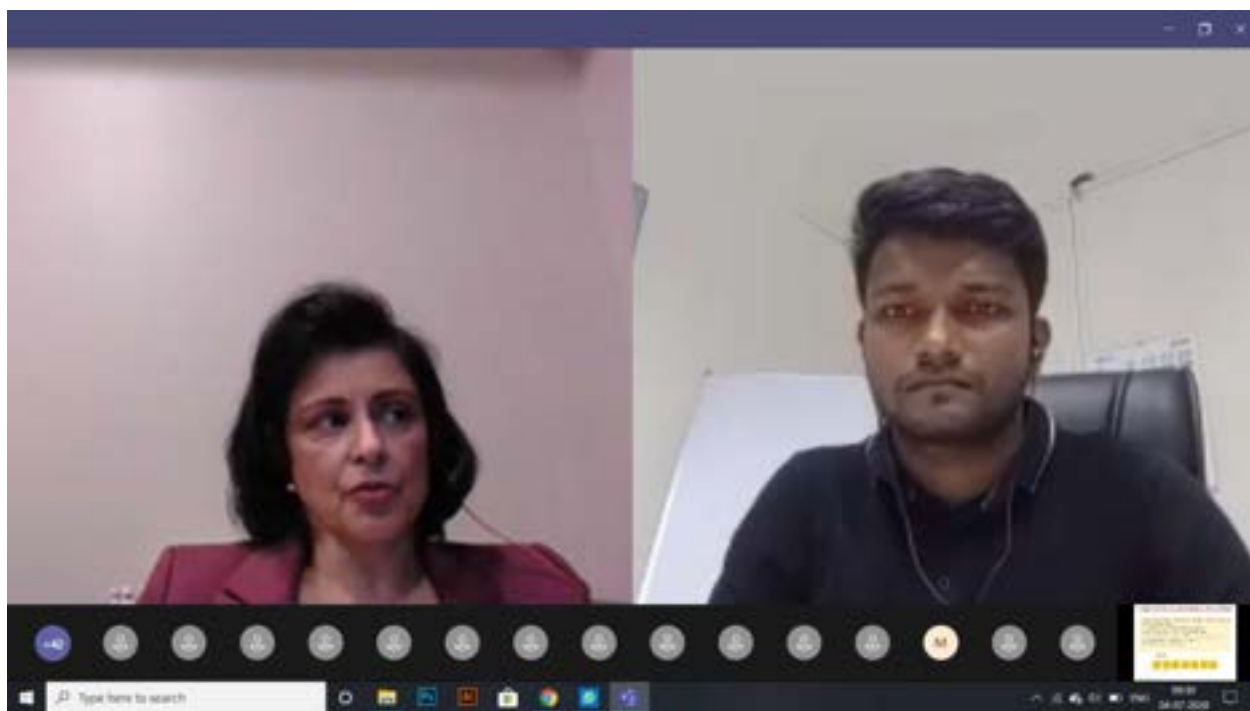
The primary purpose of this session was to utilize the students' time in a benefiting way during their time at home and provide students with extensive knowledge.



Global Challenges in managing Technical Data



Ms. Sushma Bhan and Mr. Aniket Sanyal interacting with the attendees



Ms. Sushma Bhan and Mr. Harsh Sahni addressing the students' queries

## SPE Week 15.0

*"Most people miss opportunities because it is dressed in overalls and looks like work."*

### Day 1 – Masquerade: Online Mask Designing Event

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

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**Chapter Code** : 6035

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**Date** : 19<sup>th</sup> July 2020 to 24<sup>th</sup> July 2020

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Amidst the ongoing pandemic, there has been a radical change in our lifestyle. Wearing masks has become the new normal. SPE PDEU organized Masquerade: Mask Making Initiative as a part of SPE Week 15.0, to hone the creative caliber of the participants and provide a rostrum to showcase their creativity.

The event aimed at raising awareness about the importance of wearing masks and their uses. The event witnessed zealous participation from various national and international universities. Both handmade and graphic based

designs were accepted. The parameters to judge the masks designed by the students were creativity and clarity of the design. The winning entries were published on our social media handles.



*Mask designed by the participant*

## **Day 2 – EnhanCV: Workshop on Anatomy of a CV**

<b>Chapter Name</b>	<b>:</b>	<i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	<b>:</b>	<i>6035</i>
<b>Date</b>	<b>:</b>	<i>21<sup>st</sup> July, 2020</i>
<b>Time</b>	<b>:</b>	<i>5 PM Onwards</i>
<b>Platform</b>	<b>:</b>	<i>Microsoft Teams</i>

As a part of the SPE WEEK 15.0 | HR SUMMIT, SPE PDEU Student Chapter organised "EnhanCV: Workshop on Anatomy of a CV", an acquainting session given by Dr Harmik Vaishnav, Associate Professor at School of Liberal Studies, PDEU. The target of the webinar was to bring out the frequent mistakes done by the students while drafting their CV and to enlighten them with some fundamental points which could actually help their CV look attractive.

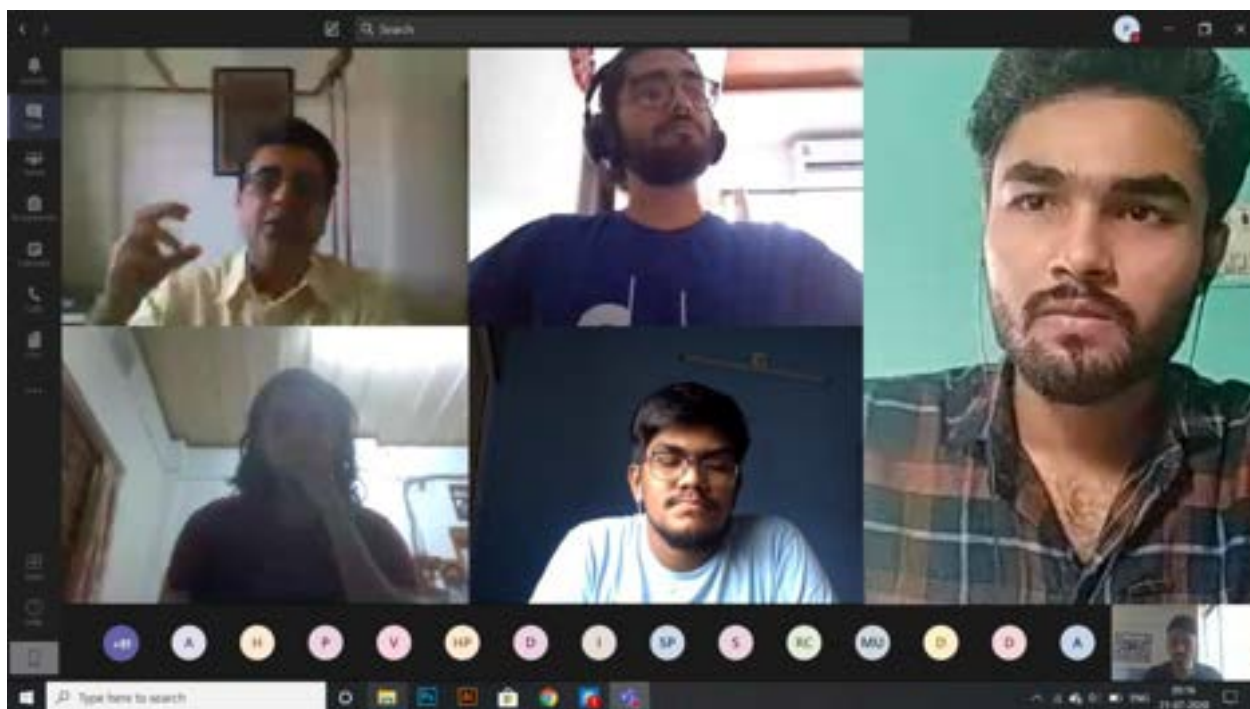


A few of these insights were "to elaborate on your education, co-curricular activities, internships, to highlight your strengths, achievements, USP". Dr Harmik Vaishnav emphasized on the advantage of a better CV. He said that your CV goes before you, it represents the candidate and asked the students to keep their CV short and to the point. He also gave some valuable insights on HR questions. The webinar was followed by an interesting question & answer session wherein he firmly quoted "CV is the raw material for questions in the interview".

It was an informative and an interactive session which focused on the ordinary mistakes made by the aspirants while drafting their CV followed by tips to make a CV look decent, and why it is crucial in the professional life of an individual.



*Chapter Officer delivering the opening note*



*Dr. Harmik interacting with the students*

### **Day 3 – Inquisite 3.0: The Aptitude Test**

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**Chapter Name** : *SPE PDEU STUDENT CHAPTER*

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**Chapter Code** : *6035*

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**Date** : *22<sup>nd</sup> July, 2020*

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**Time** : *4 PM to 6 PM*

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**Platform** : *Myswots.com*

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SPE PDEU Student Chapter feels extremely delightful to announce that SPE Week 15.0 | HR Summit had witnessed a tremendous participation from various universities across the globe. The entire week was organized diligently where students were tested with their set of skills and got insights on different aspects of their upcoming future. On the third day of the week “Inquisite 3.0: The Aptitude Test”, the students were tested through head-scratching questions and puzzles.

Aptitude test is a systematic means of testing a student in his pace of solving problems. The test was held on MySwots.com and consisted of 30 questions which had a standardized method of administration and solving. This event tested the students' logical thinking and problem-solving skills in a schematic manner. With a huge number of participants, this event had been challenging and brought out the best from them.

Aptitude test helped them realize the importance of logical thinking and the speed in solving the questions, helped in enhancing the skills and prepare for the interviews effectively. The test left a remarkable impression on the students motivating them to crack different types of real-life problems in a feasible manner.

#### **Day 4 – Quizard 2.0: The Technical Test**

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>23<sup>d</sup> July, 2020</i>
<b>Time</b>	: <i>4 PM - 6 PM</i>
<b>Platform</b>	: <i>MySwots.com</i>

As a part of SPE Week 15.0 | HR Summit, the chapter organized 'Quizard 2.0' - The Technical Test in association with MySwots.com. This event was aimed to render a perfect podium to showcase the participants' prowess in technical knowledge and general aptitude related to oil and gas industry.

The head scratching quiz was consisted questions from all the nooks and corners of oil and gas industry. There were 30 questions in totality which had to be answered correctly in a stipulated time. The problems were a combination of theoretical and numerical based questions. The quiz tested the budding engineers' knowledge quotient and their fundamental awareness of the industry.

The event saw huge participation from the national as well as international universities. The winners were evaluated on the basis of time taken and marks obtained in the quiz. The quiz enabled the participants to acquire novel information and broaden their understanding as well as knowledge about the oil and gas industry.

## **Day 5 – Interview Etiquette: How to Behave in an Interview**

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>24<sup>th</sup> July, 2020</i>
<b>Time</b>	: <i>4 PM - 6 PM</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

Getting selected in a stressful interview doesn't come naturally to most. High-pressure meetings, with someone we don't know, asking questions we don't necessarily know the answer too, are bound to feel plenary eccentric. In such situation behavior and body language plays a consequential role in determining the result of the interview.

On that note as a part of SPE WEEK 15.0 | HR Summit SPE PDEU organized 'Interview Etiquette: How to Behave in an Interview' by Dr. Bhavini Upadhyay, Visiting Lecturer at MLW, Gujarat University. The Chapter was delighted to host such an experienced and cognizant person.

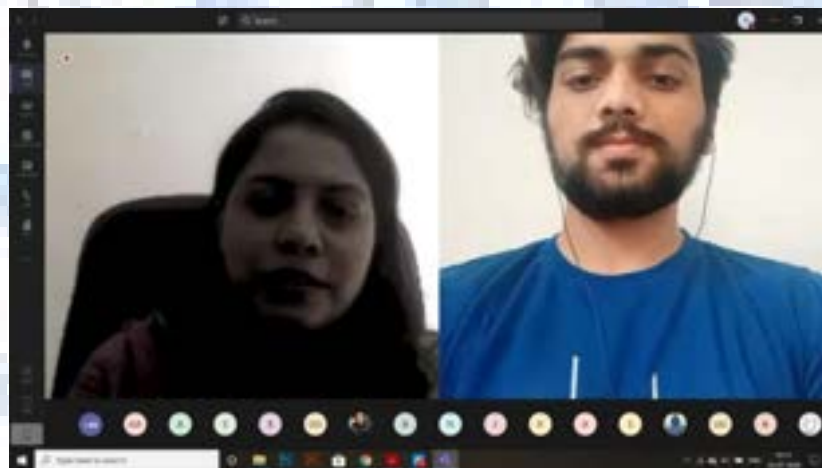
The lecture was concretely focused on how to behave in an interview, what should be the body language, posture, and how to remain calm in stressful situations.

Dr. Bhavini Upadhyay commenced the lecture with a short briefing session on CV, how to write it, and keep it up to date. Then she briefly explained rudimental etiquettes and mistakes that candidates often commit. In the concluding note, she discussed further situations that one might get into and also deliberated about how to deal with it.

After her presentation got over, she elucidated the queries of the attendees. The session was immensely informative and interactive.



*Slide from the presentation*



*Dr. Bhavini interacting with the attendees.*

## **Day 6 – Interviewopolis: The Mock Personal Interview Event**

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 25 <sup>th</sup> July, 2020
<b>Time</b>	: 10:30 AM Onwards
<b>Platform</b>	: Microsoft Teams



SPE PDEU Student Chapter organized Interviewopolis: The Mock Personal Interview session as a part of SPE Week 15.0 | HR Summit. The session was a simulation of personal interview, held online on Microsoft Teams.

Interviewopolis was the final and most significant event of the week. The students selected for this round not only proved their abilities in the technical quiz and aptitude-based quiz but also actively participated in all the events during the week.

The session was divided amongst 5 panels consisting of highly qualified industrialists who interviewed and judged the students.

The panelists for the event were as follows:

#### Panel 1

Mr. Gautam Tibrewal	SPE India Section, WSS
Mr. Aniket Sanyal	Global Drilling Automation Specialist- iCruise & LOGIX, Halliburton

#### Panel 2

Mr. Kaushal Agarwala	Superintending Engineer (Production), ONGC
Mr. Sultan Alimuddin	Project Engineer at M-I Swaco, Schlumberger

#### Panel 3

Mr. Asish Thaplyal	Secretary, SPE India Section (WSS)
Mr. Chintan Chadiya	Mud Engineer at M-I SWACO, Schlumberger

#### Panel 4

Mr. Peyush Nene	Chief Manager (Finance & Accounts), ONGC
Mr. Swapnil Satyam	Senior Engineer Deepwater Drilling operations (HPHT) and planning, RIL

#### Panel 5

Mr. Pragyan Sharma	Executive Engineer (Production), ONGC
Mr. Ankit Pandey	Assistant Category Manager, Croma (A Tata Enterprise)

The primary purpose of this session was to utilize the students' time in a benefiting way during the lockdown and provide them with extensive knowledge and an opportunity for personal development from the comfort of their homes. The session was highly interactive and instructive.

The chapter is thankful to all the aforementioned panelists for their noteworthy support and enlightening the students with their knowledge.



*Panelists interviewing the participant*

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# PerSPEctive: “Digitalization in Oil and Gas”

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>6<sup>th</sup> September, 2020</i>
<b>Time</b>	: <i>3:00pm to 4:30pm</i>
<b>Platform</b>	: <i>Microsoft Teams / Youtube</i>

SPE PDEU Student Chapter in its effort to connect industry with academia came up with a neoteric event “PerSPEctive”. Perspective is an online podcast event organized to connect students with industry professionals and clear doubts of students before they finally step into the industry.

Our first speaker was Mr. Saeed Al Mubarak, Chairman of SPE DETS Section. He was currently working at Saudi Aramco and had served the petroleum industry for more than 30 years with a greater contribution in the area of Intelligent Energy. The topic for the podcast was “Digitalization in Oil and Gas Industry”, held on 6th September 2020 which was streamed live through our YouTube channel. Several questions were submitted by students and professionals around the world and most of them were answered during the podcast.

A few questions asked during the podcast are mentioned below:

## **1.) What is the role of Digitalization in the Energy sector?**

He described digitalization as not only employing technologies, but knowing the company and the structure of the company, knowing the processes within the company, and how we can use the best technologies to improve the current situation or to resolve major challenges. He mentioned that improvement in the work of flow is an essential component of digitalization.

## **2.) Based on your extensive career in the oil and gas industry that is of more than 30 years, how has Digitalization paved its way into the exploration and production industry?**

Mr. Mubarak answered the question in steps. He said digitalization in the oil and gas industry majorly came with technology. With the increased use of computers and communication networks at all stages made it easier for the workers at all levels. He cited the example of production engineers who with the help of automation can easily keep a check on the well from the control rooms. This way the engineers could save time and save the plant from any unforeseen tragedy which couldn't be assessed through a physical check over the well. He also discussed how reservoir management was made easier with the use of technologies at all levels. Pressure changes within the reservoir during production operations, monitoring the health of the reservoirs could also be assessed remotely. He mentioned that digitization in the oil and gas industry started with basic software like Microsoft excel.

## **3.) Do you see AI and ML as capabilities to fully automate business operations in oil and gas, given regulatory compliance requirements?**

He said several engineering graduates have come up with new technologies with the help of machine learning to predict when there will be a breakdown or when will the machines require maintenance. He asked the upcoming engineers to read the work for their seniors, to get an idea of how a small basic software could make a huge difference in the everyday life of engineers working on the field. He gave an example of artificial lift optimization. In another example, he mentioned how machine learning and artificial intelligence could help us know where exactly the failures are. He said in reservoir management it depends on surveillance activities and how many pressure points are obtained in the subsurface or surface. And with the knowledge of well modelling we can recalculate subsurface pressures based on surface data and create isobaric maps due to which we won't be requiring subsurface equipment and can easily get information about how the field is performing and how the wells are performing against the strategy you are implementing. He concluded the answer by stating that different companies have different short-term



objectives and based on the objectives it requires engineers to come up with different ideas, approaches, and technologies.

**4.) We are on the 10th year of Macondo and are still seeing so many treacherous blow-out incidents including in the recent past, and we know that digital transformation actually can suitably prevent most risks including Blow Outs; is SPE planning to take this forward to implement a protocol for Industries across to mandatorily use digital interventions especially in brown-fields as well as inactive and new green fields?**

He pointed out that there have been many failures may be due to human error or technical errors. But what matters is if we have the right technology to bring out the errors or predict possible failures, then we could necessarily reduce the number of failures. Many of these technologies have sensors that will provide us some sort of indication about the failure that might happen. He also mentioned that companies usually install several sensors and once they all give their indication then artificial intelligence and machine learning could be brought into the picture to figure out what is going to come. He emphasized the point that the oil and gas industry is conservative and installing any such equipment requires lots of data. For the technology to be successful it just not only requires data but accuracy too.

**5.) Today, most businesses understand the need for digital transformation. What's the most important enabler for Digital Transformation?**

He answered the question in one word "you". He said it's the people who come up with different innovations even with the limited implementation of technologies. He gave an excellent example to prove his point. He asked us to assume we are making a modern well nodal analysis that could be done with the help of Python and PROSPER but it requires a whole lot of data and could take hours to get completed. Though people familiar with Microsoft Excel and some general visual software could do it in minutes and also raise objections to the data that needs verification from the engineers. That way you don't have to use any gauges and use the data available to you. In the end, he mentioned its people, workflows of

technologies then there might be some sort of changes in the organization that is management which allows these new approaches. He also mentioned that different people have different capabilities and thus they need to integrate their differences and work together.

### **6.) Are companies willing to invest in new technologies even during this time where in the cash flow is at a halt?**

He gave a detailed explanation along with supporting examples to the question. He emphasized that there are companies which are always looking for new technologies but, in the end, what matters is how much return does that new technology provide to the company. The development and implementation of new technology, poses risk due to high capital investment. He also said other factors involved apart from a capital investment like politics also affect the company's decision. He emphasized that the program needs to be assessed as per the need of the project.

### **7.) Will digitalization help pave a way for the oil and gas industry to sustain for more years or will this lead to a quick shift from oil and gas to the renewable sector?**

According to Mr. Mubarak digitalization will help pave a way for the industry to grow in the coming years because many international and national oil companies have invested in digitalization. He said if the large corporations are willing to invest in digitalization then there must be some value hidden. If the technologies are deployed, capitalized in their capabilities, used in their best way possible for whatever is the company's objective then it will increase the value of the company tremendously.

As the podcast saw its way to its culmination, Mr. Saeed concluded the insightful session with reiterating the benefits of being a member of SPE and how one can connect with industry experts who have seen the transformation of the oil and gas energy. He advised the students not to waste their time and expand their network on LinkedIn to discuss ideas with different experts around the globe.

In the end, he quoted, "Sometimes it's better to be silent to get to know what you desire, what you want to be. Everybody has an edge and has some sort of talent and definitely, it can explode but it needs patience, passion but more than patience and passion it requires effort."

The chapter is thankful to Mr. Saeed Al Mubarak for his significant support and enlightening the students with his paramount knowledge.



*Mr. Saeed Al Mubarak delivering his presentation*

# DIGITALIZATION IN O&G INDUSTRY



**PERSPECTIVE**  
Podcast by SPE PDPU



Florida International University  
SPE Student Chapter

*Mr. Anish Singhi, Membership Chairperson interviewing Mr. Saeed Al Mubarak*

# Oil-O-Nomics: Webinar on Impact of Exploration Activities on the Financial Statements of Oil and Gas Companies by Mr. Saket Modi

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>29<sup>th</sup> August, 2020</i>
<b>Time</b>	: <i>10 AM IST</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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The objective of oil and gas operation is to find, extract, refine, and sell oil and gas, refined products, and related products. The main objective of holding petroleum reserves is to generate future cash flows when they are extracted from oil and gas reservoirs and subsequently monetized. Exploration, development, and production often take place in joint ventures to share the substantial capital costs to ensure higher profits.

The Chapter was delighted to host Mr. Saket Modi, Founder and Director of London based Square Mile Global Consulting Company. He delivered a webinar on the “Impact of Exploration Activities on the Financial Activities of Oil and Gas Companies.”

He began the webinar with the explanation of fundamentals of financial statements including terms like Income Statement, Statement of Financial Position and Cash Flow Statements. He explained the various aspects of an oil and gas company’s balance sheet through the balance sheet of British Petroleum (Dated 30th June, 2020). Further he discussed about the various techniques used in creative accounting by stating the example of the Enron energy company.

He then continued to talk about the upstream activities which make a significant effect on the financial statements such as the development



expenditure, borrowing costs, depreciation of upstream assets and the production sharing contracts. The sector wide considerations included Royalties, leases, impairment of assets and decommissioning.

He concluded the webinar with a small note on the impact of Covid-19 on the global oil and gas industry. The session along with being informative was also interactive. Mr. Saket addressed students' questions and cleared their doubts regarding accruals and, it's impact on the financial health of the company. The webinar enabled the attendees to understand the financial implications which explorational activities have on the companies.

**BP PLC – GROUP INCOME STATEMENT (30 JUNE 2020)**

£ million	Second quarter 2020	First quarter 2020	Second quarter 2019	First half 2020	First half 2019
Sales and other operating revenues (Note 2)	21,878	20,000	22,078	41,878	42,077
Earnings from joint ventures – after interest and tax	(967)	(222)	138	(1046)	323
Earnings from associates – after interest and tax	(700)	(244)	408	(1046)	1,257
Interest and other income	107	140	270	247	433
Gains on sale of businesses and fixed assets	74	10	10	84	144
Total revenues and other income	21,392	19,584	22,904	40,737	44,234
Purchases	18,778	18,870	19,603	37,648	38,473
Production and manufacturing expenses	8,211	6,288	8,287	14,499	14,574
Production and similar taxes (Note 3)	628	212	271	840	786
Depreciation, depletion and amortisation (Note 7)	3,927	4,008	4,588	7,935	8,596
Impairment and losses on sale of businesses and fixed assets (Note 3)	11,778	1,188	308	12,966	1,202
Exploration expense (Note 4)	8,674	212	140	8,886	913
Distribution and administration expenses	8,505	2,984	2,940	11,489	5,413
Profit (loss) before interest and taxation	(20,812)	(13,744)	4,078	(24,347)	9,040
Finance costs	783	793	813	1,576	1,726
Net finance expense relating to pensions and other post-employment benefits	0	1	10	10	30
Profit (loss) before taxation	(21,604)	(14,224)	4,198	(25,833)	10,796
Taxation	(8,852)	(7,751)	2,244	(16,603)	3,527
Profit (loss) for the period	(30,456)	(21,975)	6,442	(42,436)	14,323
Attributable to:					
BP shareholders	(28,848)	(21,246)	5,822	(41,272)	13,759
Non-controlling interests	(1,608)	(729)	620	(2,164)	564
	(30,456)	(21,975)	6,442	(42,436)	14,323
<b>Earnings per share (Note 5)</b>					
Profit (loss) for the period attributable to BP shareholders					
For ordinary shares (cents)					
Basic	(83.22)	(27.82)	9.90	(104.82)	23.47
Diluted	(83.22)	(27.82)	9.90	(104.82)	23.39

Income Statement of British Petroleum being discussed

**KEY CHARACTERISTICS AND RELATED RISKS IN OIL & GAS INDUSTRY**

- Large capital investment
- Upstream industry – uncertainty around finding oil
- High risk and rewards
- Complexity of operations
- Strategic value to the government
- Environmental impact
- COVID-19

*Key risks in the Oil and Gas Industry*



# Guest Lecture on “Identification of Reserve Growth Opportunity and Improvement of Recovery in Mature Oil Fields” by Mr. Sunil Srivastava

*"Quality means doing it right when no one is looking."*

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 29 <sup>th</sup> September 2020
<b>Time</b>	: 5:00 PM
<b>Platform</b>	: Microsoft Teams

SPE PDEU Student Chapter organized an online webinar on “Identification of Reserve Growth Opportunity and Improvement of Recovery in Mature Oil Fields” presented by Mr. Sunil Srivastava, OEC at Oil India Limited: A Navratna Company. He has had an illustrious career in the industry spanning over 40 years. He has an outstanding experience and expertise, with DGH as Technical Advisor to Ministry of Petroleum & Natural Gas, Govt. of India, in implementing national upstream exploration and development plans of Govt. of India for intensifying exploration and production of oil and gas from conventional and unconventional resources and covering policy development, fiscal systems, designing, conceptualization, formulation and execution of complex upstream licensing bidding and bids’ evaluations.

Mr. Srivastava shared his insights on mature field development practices which can be divided into two major groups: Well Engineering and Reservoir Engineering. After providing an overview of what is mature field, he outlined the different aspects of mature field development.

He then continued to talk about how after valuing the remaining oil, methods to recover it are classified. They include tertiary recovery, infill drilling, horizontals,

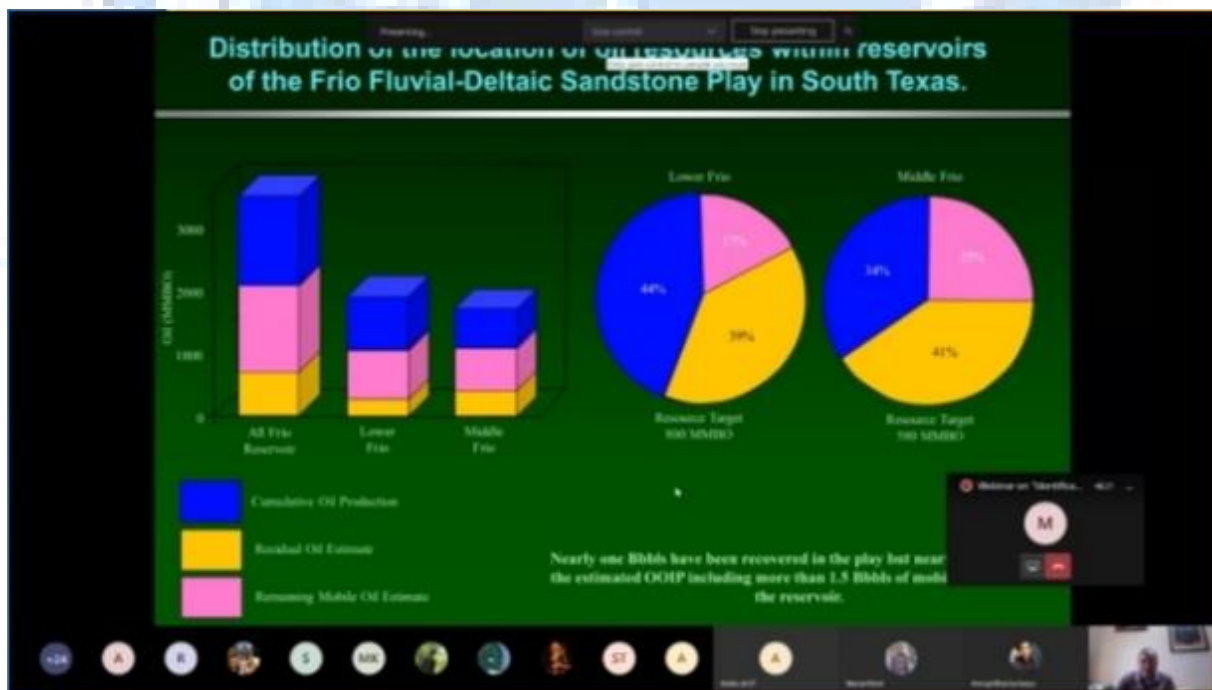
optimal water flooding design for mature fields, optimal well placement and other reservoir management practices.

Alongside this he also threw light on the special attention which is given to tertiary oil recovery. He gave an extensive review and critical analysis of tertiary recovery techniques covering the theoretical, practical, and economical aspects of it. The emphasis is on their applicability in mature field development in terms of effectiveness (incremental recovery) and efficiency (cost and recovery time).

He also communicated the advantages and the disadvantages that are directly or indirectly linked with the Identification of reserve growth and the improvement of recovery in mature oil fields.

The webinar enabled the partakers to learn the concepts of oil recovery from mature fields. The session along with being informative was also interactive. Mr. Srivastava addressed students' questions and cleared their doubts regarding the recovery in mature oil fields.

The chapter is grateful to Mr. Sunil Srivastava for his significant support and offering extensive knowledge to the students.



*Mr. Sunil illuminating the attendees*

**ASSAM-ARAKAN BASIN**

**ONLAND**

- 1<sup>st</sup> Hydrocarbon Discovery in Digboi in Assam Shelf
- Reasonably explored Plays

Mr. Sunil describing the Assam Arakan Basin



# PerSPEctive: Offshore Well Completions

*"The key to the success is to focus on goals not obstacles."*

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 23 <sup>rd</sup> October 2020
<b>Time</b>	: 3:00 PM to 4:30 PM
<b>Platform</b>	: Youtube

SPE PDEU Student Chapter in its effort to connect industry with academia came up with a neoteric event "PerSPEctive". Perspective is an online podcast event organized to connect students with industry professionals and clear doubts of students before they finally step into the industry.

For the second edition of the podcast, we hosted Dr. Niladri Kumar Mitra,

The topic for the podcast was "Offshore Well Completions", and was held on 23rd October 2020. The podcast was streamed live through our YouTube channel for the viewers.

Dr. Mitra began the podcast with delivering a presentation on "Offshore Well Completions." He began with explaining the Lower and Upper Completions employed in subsea systems.

Further, he explained the X-Mas Tree systems which are used in the subsea completions in detail. He provided a holistic insight into the valve, actuators and controllers utilized in the same. He concluded his short presentation with a brief explanation of Drill Centre Layout and Subsea Manifolds.

Several questions were submitted by students and professionals around the world.

A few questions asked during the podcast are mentioned below:

1) The offshore multilayered carbonate reservoir field redevelopment process requires the integration of many strategies and philosophies to maximize oil and gas recovery from a matured field. Can you please give a brief idea about these strategies?

He described Mumbai High as a multi-layer limestone reservoir. He further added that it was initially completed with normal water base mud during 1974-76.

All these wells were completed from platform base well with high deviation and annulus packers. When the fields are getting matured, various stages of redevelopment plan were launched, wells were being drilled with MWD, LWD and RSS tools for long radius, short radius drilling hole to lower the well spacing in order to improve recovery factors. Parallely water injection process was initiated along artificial lift technique was adapted to have better wellbore fluid lift efficiency. All these plans were executed to drill infill well under IOR scheme because the reservoir pressure had gone down and then increased the water injection capacity in order to enhance voided compensation of the reservoir. Dually completed well were planned with a dual gas lift facility.

**2.) Acquisition of subsea data is a difficult task in the offshore field development. What are the various challenges faced during this process and how is the data collected processed?**

Wells need to be equipped with intelligent completion down hole equipment like flow, pressure and temperature transmitter in bottom hole well completion assembly fiber optic flat cable. During the well testing of exploratory well, memory gauges are also used for data collection. Nowadays intelligent wells are equipped with bottom transmitters with down packer mandrel surfaces Xmas tree with mandrel. Sometimes pressure gauges are installed in side pocket mandrel in inclined wells.

**3.) Is there any viscosifier for water-based drilling fluid which has a very high temperature tolerance i.e. it is stable up to 260°C, 500°F?**

Generally speaking, 260 degrees Celsius is a very high temperature. Water based drilling fluid at this temperature is never recommended. He added that he was not aware of any such polymer base viscosifier which is stable at the referred temperature and compatible for the well operations. He concluded the answer stating that some companies have claims of such conditioned muds for the abovementioned situations but he has not come across any case studies.

#### **4.) What impact does Nano fluids have on viscosity, density and which rheological model best describes them?**

For any fluid system viscosity parameter always plays an important role on its fluidity. So in my opinion, in case of Nano fluid also, viscosity will have a role for its capacity to move. With increasing density, generally, the viscosity, also increases. So indirectly, density will also have a role on fluidity besides exerting hydrostatic pressure.

As the podcast saw its way to its culmination, Dr. Mitra concluded the perspicacious session by sharing a few personal experiences and advised students to amplify their skills with assistance from the resources of SPE International.

The chapter is thankful to Dr. Niladri Kumar Mitra for his significant support and enlightening the students with his paramount knowledge.

# SPE PDEU Introductory Session

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>1<sup>st</sup> November, 2020</i>
<b>Time</b>	: <i>11:30 AM Onwards</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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The Chapter has always aimed towards the upliftment of its affiliates by enhancing their skills and instilling professional ethics. The primary objective of a student chapter is to connect academia with the industry.

The introductory session was organised so as to brief the freshmen about the benefits of SPE membership and the importance of SPE in shaping the global petroleum scenario where the oil markets have turned extremely volatile in response to the pandemic.

The event began with a prelude of the SPE PDEU Student Chapter and its triumphs till date. The students were acquainted with the events previously conducted by SPE PDEU and how they evinced to be advantageous for the members. Novel events which were to be conducted in future were also discussed and their opinions were taken regarding the type of event they want the chapter to conduct for them.

The committee members of SPE PDEU shared their views on how the Student Chapter played a vital role in assisting them to understand the change in global scenario of Oil and Gas industry, their role as a petroleum engineer and how SPE PDEU SC provided platform for any petroleum engineer to share as well as gain knowledge through different modes.

The freshmen showed great zeal throughout the event. The introductory session ended with an enjoyable and interactive quiz which was based on general knowledge and current affairs.

# PDEU SPE Fest'20

5<sup>th</sup> to 8<sup>th</sup> November 2020



## Inaugural Ceremony

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>5<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

The sixth and the first virtual edition of PDEU SPE Fest commenced with a warm welcome to the respected guests from the oil and gas industry, faculties and participants from international as well as national universities.



Ms. Yogini Lakhani, President, SPE PDEU Student Chapter delivered the opening address to the congregation. She affirmed on the fact that learning is a continuous process and how the chapter had planned up on this ambitious event.

Dr. R.K. Vij formally welcomed all the honorable dignitaries, students and participants from various parts of the world. He cited the significance of subjecting the students to industry which PDEU has always believed in and the importance of PDEU SPE Fest, as it provides exceptional opportunities to the participants to foster their cognizance and intellect involving operations in the oil and gas domain.

The Inaugural Ceremony witnessed prominent dignitaries from various disciplines of the industry:


- Dr. Thomas Blasingame, SPE President 2021
- Shri Tapas Kumar Sengupta, SPE regional Director, Asia Pacific Region
- Shri Arun Kumar Singhal, Chief Editor, DEW Journal
- Prof. Subhash Shah, Shell Total Chair Professor at PDEU
- Shri Omkar Nath Gyani, HOI, IRS ONGC

In his address, Dr. Thomas Blasingame discussed how as the President of SPE International, he has to inspire all the present and future energy soldiers. Along with that he also briefed on how the demand for oil and gas will observe a sharp rise in future and that there is a lot to be seen by the industry. He thanked all the dignitaries and the members of the Student Chapter to have invited him. He wished for the success of the students and inspired the students with his powerful and illuminating words.

Shri Tapas Kumar Sengupta described the unprecedented situation that the whole E&P sector faced due to low oil prices and the closures due to stringent lockdowns across the world. He discussed about the various renewable resources coming up as potential replacement to oil and gas. He praised SPE PDEU's effort to bring all the budding engineers together for

the sixth time in a row and even during these difficult times the Chapter managed to build a platform for students to showcase their skills.

Towards the end of the ceremony, Dr. Bhawanisingh Desai, Faculty Advisor, SPE PDEU delivered a vote of thanks to all the dignitaries, the honorable Chief Guest Dr. Thomas Blasingame, students and participants for gracing the occasion by their solemn presence.



## Guest Lecture on “Evaluation of Low/Ultra-Low Permeability Reservoirs” by Dr. Thomas Blasingame

*“The answers you get depend upon the questions you ask”*

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 5th November, 2020
<b>Venue</b>	: Microsoft Teams

Followed by the Inaugural Ceremony of PDEU SPE Fest 2020, the Distinguished Guest Lecture on the topic "Evaluation of low/ultra-low permeability reservoirs". The Lecture was delivered by Dr. Thomas Blasingame, President SPE International, 2021. Dr. Blasingame is a Professor and is the holder of the Robert L. Whiting Professorship in the Department of Petroleum Engineering at Texas A&M University in College

Station Texas. He holds B.S., M.S., and Ph. D. degrees from Texas A&M University, all in Petroleum Engineering.

He began the enlightening session with introducing the properties which are of paramount importance to ensure profitable extraction of hydrocarbons from the reservoirs.

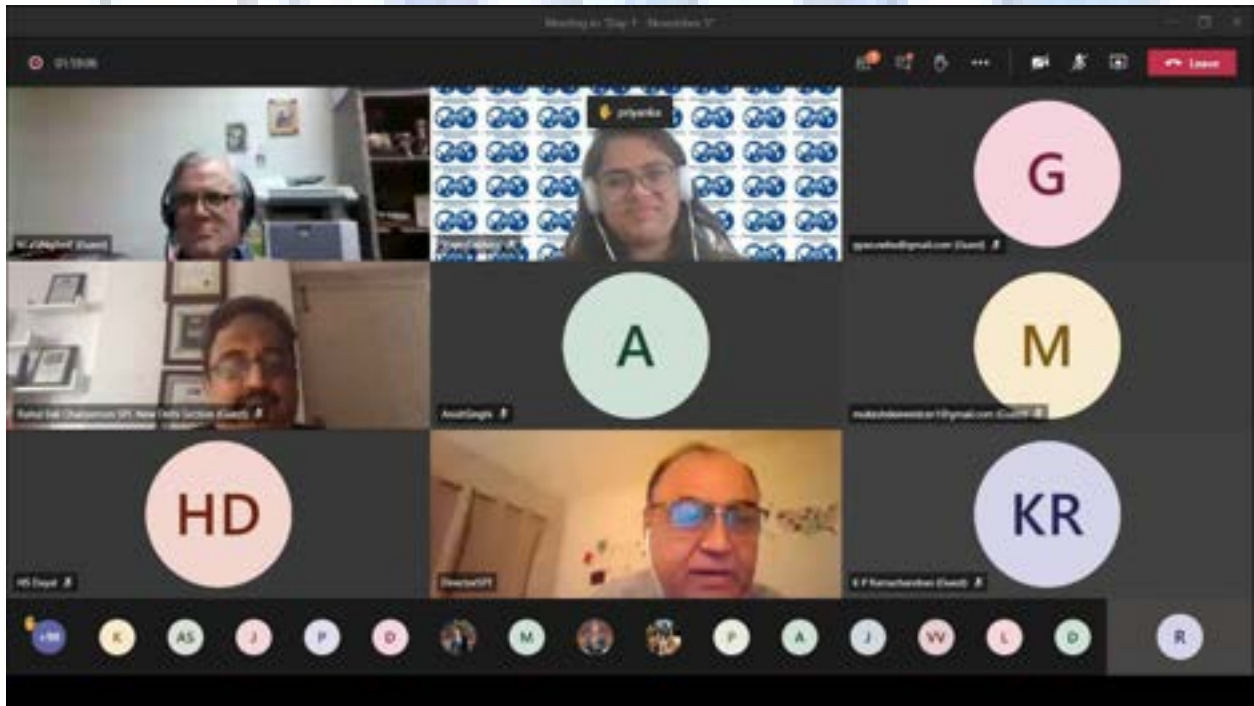
He further explained that due to the existence of a threshold pressure gradient (TPG) in ultra-low-permeability reservoirs, the peripheral reserves of the wellbore are difficult to deploy effectively. The key problem is that it is hard to ensure that well pattern, well spacing, and drawdown pressure easily and accurately because of the existence of low-velocity non-Darcy flow in such reservoirs.

Next up, he elucidated the petro physical integration process model and scale issues. He also discussed about Tight Gas Reservoir Behavior (Elliptical Flow Behavior) and various patterns and models related to it. Alongside he projected several curves which represented elliptical flow behavior to help the students understand the subject better. The session was interactive as well as enlightening. The lecture was followed by an interactive doubt session. Dr. Blasingame solved the queries of the enthusiasts and shared a few light moments with them too.

The distinguished lecture ended with a vote of thanks being delivered by Dr. R.K. Vij, Director SPT PDEU and Dr. Jatin Agarwal, Faculty Mentor, SPE PDEU.



Dr. Blasingame elucidating Elliptical Flow



Dr. Thomas Blasingame interacting with the attendees

# Guest Lecture on “Field Scale Multiphase Flows” by Dr. Damodaran Vedapuri

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>6<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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SPE PDEU Student Chapter had organized an enlightening guest lecture on “Field Scale Multiphase Flows” by Dr. Damodaran Vedapuri as a part of its 4-day oil and gas festival; PDEU SPE Fest, conducted on 6th November 2020.

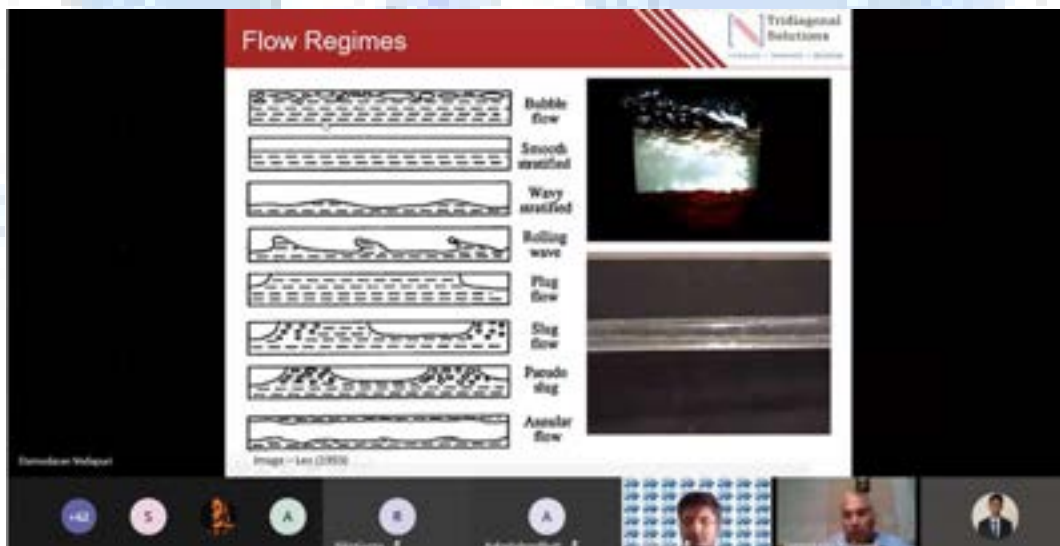
Dr. Damodaran Vedapuri works as the Head of North American Operations at Tridiagonal Solutions. He primarily assists oil and gas majors identify knowledge gaps and uncertainties developed during field development and field support. To help the oil and gas industry they design and construct field scale facility and conduct experiments and analyze data.

Dr. Vedapuri began the informative session by deliberating certain ordinary difficulties encountered by them in mundane routine majorly from the managing the production point of view. He discussed questions concerning flow behavior and pressure drops due to the presence of gas, water and sand along with oil. He threw light on when we are likely to have sand accumulations in low spots, and when the sand is being produced at high rate the concern shifts to erosion. Other challenges included the ones faced by the oil and gas industry when it comes to asphaltene and wax formation, which reduces the porosity and permeability and hence bringing the production and productivity down.



As the discussion continued, Dr. Damodaran introduced Bench-Top system which helps to understand and quantify the challenges faced. The main advantage of using Bench-top systems is that in actuality the petroleum reservoirs and the flow lines are at extremely high pressures and they could be at very high temperatures as well. This is where Bench-Top systems comes to play as they make a comprehensive the study of these pipelines and reservoir at high pressure and temperature and in an inexpensive manner. He also pointed that there may be a significant difference in the values obtained from the Bench-Top system and the real world data since simulating these high temperature and pressure conditions require various other instruments and this is where field scale systems come into the picture.

This informative session saw its end with an interactive Q&A session. The session was made interactive and interesting with real life experiences shown through various pictures and videos so that the students could get a better hold onto the topic. We are extremely grateful to Dr. Vedapuri for delivering such an immersive lecture as a part of PDEU SPE Fest'20.



*Various types of Flow Regimes*



*Dr. Vedapuri clarifying attendees' doubts*

## Guest Lecture on “Field Scale Multiphase Flows” by Dr. Kanubhai Parmar

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

**Chapter Code** : 6035

**Date** : 6th November, 2020

**Venue** : Microsoft Teams

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To enable the budding engineers to have a better understanding of Operational Excellence in Petrochemical Complexes, on the second day of PDEU SPE Fest 20, SPE PDEU organized a guest lecture on the same by Dr. Kanubhai Parmar. He presently heads the Energy department of Reliance Industries Ltd.

Dr. Parmar commenced the lecture with a brief discussion on the various safety protocols followed by his organization to handle the hazardous chemicals and solvents efficiently. Alongside he discussed various

performance monitoring techniques, digitization, visualization, modeling, and integrated refining chemical factory.

He primarily focused on Operational Excellence using various strategies such as drivers, enablers, control & governance. He inculcated the financial aspects taken into account which included cost reduction, profit improvement schemes, and risk assessment. Other strategies included idea management, processes and systems, performance improvement, performance monitoring, and real-time operations intelligence.

Towards the conclusion of the guest lecture, he addressed multiple developments occurring in the technical and managerial domains in the industry that would help the budding energy soldiers in their future upgrade their skill set to make complete utilization of the futuristic opportunities. The session ended with participants clearing their doubts in an interactive question and answer session.

## Examen: Case Study Solving Competition

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>6<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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As a part of PDEU SPE Fest 2020, SPE PDEU Student Chapter organized Examen: Case Study Solving Competition. As the name suggest it was a case study solving competition and students were provided with the case study on the first day of Fest. The Case Study for the event was provided by ONGC. The students were supposed to solve the case study and present the solution for the same. The presentation was to be given on the final day of the fest.

The petroleum industry faces numerous problems each day. The participants were provided with one such current issue from the industry with some statistics for them to work upon and find a suitable solution and

also present their solution. The teams were judged upon their solutions, their approach to the problem and the application of their understanding as well as the feasibility of the solution.

Examen was one of the most successful event of PSF20 and received an overwhelming response from the participants. It helped them in building up their practical understanding, problem solving and presentation skills.

The screenshot shows a Zoom meeting interface. The main content is a presentation slide with the following text:

1) Suggest suitable methodology to optimise the production from the Field 'X', while maintaining the reservoir health.

- From the structural contour map, it's quite clear that reservoir structure is anisotropical and red line represents faults in the reservoir.
- To effectively optimize the production, **central and basal patterns** are used whereas we inject water at the basal part and simultaneously produce from the central part as additional benefit being gained from gravity segregation.

The slide includes two diagrams: a 3D cross-section of a reservoir showing injection and production wells, and a 2D structural contour map with red lines indicating faults. The diagrams are labeled "Central and Basal Injection method" and "Structural Contour Map".

At the bottom of the Zoom window, several participant avatars are visible, including one labeled "RM".

*Partakers presenting their solutions to the case study*

The screenshot shows a Zoom meeting interface. The main content is a presentation slide titled "OBJECTIVE 2: INJECTOR WELLS". The slide text reads:

WE'VE quantified both, the Number of In-FG Wells and their Placement.

The slide includes a structural contour map with a green circle highlighting a specific area. The text on the slide explains that in the northern part of the field, the well is not an optimal fit and that the flooding pattern will be more in the S-SW well area, which is the northern part of field A. It also mentions that the number of WATER INJECTION AND WATER PRODUCTION to optimize the production from the field.

At the bottom of the Zoom window, several participant avatars are visible, including one labeled "RM" and another labeled "A".

## Showcase: Paper Presentation Competition

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>7<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

Showcase: Paper Presentation competition, the bellwether of PDEU SPE FEST'20 was organized on 7th November 2020. The objective of the event was to provide the future energy soldiers with a comprehensive medium to share their meritorious proposals in the form of research and review papers. During these trying times, SPE PDEU furnished an unbiased dais to all the budding petroleum engineers to exemplify their ingenious thoughts.

The paper presentations were divided into five panels, namely Reservoir, Production, Drilling, Downstream and HSSE/Others.

In a first, the event was to be managed on an online medium. The shortlisted participants were solicited to submit their video presentations in the form of recordings of 12 minutes each. During the course of the event the video presentations were played for the judges followed by an exhaustive question and answer round. The partakers were arbitrated based on the applicability of their research, presentation skills and the degree of innovation.



The judging panel encompassed several high-ranking officials from various Oil and Gas conglomerates, PDEU faculties as well as PDEU alumni, working at a position of respect in diverse corporations. Some of the esteemed judges were Mr. P. S. Jamval, Prof. Subhash Shah, Shell Total Chair Professor at PDEU and Asish Thaplyal. DGM, WSS ONGC, Ahmedabad.

Three teams emerged victorious from every panel. The judges encouraged and motivated the participants to grab such kind of opportunities for their individual growth. The event was very insightful and highly research related which was appreciated even by judges.

**Graphs and Results**

**Table 5: API Filter press experiment (filtration loss results for drilling fluid)**

Solid Loading (%)	Native Mud	Sample with Starch	Experimental Sample
1	130	112	81
2	112	100	54
3	97	80	45
4	80	55	30

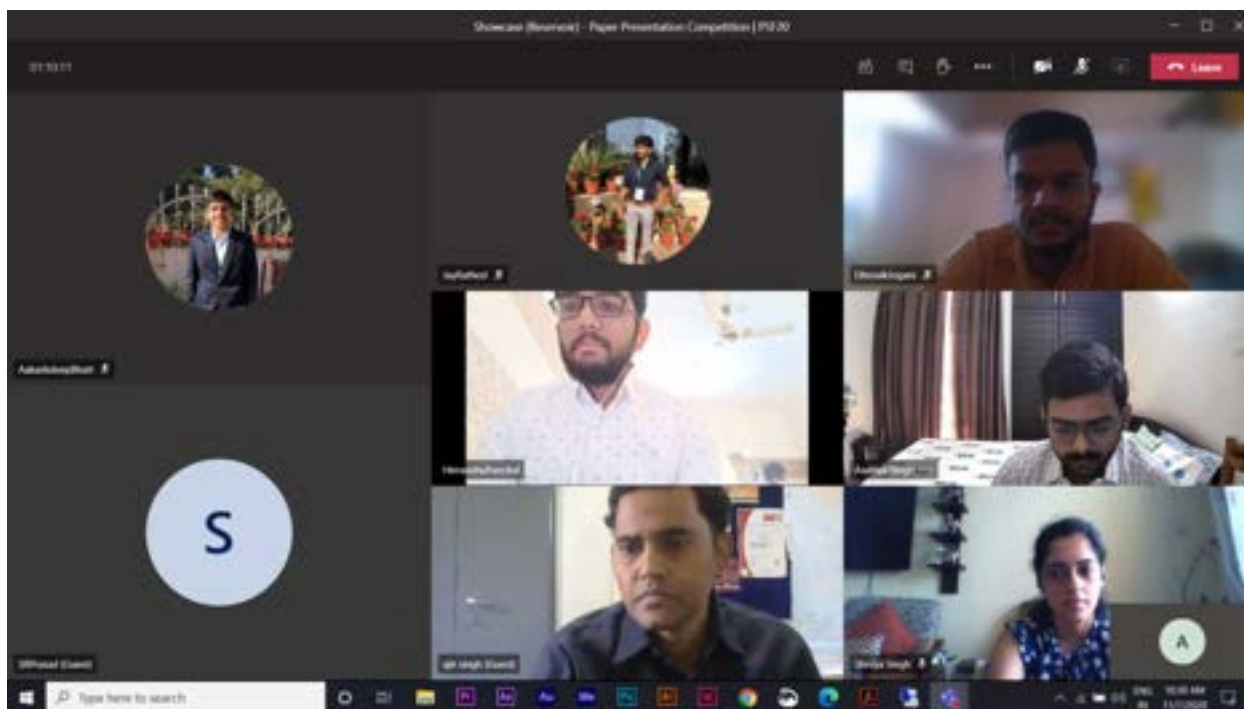
**Table 6: Filter Cake Thickness (1/32 inch)**

Solid Loading (%)	Thickness (1/32 inch)
1	1
2	1.5
3	2.5
4	3

**Figure 12: Filtration Loss of various samples using API filter press**

**Figure 13: Filter Cake Thickness (1/32 inch) for the experimental sample**

Participants presenting their ideas



*Judges evaluating the participants*

## Chemfluence: Equipment Designing Competition

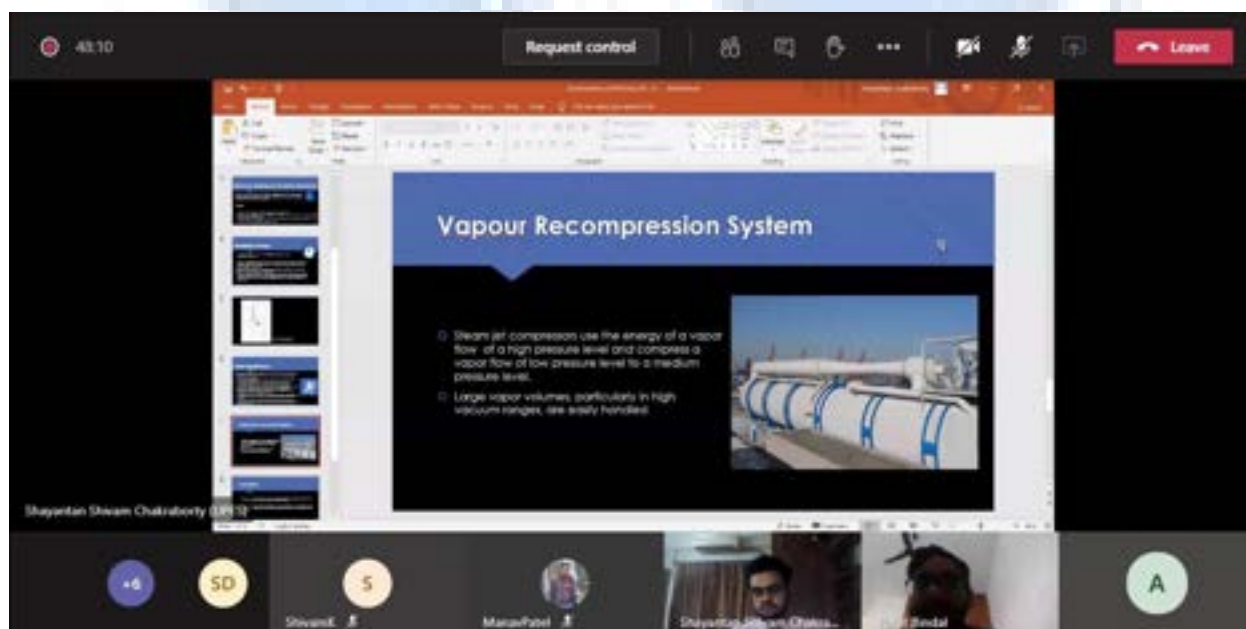
<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>6<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

As a part of PDEU SPE Fest 2020, we had organized Chemfluence: Equipment Designing Competition. The event was designed primarily for the participants with chemical engineering background. It aimed at scrutinizing the partakers' technical skills focusing mainly in the chemical engineering domain. The event was an amalgamation of a quiz and a case study solving event.

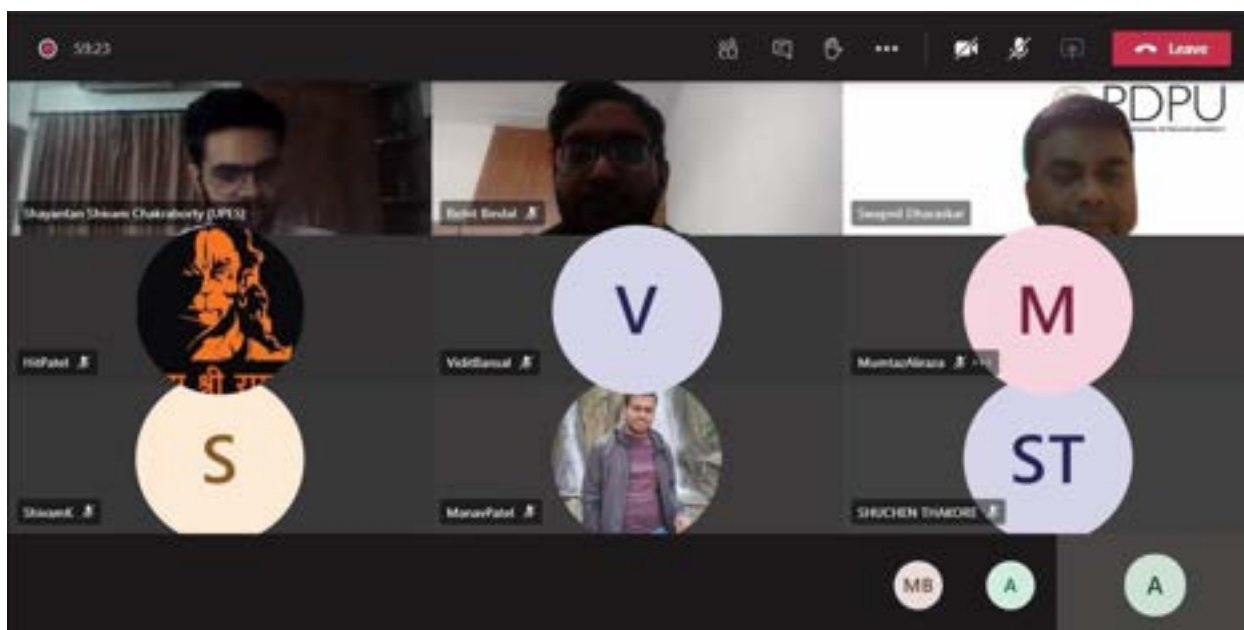
The preliminary round consisted of general quiz based on chemical domain. The quiz was held online on our partner website MySwots.com. The top scoring teams were then shortlisted for the second round. The participants were then given a case study based on the concurrent issues faced by the industry and present its solution in front of the judges.

The teams were provided 10 minutes to present their solution to the judges which was followed by a rigorous round of questioning by the judging panel consisting of Mr. Shuchen Thakore, Professor, GEC Gandhinagar and Dr. Swapnil Dharaskar, HOD, Chemical Engineering department PDEU. The judges scrutinized the solution of the finalists based on the innovation, affordability and practicality.

The team whose solution fulfilled all of the above mentioned criterions were declared as the winners. The judges opined that these kind of events stimulated the young minds to apply their theoretical knowledge to solve a case study which leads to an overall holistic development of the students and makes them industry ready.



*Participants presenting their solutions*



*Judges provide their feedback to the participants*

## Bid your Block: Block Bidding Competition

**Chapter Name** : SPE PDEU STUDENT CHAPTER

**Chapter Code** : 6035

**Date** : 7<sup>th</sup> November, 2020

**Platform** : Microsoft Teams

Among the numerous technical events that PDEU SPE Fest'20 boasted of, Bid your Block: Virtual Block Bidding competition was organized on 7th November 2020, the third day of the technical extravaganza.

The event was aimed to habituate aspirants with the professional bidding process within the oil and gas industry. The preliminary round of this stimulating competition was organized on 5<sup>th</sup> November 2020. The round consisted of a mixed bag of questions which tested the participants' general knowledge in the upstream and downstream arena of the vast petroleum industry.

The second phase of the event began with a brief session on HELP Bidding, where Dr. Anirbid Sircar, Director, GERMI, briefed the teams about various possibilities and basics of the block bidding process.

In this phase of the competition the aspirants had to inspect the given data and use their apprehending skills to bid for a block and then further explain the various operations which should be undertaken so as to develop it, as it is done within the industry.

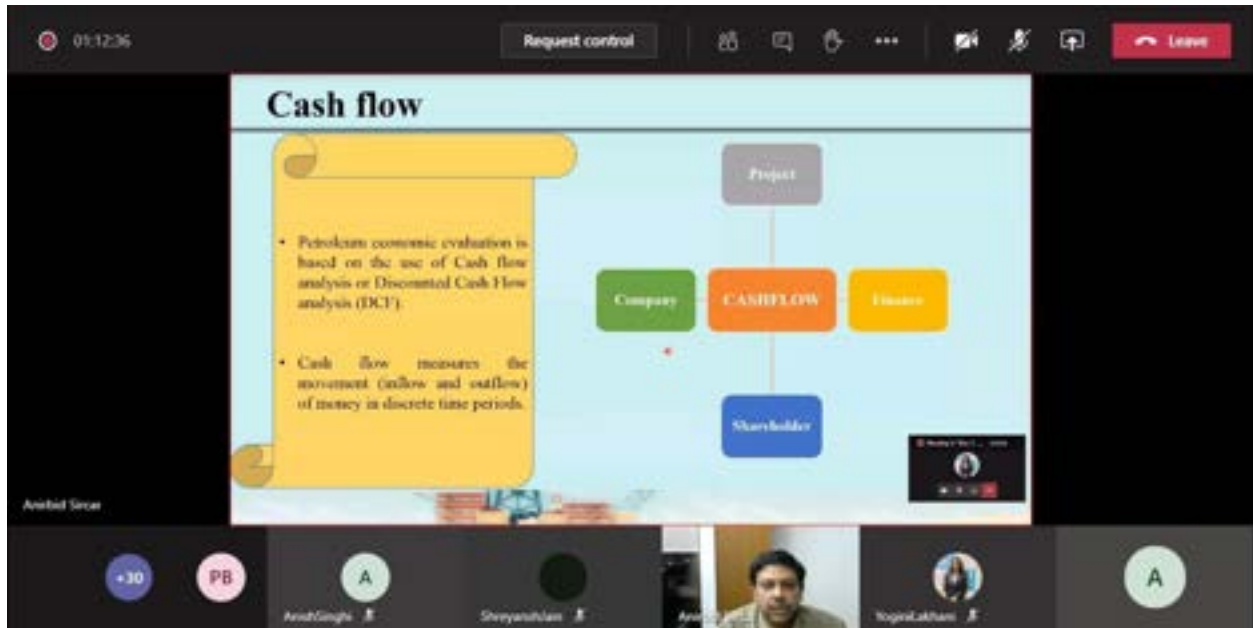
This was followed by a Virtual Block Bidding competition and thereafter the evaluation of the block allocated to them from the provided data. The event was bifurcated into Upstream and Downstream Bidding. The Upstream Panel of the event dealt with the bidding of Shale Gas Blocks and the Downstream Panel dealt with the bidding of City Gas Distribution (CGD) Blocks.

The teams had to formulate a plan and bid their respective blocks. They were assigned a mentor and then given a chance to bid. They advocated their advancement plan and the prospecting benefits of contriving it into a cost-effective and worthwhile undertaking.

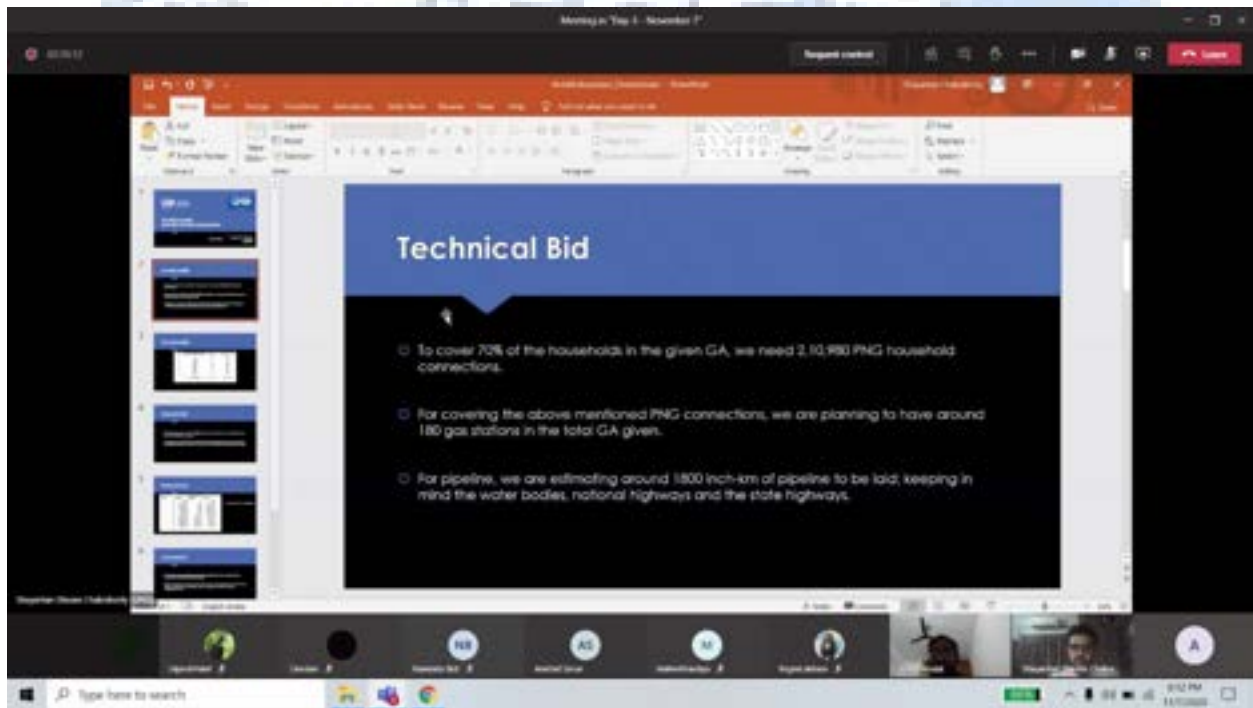
The blocks were awarded to the team based on their comprehensive approach towards the arena of oil and gas sector and their application of fundamental concepts as well as consideration of superficial aspects.

The passion, diligence, and dedication among participants strengthened the success of event. This event, without any doubt made the participants aware about the bidding process of the industry, thus adding to the knowledge of the nascent petroleum engineers at an early stage.





*Dr. Anirbid Sircar explaining Cash Flows*



*Technical Bids being placed by the participants*

# Workshop on Well Test Analysis using Python by Mr. Divyanshu Vyas

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>8<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

SPE PDEU Student Chapter organized a workshop as a part of the first-ever virtual fest; PDEU SPE FEST 2020, the sixth edition of the biggest oil and gas festival. The workshop was held on the topic, "Well Test Analysis Using Python" by Mr. Divyanshu Vyas, Data Analytics Consultant at Dicelytics Pvt. Ltd.

The session began with the basic introduction of the Python programming language. He emphasized the importance of this language in the Oil and Gas industry and its utilization in Reservoir Engineering and Well Testing.

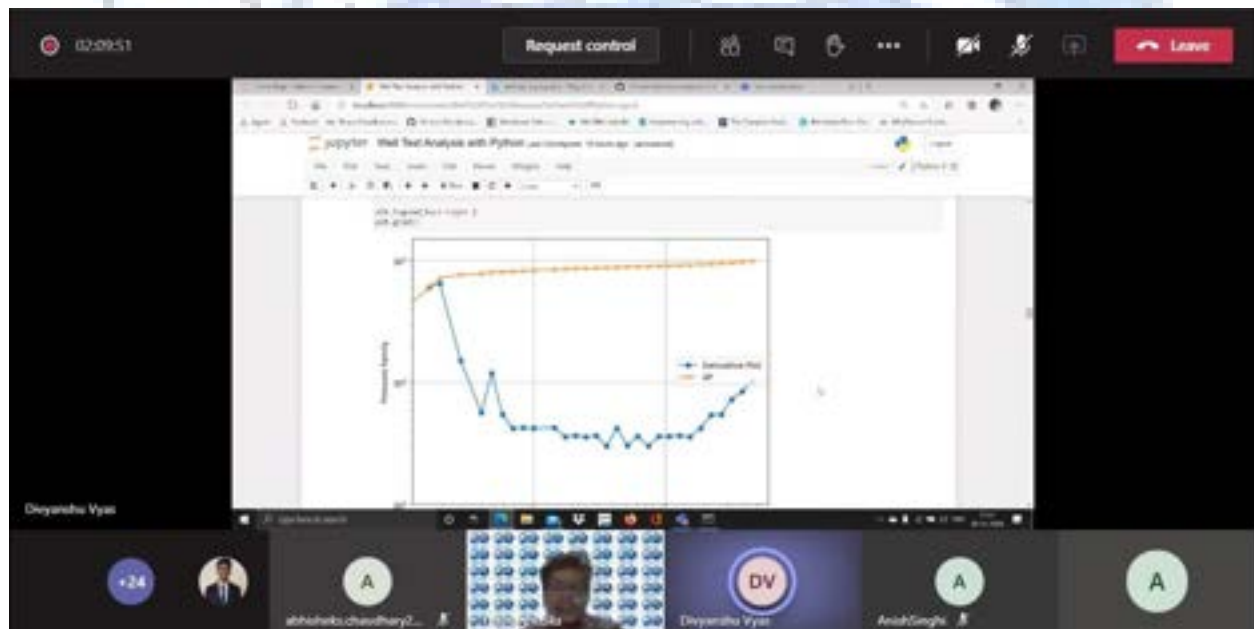
Employing various realistic situations, he enabled the participants to envision and understand Well Testing and how Python can help a petroleum engineer.

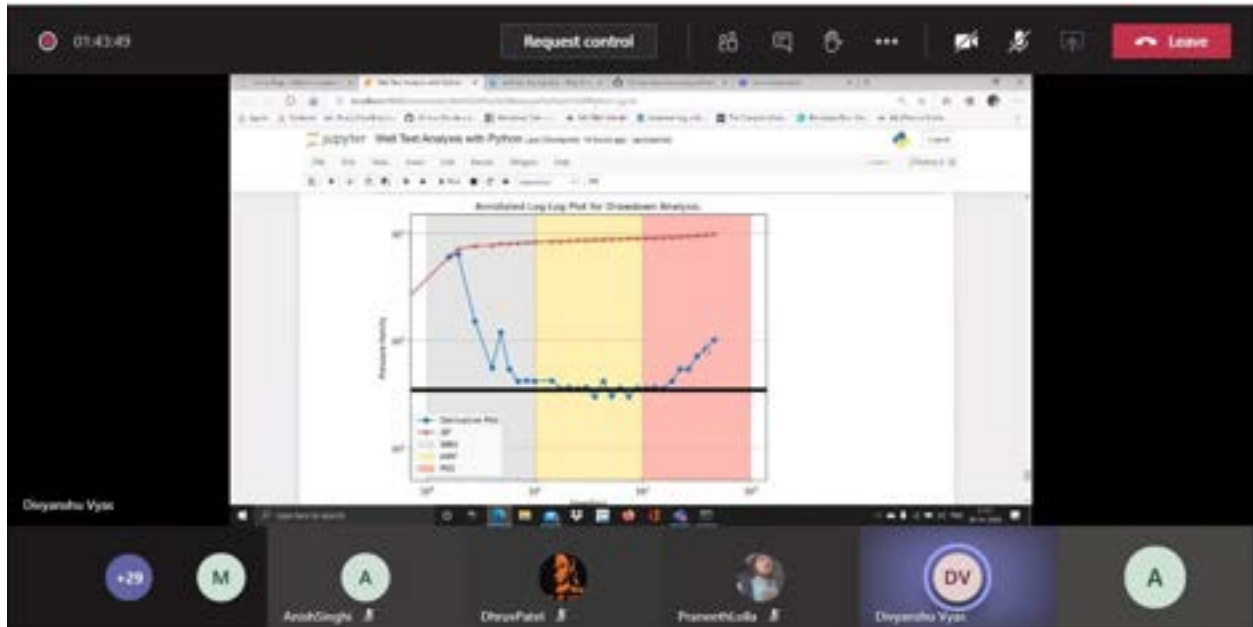
He explained how Python can be employed to recognize pressure abnormalities. This helps us calculate the values of permeability accurately.

He also discussed semi log-log and log-log plots which when interpreted using Python to visualize it in a simple manner. He further discussed how the greater quantity of data enhances the information which can be depicted using the plot.

He continued the session with a brief discussion on multiple applications of Machine Learning in the Oil and Gas industry, one of which is; applying Machine Learning concepts could help save time, as we could get to know the values of specific elements through forecasting and help the engineers save resources and capital.

The intensive and stimulating session saw its conclusion with a thorough question and answer session wherein partakers posed their questions to Mr. Divyanshu Vyas and he resolved all the queries raised.





*Plots being explained by Mr. Vyas*

## Panel Discussion on “Impact of COVID-19 on the Oil and Gas Industry”

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 8 <sup>th</sup> November, 2020
<b>Platform</b>	: Microsoft Teams

On the 4th and final day of the India’s biggest virtual oil and gas festival PSF20, we organized an extraordinarily enlightening and quadrilateral panel discussion based on “Impact of COVID-19 on the Oil and Gas Industry”, dated 8th November 2020. The discussion catered to the current scenario of the Oil & Gas industry and the impact of COVID-19 on all the sections in the industry. The panel consisted of esteemed stalwarts of the oil and gas industry including:

Shri Omkar Nath Gyani, Executive Director, HOI IRS, ONGC

Shri Jayant Malhotra, General Manager, Schlumberger

Shri Sharad Dubey, Director, Kuwait Drilling Fluids and Oil Services

The panel was moderated by Dr. R.K Vij, Director, School of Petroleum Technology, PDEU.

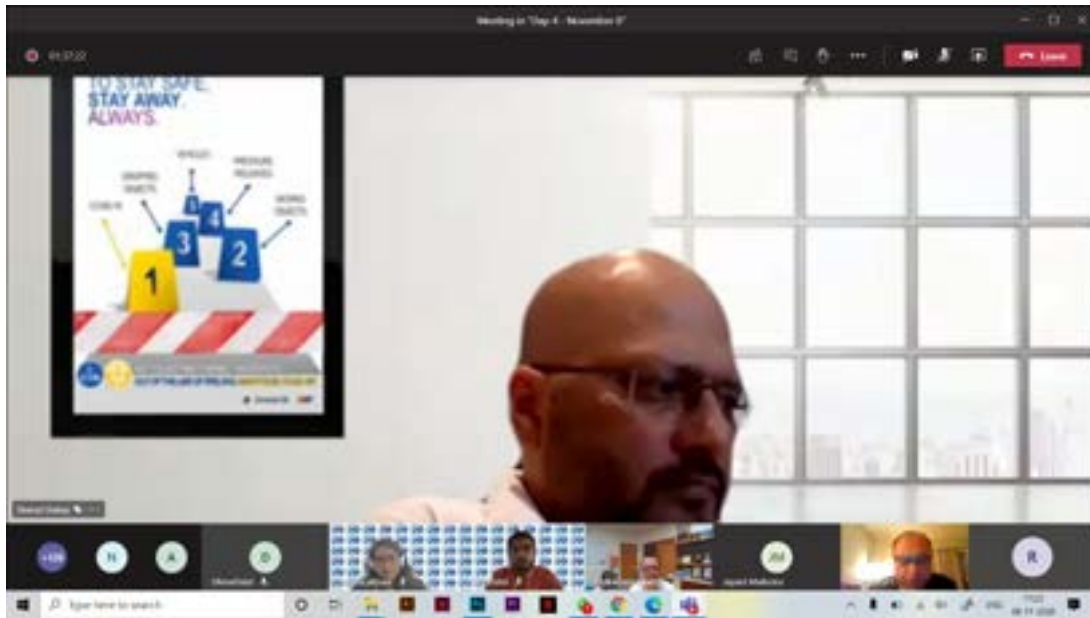
The impact of Covid-19 on the oil and gas industry is a contemporary topic and discussion about the same was a must.

During the discussion, the panel highlighted various points regarding the post pandemic opportunities.

The session along with being explanatory was also interactive. The dignitaries addressed students' questions and cleared their doubts regarding the internships and job opportunities post the COVID-19 pandemic.

The students in the audience listened to the discussion with utmost curiosity. This event proved to be quite informative for the participants participating in the fest and presence of highly experienced industry personnel helped in achieving the ultimate aim of the event, which was to impart knowledge on the subject to the participants.





*Shri Sharad Dubey sharing his words of Wisdom*



*Panelists interacting with the attendees*

## Catechize: International Quiz Competition

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

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<b>Chapter Code</b>	: 6035
<b>Date</b>	: 8 <sup>th</sup> November, 2020
<b>Platform</b>	: Microsoft Teams

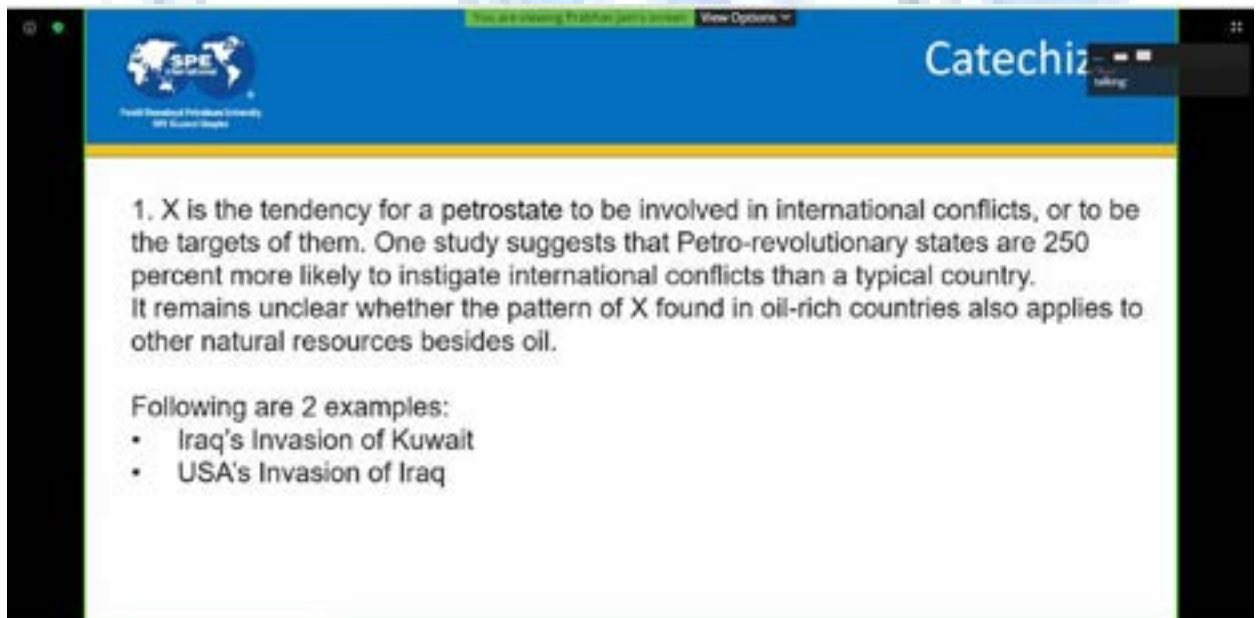
Catechize: International Quiz competition was organized as a part of PDEU SPE Fest'20 to test the technical cognizance of the budding petroleum engineers about the vast oil and gas industry. Catechize witnessed massive participation from international as well as national universities. The was divided into two panels namely Upstream and Downstream.

The quiz was conducted in three phases with the first and the second phase being conducted on our partner website "MySwots.com". The preliminary rounds encompassed questions about the oil and gas industry ranging from history, numerical, technical and geopolitical domains. The partakers cleared their way through multiple online rounds with increasing perplexity by putting forward their riddle tackling aptitude and showcasing exemplary quizzing skills.

The top 8 participants each from Upstream and Downstream panel qualified for the final round of the quiz which was held live during the final day of PDEU SPE Fest'20.

The third and final round of Catechize was held in Pounce and Bounce Format and Audio Visual Based round. In this round the participants were primarily tested on their General Knowledge and Current Affairs concerning the world of oil and gas for the upstream panel and from the world of Refining and chemical industry for the downstream panel.

The top participants who outperformed their respective panels, were declared as winners of this head scratching event.



*Question from the final round of Catechize*

# Feud-A-Nation: Dispute Solving Competition

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>8<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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On the final day of the PDEU SPE Fest 2020, Feud-A-Nation: Dispute Solving Competition was organized wherein all the participants showcased their constructive debating skills with perimetric awareness concerning the oil and gas industry.

The theme for the event was 'Roadmap of the Energy Transition of Oil and Gas Companies', wherein the teams from various universities were assigned with 14 different Oil and Gas Companies.

The event was judged by Shri. Sujit Mishra, General Manager, IRS ONGC, Ahmedabad and Shri. Pragyan Sharma, Executive Production Engineer, ONGC, Ahmedabad

In the first round the participating teams had to deliver Opening Statements uplifting the works, economic and management skills during this pandemic and environmental degradation scenario. The top 5 teams with best opening statements from the round 1 were shortlisted for the next round by our esteemed judges.

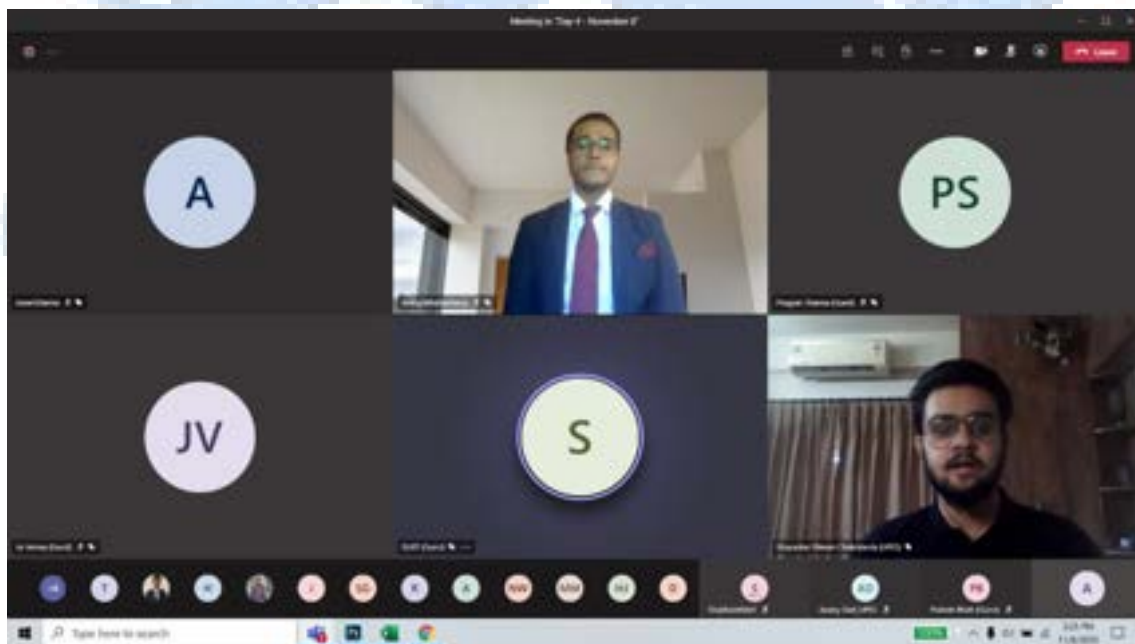
The selected teams then questioned to other qualified teams of their choice. In the final round, 2 countries were allotted to each of the team and were then asked to prepare a statement. This statement had to include their plan of investment, development and approach in the country while inculcating the issues like COVID-19 and climate change. Once the teams delivered their statements, this was followed by a Question and Answer wherein the judges asked the partakers challenging questions to assess

the critical thinking ability of young minds. The team that performed exceptionally well throughout the event emerged as winners.

The event helped the participants in gaining experience and enhancing their general knowledge regarding the current affairs.

ADNDIC	ISI Formed	ONDC	Ekowangi & Dutta
	Prakash Shukla		Manojit Saha
BP	Shayantan Shrivastava Chakraborty	Rusali	Tapan Parua
	Rishi Sengupta		
Cherwin	Muhammad Ahsanul Ullah	Royal Bishu Shukla	Shakti Patel Manan Ghosh/Kumar Patel
EventMadd	Natali Hasan Nigam	Saahil Anand	Ashutosh Anand
	Md. Abu-Magha		
Sageem	Tejas Warrier	SchMunberger	Shubham Patel
Halliburton	Hemanshu Patil Sudh Patel	SNCPSC	Tanya Goyal
Rusali Oil Corporation	Rishi Jais	Total	Rishi Kumar Rishi Kumar
	Rishi Sengupta		

*Finalists of the event*



*Teams delivering their statements*



# Informal Events

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**Chapter Name** : *SPE PDEU STUDENT CHAPTER*

**Chapter Code** : 6035

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Amidst the gamut of technical events which abetted the participants in strengthening their eruditions, PDEU SPE Fest 2020 moreover comprised of informal events which were organized to aid the participants to illustrate their artistic flair and bring out their creativity.

Purple was a themed photography competition. The theme for this year was “Golden Hour: The hour of Sunrise and Sunset”. The participants captured some astounding snapshots of the golden hour with their impressive photography skills. Several mesmerizing moments were photographed by the participants.

Vlog Fair was a video blogging event. The theme for this year was “World from Home”. The cinematography enthusiasts captured the life during the pandemic imposed lockdown. The participant who displayed his brilliance from behind the camera emerged victorious.

Sketch'D was an online t-shirt designing contest. This event provided the participants with an opportunity to showcase their designing and creativity skills by designing a thematic t-shirt based on the oil and gas industry or chemical industry. There were numerous creative entries for the contest out of which the participant with the best design was declared as the winner.

Rhapsody was a Petroleum themed poetry competition in which the participants showcased their excellent writing skills by writing a poem related to the oil and gas industry or the chemical industry.

As a part of an online technical event, PSF19 conducted Quid Pro Quo: Spot Trading competition. The event was successfully held in association with MarketWatch. The event proved to be an excellent platform for the aspirants to understand the functioning of the share market and learn the fundamentals of stock trading. The enthusiasts had to trade virtually in

stocks based on their spot prices. The fast paced event put their analytical skills to test in order to maximize profits from their investments. The participants, with their extraordinary trading skills, possessing maximum profit, emerged as winners.

## Closing Ceremony

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>8<sup>th</sup> November, 2020</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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The marvelous oil and gas festival of India, PDEU SPE Fest 2020, culminated with a pompous and grandiose Closing Ceremony on the final day of the fest, 8th November 2020.

The energy enthusiasts actively represented their colleges in events like Showcase: Paper Presentation competition, put their knowledge to practical usage in Examen, navigated their way through the myriad of questions in catechize, designing an equipment in Chemfluence, understood the real value of investment in bid your block and debated on a geopolitical issue in Feud-a-Nation.

The ceremony was graced by the presence of Prof. Subhash Shah, Shell Total Chair Professor at PDEU, Dr. Jatin Agrawal, Manager at School of Petroleum Technology PDEU, Shri Rahul Bali, Chairperson, SPE New Delhi Section, Dr. Bhawanisingh Desai, Associate Professor at School of Petroleum Technology PDEU and Dr. R.K. Vij, Director, School of Petroleum Technology, PDEU.

Rahul Bali, Head of SPE Delhi Section lauded SPE PDEU Student Chapter for congregating the nascent petroleum engineers together consecutively for the sixth time. He appreciated the fact that even during this pandemic

the Chapter managed to provide a platform for students to showcase their exemplary skills.

Dr. R.K. Vij, Director - School of Petroleum Technology, PDEU, highlighted the importance of the unconventional juncture catered by PDEU SPE Fest. He emphasized on the fact that PDEU SPE Fest provides aspirants with a stage wherein they come together to work as a team and gain surfeit knowledge.

Towards the end, Dr. Bhawanisingh Desai, Faculty Advisor at PDEU, offered a vote of thanks to all the dignitaries, the honorable Chief Guests, students and participants for gracing the occasion with their solemn presence.

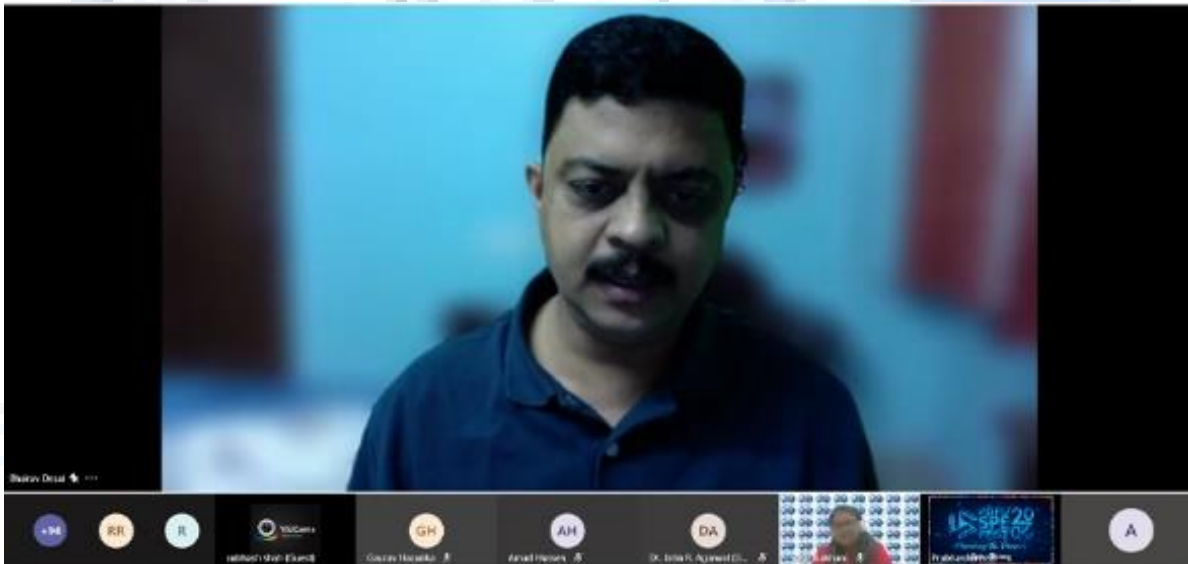
The dignitaries motivated the participants with their words of wisdom to move forward as budding petroleum engineers. Their presence made it possible for the fest to come to a good end. With all our heart, we would also like to congratulate all the winners of the SPE PDEU Fest 2020 and a much appreciated thank you to all the participants for making this fest such a grand success.



*Shri Rahul Bali addressing the participants*



*Participants providing their feedback of the fest*



*Dr. Bhawanisingh Desai delivering Vote of Thanks*

# SPE Week 16.0

*"Victory comes from finding opportunities in problems."*

## Day 1 – Collide-O-Scope: Debate Competition

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 21 <sup>ST</sup> FEBRUARY 2021
<b>Time</b>	: 2 PM Onwards
<b>Venue</b>	: Microsoft Teams

SPE PDEU Student Chapter organized Collide-O-Scope, a debate competition as part of SPE Week 16.0. The topic for the debate was "The Impact of Energy Transition on the Oil and Gas Industry in the upcoming years." The participants were divided into teams of two and had to present their motion.

The even-numbered teams had to give their opening statement in favour of the topic. The odd-numbered teams were required to present their opening statement in against the topic. Each team was given 90 seconds to present their opening statement. A couple of minutes were allotted to the participating teams for questioning other teams. After the first round, the best teams were selected who then had to compete in the next round.

Round 2 came up with an element of surprise. The teams who had qualified had to provide their opening statement opposite to that they gave in previous round.

At the end of the final round, the decision was made based on the teams opening statement and their questioning ability, and the team which was considered elite won the competition. This debate competition not only assisted in improving the fresher's confidence but also their critical thinking ability, and oratory skills.





Attendees in the course of the event

## Day 2 – Diwali Decor

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 23 <sup>rd</sup> November, 2020
<b>Venue</b>	: Microsoft Teams

SPE PDEU Student Chapter organized Diwali Decor on 23rd November 2020. Diwali the festival of lights, colors, prosperity, and happiness is celebrated by people across India by preparing sweets, making rangoli, lighting home with lamps, and decorating with flowers and other paraphernalia. SPE PDEU Student Chapter this time came up with a brilliant idea to keep up the charm of this festival on the online platform and help connect the freshmen through a healthy competition. The event comprised of three categories: -

- Poster Making
- Rangoli Making
- Diya Decoration

Participants were allowed to participate in any of the above-mentioned categories, participants were given enough time to prepare and decorate their artwork and have to submit their entries within the deadline through google forms. Participants had to capture a picture of their artwork along with the themselves to ensure the fairness of the competition. All the entries were uploaded on the SPE PDEU Instagram handle. Participants were judged based on the number of likes they received on their posts. The unique and unbiased judging system kept the glory high throughout the event. This event also took into consideration that the festival was celebrated in an eco-friendly way.

The event was wrapped up with the announcement of winners. In each category, cash prizes were distributed among the 2 most liked posts. The event was proved to be a successful one because of the great enthusiasm and dedication exhibited by the participants towards the event.

### **Day 3 – Learnapalooza: Alumni Interaction Session**

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>24<sup>th</sup> November 2020</i>
<b>Time</b>	: <i>4:00pm to 6:00pm</i>
<b>Venue</b>	: <i>Microsoft Teams</i>

SPE PDEU Student Chapter organized the 'Learnapalooza: Alumni Interaction Event' as a part of the SPE Week 16.0. The event was organized to fill up the intermediate gap between the industry and academia. The event was specifically designed for the freshers who had several questions in their minds after making the decision of pursuing Petroleum Engineering. The event was highly insightful and correlative.

Mr. Divyanshu Vyas, Data Analytics Consultant at Dicelytics Pvt. Ltd, was invited as the speaker for the event. He was the part of SPT PDEU batch of 2014. The event commenced with an overview into the domains of Petroleum Engineering. He threw light upon preliminaries of Petroleum Engineering and the versatile skills we can learn to excel and transcend in the career in oil and gas industry. During the event he put special emphasis on the importance of an updated LinkedIn profile. Alongside he also explained the importance of building connections with seniors, faculties, alumni and other dignitaries of the industry. He spotlighted the benefits of LinkedIn which are the great role it plays for getting entered into any reputed company and many more. He accentuated on significance on learning programming languages like python and C++ as a skill for working in any firm. He also emphasized on the importance of internship before entering into the Petroleum industry.

The event saw its conclusion by an interactive Q&A session being held where the attendees of the event got their queries resolved.

## 8. Options to go for :-

- A. Data Analytics / Business Analytics / Data-Science / Machine Learning\*\*\*\*\*  
-> Udemy | Coursera | YouTube | Khan Academy | Kaggle | GitHub
- B. Field Jobs -> Do a lot of Internships (LinkedIn)
- C. Higher Studies -> GATE | GRE
- D. PSUs -> GATE
- E. Off-Campus Opportunities ->  
-> Get Company referrals by connecting on LinkedIn, apply and you're 70-90% certain to get a job.



Mr. Divyanshu discussing various career options



Mr Divyanshu answering the attendees' queries

## Day 4 – Petroplexity: Puzzle Solving Competition

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>25<sup>th</sup> November 2020</i>
<b>Time</b>	: <i>2:00 PM Onwards</i>
<b>Venue</b>	: <i>Microsoft Teams</i>

SPE PDEU had arranged the event Petroplexity: The Puzzle Solving Competition as a part of SPE Week 16.0. The event was organized with the sole purpose to welcome and encourage the fresher's to work as a team and help them to be acquainted with the importance of teamwork.

Participants were allowed to form a team of 2 members each for the event.

The event comprised of two rounds; Round 1 consisted of 5 Questions in it. Each question was incorporated in sequential order in form of a pdf. The answer to the first question was the key to solution of the second question and so on till to the fifth question. The answer to the fifth question was the key to move in to the next round. Round 2 consisted of a single unique question for each team.

The event was framed in such manner that in the first-round, participants were examined with basic puzzles, and the Second round concentrated on the technical aspects of the oil and gas industry. The passion exhibited by participants kept the energy high throughout the event. The fun filled and exhilarating event culminated with the declaration of the winners.





*Participants actively discussing solution to the puzzles*

## **Day 5 – SPeCial Day Out**

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 26 <sup>th</sup> November 2020
<b>Time</b>	: 4:00pm To 6:00pm
<b>Venue</b>	: Microsoft Teams

SPE PDEU Student Chapter organized the 'Special Day Out' event as a part of the SPE Week 16.0. The primary inspiration behind organizing the event was to give a glimpse of student life in the university to the freshers.

This informal event started with the pre-final, final year students along with the sophomores interacting with the freshers. During the event, the freshmen got a clear overview of the academic life of the college along with

the sensational and remarkable extracurricular facilities that are provided to the students at PDEU. Seniors threw light on how to obtain maximum benefit of all the fests which PDEU organize for the students to connect to industry professionals and to fill the gap between academics and industry. Attendees were advised and encouraged to take part in clubs of their choice as clubs can improve their extracurricular skills and can take the individual's skills to new heights. All the queries of partakers were catered to during the event. The hostel life and its great qualities were also elucidated as the event moved further.

The event was concluded with a brief synopsis of the working of the Student Chapter and an expression of gratitude, along with a nice round of applause.

### **Day 6 – Membership Drive**

SPE PDEU Student Chapter organized Membership Drive; the last event of the SPE Week 16.0. Even though this drive was conducted on an online platform for the very first time but that did not make the spirit of the event become any lesser instead a very unique level of ardor was present in the air.

The freshers were briefed about the chapter and its various activities. Immense support was displayed by the committee members to assist the newly registered member complete their online registration to formally become a member of SPE PDEU Student Chapter.

The drive was held in 2 shifts to ensure that each new member can get personalized assistance during their registration process. At the end of the 2nd shift the new members of 2nd and 3rd year were registered and the renewal of existing members was also completed.

The event proved to be very successful as great enthusiasm was exhibited by both the then members and the newly recruited ones.



*Newly inducted members being guided through SPE International's website*

# Giving Tuesday

*“We make a living by what we get, but we make a life by what we give.”*

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

**Chapter Code** : 6035

**Date** : 1<sup>st</sup> December, 2020

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Highly inspired by Trisha Mc Cagh’s statement, “Animals are the bridge between us and the beauty of all that is natural. They show us what's missing in our lives, and how to love ourselves more completely and unconditionally. They connect us back to who we are, and to the purpose of why we're here.”, SPE PDEU Student Chapter celebrated "Giving Tuesday" on 1st December 2020 to help the speechless stray animals.

This was celebrated as a part of our social initiative campaign. The pandemic has forced the whole world inside their homes but has put the four-legged strays in extreme distress. The unavailability of food and water is impacting stray animals all over the country.

The committee members, therefore actively participated in this celebration, feeding the hungry stray animals around their house, encouraging and influencing others to do the same.

The initiative aimed at spreading awareness and getting more and more people to feed stray animals who do not have access to adequate food in these trying times.

In these difficult times we made an effort to ensure that the stray animals of the nation do not go hungry and that they are too in good health.



*Committee members feeding the stray animals*



# 12<sup>th</sup> Anniversary Celebration

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>18<sup>th</sup> January, 2021</i>
<b>Platform</b>	: <i>Microsoft Teams</i>

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SPE PDEU Student Chapter felt gratified on completing an illustrious journey of 12 years and organized the 12th Anniversary Celebration on 5 December 2020. In this due period, the student chapter worked vigorously on extending its horizons to cultivate and nurture budding petroleum enthusiasts and professionals with premier knowledge. In addition to that, we also organized startling events, workshops, and distinguished lectures were organized.

The event started with an enlightening speech by Shri Rahul Bali, Sponsorship Chairperson, SPE New Delhi Section, and Ms. Sushma Bhan, SPE DSEA Advisory and Co-Chair DETS. The event was also encouraged by the presence of dignitaries from the SPE India Section which included Mr. Peyush Nene, Ms. Priyanka Panigrahi, and Ms. Pallavi Adhikari Chatterjee. Following which Dr. R.K. Vij, Director, SPT, PDEU delivered a speech describing the achievements the chapter achieved and appreciated the chapter members for working relentlessly throughout to elevate the stature of the chapter.

Around 150 people joined from all over the world to celebrate the event. Later, the officers and the executive committee members shared a presentation about the journey so far and future goals to achieve as in what will be the strategy the chapter will follow to lead further.

As the celebration saw its conclusion, all the previous office bearers of the Chapter came forward and shared their thoughts and experience on the working of the SPE PDEU Student Chapter. The chapter celebrated this auspicious moment with complete pleasure and congratulated its affiliated members for their hard work and dedication.



*Dignitaries at the 12<sup>th</sup> Anniversary Celebration*



*Presnt and Former Office Bearers of the Chapter*

# Intern Talk

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 18 <sup>th</sup> January, 2021
<b>Time</b>	: 4:00 PM Onwards
<b>Platform</b>	: <i>Microsoft Teams</i>

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SPE PDEU Student Chapter in collaboration with FIPI, SEG-SPG-EAGE and IADC Student Chapters organized Intern Talk, an interactive session wherein the final year student interacted with the pre-final, sophomores and freshers. The speakers for the event were:

<b>Name</b>	<b>Organization</b>
Anish Singhi	IRS, ONGC
Jhanvi Desai	Reliance Industries
Smit Prajapati	WSS, ONGC
Yashpalsinh Dayma	IRS, ONGC
Suraj Chauhan	WSS, ONGC
Kaushal Dudhat	ONGC
Brijesh Gondaliya	Reliance Industries
Parag Bhoraniya	Essar
Jigar Galsar	IOCL
Dharti Patel	Caliche
Kripal Patel	Gujarat Gas
Hardik Parmar	ONGC
Jenisgiri Goswami	ONGC

The final year students provided insights into the process of selecting a proper internship and then reap maximum benefits from the same. They then elucidated on the prerequisites and qualifications which we require to have in place for that particular intern role. They emphasized the importance of their study and practical tasks. They also addressed the operating atmosphere and situations in accordance with the company's

requirements. They also discussed the significance of internships in terms of campus placements.

The session helped the attendees comprehend both offline and online internship experiences, how to approach different industries for internships through different speakers. The insightful and interactive discussion concluded with a Q&A session.



*Ms. Jhanvi Desai sharing her experience*



*Ms. Jhanvi Desai sharing her experience*

# SPE Week 17.0

*"Success is where Preparation and Opportunities meet!"*

## Day 1 – 5MT

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 8 <sup>th</sup> FEBRUARY 2021
<b>Time</b>	: 6:00pm to 7:30pm
<b>Venue</b>	: Microsoft Teams

SPE PDEU Student Chapter organized the '5MT' event as a part of the SPE Week 17.0 on 8th February 2021. The event emphasized on enhancing the critical thinking and communication skills of the participants. In this event, the participants had to create a PowerPoint presentation on the topic assigned on the spot in the given time constraint. Maximum 2 participants were allowed in each participating team.

The event was judged by Dr. Mary Hepzibah, Assistant Professor, PDEU and Dr. Nilesh Jha, Assistant Professor, PDEU. The participants were allotted their topics and were then instructed to make the presentation. The teams were allotted a time of 5 minutes to make the presentation.

One by one the teams presented their presentations efficiently and confidently given the small amount of time. The presentations were judged on the basis of content, voice modulation and presenting skills by the judges.

Once the presentation round was over, the judges emphasized on the impact of ideal presentations in the corporate world. They also shared their personal

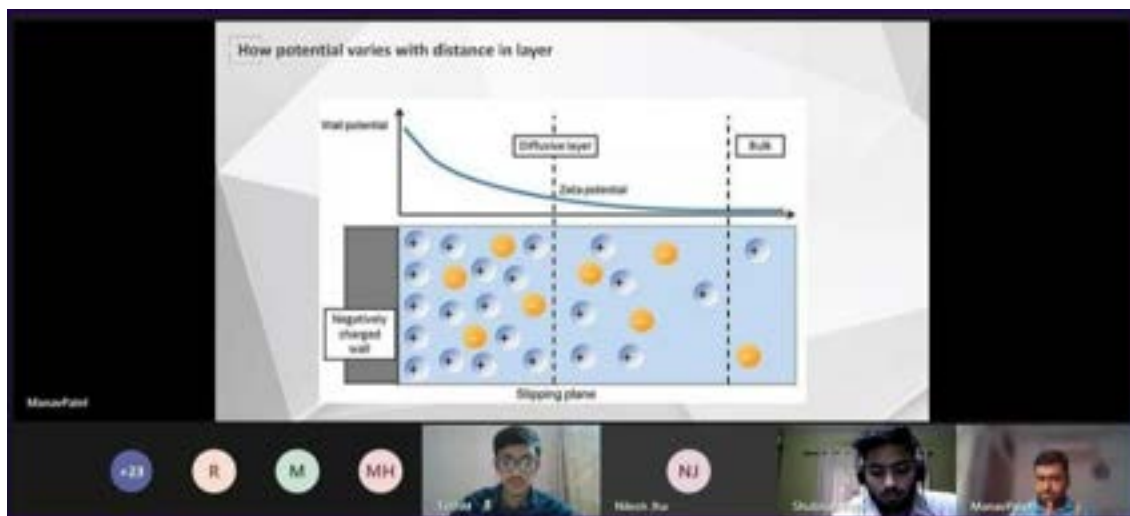


experiences and illuminated the participants over the tips which can be used to deliver a flawless presentation. They appreciated the enthusiasts for their brilliant performance under the tremendous pressure imposed by the time limit.

The event concluded with the declaration of results of the event. The participants of the event were appreciated for their sterling efforts and the winners were awarded with cash prizes.



*Partakers delivering their presentations*



*Partakers delivering their presentations*

## **Day 2 – Social Initiative**

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**Chapter Name** : SPE PDEU STUDENT CHAPTER

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**Chapter Code** : 6035

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**Date** : 9<sup>th</sup> FEBRUARY 2021

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SPE PDEU Student Chapter has embedded service to the society in its core values and in accordance to that we organized a Social Initiative as part of the SPE Week 17.0. The event was held on 9<sup>th</sup> February 2021 wherein committee members of SPE PDEU engaged in events for the benefit of society.

COVID-19 has had severe impact on the on the unemployment rate, economic differences as well as the small-scale industries. The members of SPE PDEU Student Chapter decided to host a social initiative drive as a part of the SPE Week 17.0. The students visited their homes adhering strictly to the protocols imposed in their areas and donated essential goods to the deprived sections. These essential goods consisted of shawls, old clothes, masks sanitization products, food grains etc. There was a feeling

of joy and a sense of belongingness among the people while receiving the gifts and they whole heartedly thanked the students.

The members too were extremely happy and content seeing the people so happy receiving goods that were termed essential by them. The Chapter will continue the practice of assisting the society and individuals in these trying times.



*Committee member distributing essentials*



*Committee member distributing essentials*

### **Day 3 – Research Paper Workshop**

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 10 <sup>th</sup> February 2021
<b>Time</b>	: 6:00pm To 7:30pm
<b>Venue</b>	: Microsoft Teams

SPE PDEU Student Chapter aims to provide each affiliate with opportunities for personal and professional development through the

amalgamation of events around the year including distinguished lectures, workshop, seminar, a plethora of contests with the sole purpose of bridging the gap between industry and academia in its effort came with Research Paper Workshop organized on 10th February 2021, as a part of SPE WEEK 17.0.

The workshop was conducted by Mr. Harsh Patel, alumni of School of Petroleum Technology '16 Batch. He currently works as Process Data Engineer at Shell Business Operations, Chennai.

Mr. Harsh began the workshop with a brief introduction on what are research papers and their significance. He also explained the differences between a research paper and a review paper.

Moving forward with the session, Mr. Harsh threw light on key points to be kept in mind while preparing a good research paper wherein he included points like correct methodology to be followed, importance and correct usage of references, reduction of plagiarism, and concluding a research paper. He also discussed ways to improve the research paper and how we can present our technical papers in an impeccable manner.

As the workshop came to he emphasized on the fact that the students should actively participate in student chapter activities as it benefits their overall growth and provides them a pathway to connect to industry experts.

The enlightening and knowledgeable event saw its end with an interactive Q&A session and vote of thanks by the Chapter officers.





Mr. Harsh explain the methodology of writing a research paper



Participants asking their doubts to Mr. Harsh

## Day 4 – Treasure Hunt: Puzzle Solving Competition

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>11<sup>th</sup> February 2021</i>
<b>Time</b>	: <i>5:00 P.M. Onwards</i>
<b>Venue</b>	: <i>Microsoft Teams</i>

The SPE PDEU Student Chapter organized the “Treasure Hunt” as part of the SPE Week 17.0 on 11<sup>th</sup> February 2021. The event was held on the online platform Microsoft Teams and was invigilated by the core committee members of SPE PDEU SC. The competition fostered the analytical and creative thinking skills of the participants within limited time frame. More than fifteen teams participated and a maximum of two members were allowed to form a team.

The event was outlined in such a way that in the first-round participants were tested with basic Aptitude Based questions and the second round focused fundamentally on the technical aspects of the Oil & Gas Industries. The fervor and enthusiasm displayed by the competing teams kept the liveliness high throughout the event.

The event was brought to an end by the announcement of winners. All the participants were appreciated for their dedication and genuine efforts exhibited during the competition.



*Participants being briefed about the rules of the competition*

## Day 5 – Decoding the Disaster: Problem Solving Competition

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>12<sup>th</sup> February 2021</i>
<b>Time</b>	: <i>4:00 – 6:00 P.M.</i>
<b>Venue</b>	: <i>Microsoft Teams</i>

SPE PDEU Student Chapter had organized an event “Decoding the Disaster: Problem Solving Competition” on 12th February 2021, Friday as a part of its SPE Week 17.0.

Mrs. Namrata Bist who is actively involved in training and consultancy programs related to City Gas Distribution, Assistant Professor, PDEU and Dr. Amit Verma who has researched immensely in the fields like Hydraulic Fracturing, Foam fluid and Petroleum Data Analytics, Assistant Professor, PDEU presided over the event as an esteemed panel of judges. The event was associated with real-life problems faced in the oil and gas industry history. Teams were asked to make a PowerPoint presentation one day before the event based on the industrial accidents which have occurred in oil and gas industry including the likes of Deepwater Horizon Oil Spill and Piper Alpha platform disaster.

Teams submitted their presentation and delightfully elaborated it in front of our esteemed panel of judges. On execution of each team presentation, they were asked value imparting questions that can help them to encounter a similar situation in the future by judges. Judges empowered each team with correct usage of technology to prevent further incidents in the future.



Towards the conclusion of the event remarks were given by the judges to participants to make their presentation look more captivating.



*Presentation by a participant*



*Judges interacting with the participants*



## Day 6 – RetroSPEct: Alumni Interaction Session

<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: <i>6035</i>
<b>Date</b>	: <i>13<sup>th</sup> February 2021</i>
<b>Time</b>	: <i>6:00pm to 7:30pm</i>
<b>Venue</b>	: <i>Microsoft Teams</i>

The SPE PDEU Student Chapter organized 'RetroSPEct: Alumni Interaction Session', the final event of SPE Week 17.0. The event was an alumnus meet where the alumni reconnected with the juniors and celebrated their success and achievements. The alumni provided their guidance and interacted with their juniors as well as the freshmen. They provided insight into the petroleum industry and motivated the students in their future career life.

The Alumni arrived at the virtual platform at 6 PM, where they greeted and welcomed. The meet started with the alumni giving their introductions followed by their past roles in the SPE PDEU Student Chapter. They then explained their current job roles and insights into the industry. They then interacted with the juniors who asked them questions about their experiences in the chapter and crucial job interviews. There were questions related to the current placement opportunities, the future of oil and gas, the need to pursue higher education.

It was followed by a short informal quiz that was prepared by the organizers based on popular culture. The quiz was followed by a short video made by the chapter members on college life and events conducted by the alumni.



*Alumni sharing their experiences*



# Panel Discussion on Hydrocarbon Prospectivity in Kachchh Onshore and Offshore Basins

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<b>Chapter Name</b>	: <i>SPE PDEU STUDENT CHAPTER</i>
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 18 <sup>th</sup> to 19 <sup>th</sup> February, 2021
<b>Platform</b>	: <i>Kachchh University</i>

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Kachchh with an area of 45,691.895 square km is the largest district of India. Kachchh District is surrounded by the Gulf of Kachchh and the Arabian Sea in south and west, while northern and eastern parts are surrounded by the Great and Little Rann (seasonal wetlands) of Kachchh. The Kachchh landscape comprises an array of tectonic geomorphic elements and is a manifestation of uplifts and residual depressions. This has resulted the area being well renowned across India as a research hub.

Kachchh basin has significant reserves of oil and gas which can be extracted profitably and in turn contribute to reduction of import of crude oil from OPEC countries. It is estimated that by 2024, production will begin in the Kachchh basin and the government has granted permission for the same.

The panel discussion on the Hydrocarbon Prospectivity in Kachchh basin was attended by highly respected dignitaries from ONGC, PDEU, SPE PDEU Student Chapter and the University itself. The Panel Discussion primarily revolved around the surveys and researches that have been conducted since a past few year and the results which they yielded. It was stated by the research scientists of Kachchh University that the basin holds around 7 million cubic meters of estimated Natural Gas reserves. Dr. R. K. Vij, Director, SPT PDEU and Advisor ONGC Ltd., congratulated the research team for their find and stated that this is effort done by Kachchh University and PDEU laid another important milestone on the country's road to Energy Security.

Dr. Bhawanisingh Desai stated that we presently we obtain large amount of energy from fossil fuels and much of it is imported from foreign countries despite India having a huge number of reserves. So to maximize our production and reduce the cost factor of imports, the government has permitted exploration here. He also mentioned that the mountain rocks near Bhuj-Mandavi highway and Jara-Jumara rocks play an important role for exploration of this reserves.

The Panel Discussion concluded with moderator delivering a vote of thanks to all the panelists.



*Inauguration Ceremony of the Panel Discussion*



*Dignitaries at the event*





# Guest Lecture on “Transition of India Towards a Gas Based Economy” by Shri Rahul Bali

*“Power has only one duty-To secure the social welfare of the people.”*

<b>Chapter Name</b>	: SPE PDEU STUDENT CHAPTER
<b>Chapter Code</b>	: 6035
<b>Date</b>	: 27 <sup>TH</sup> March 2021
<b>Time</b>	: 5:00 PM Onwards
<b>Venue</b>	: Microsoft Teams

SPE PDEU Student Chapter hosted a guest lecture on 'Transition of India towards a Gas based Economy' which was delivered by Shri Rahul Bali. He presently works as General Manager at ONGC and has an illustrious experience of over 31 years in the oil and gas industry, as well as strategic communications, project management, finance, and the automotive industry. He also serves as the Section Chair at the SPE New Delhi Section.

Shri Rahul Bali began the lecture by recounting his previous experiences in the industry, accompanied by a thorough clarification of the nature of energy transformation and India's current energy consumption situation. The data depicted the various resources as well as the amount of energy produced by them. The data revealed that there was much potential for meeting the energy demand through Natural gas.

Dr. Bali then went on to discuss the different challenges that India faces in transitioning to a gas-based economy, as well as discussed, the potential solutions.

The cost of natural gas output, pipeline structure, and storage facilities were the main issues addressed. He explained that the dilemma can be solved by decentralizing monopoly power which covers both the right to manufacture and the export of natural gas.

Shri Rahul Bali concluded his presentation with a quote by J F Kennedy, "It is not our wealth that built our roads, but it is our roads that built our wealth", wherein he cleverly compared the transportation of fuel resulting in an increasing economy.



*Shri Rahul Bali explaining the Energy Consumption Scenario of the country*



*Shri Rahul Bali interacting with the attendees*