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The First

SPE Norway magazine

To gather members
To share knowledge

Lower P&A Costs

The Role of Geomechanics in Simulation

Organisations don't Innovate—people do

NPD: In it for the long haul

Note from the Editors

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...and the long awaited summer has arrived. This issue of our magazine is very light and includes general reading

Inside this issue

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The electronic version of this Issue and previous Issues are available on SPE Norway website.

Front cover: Tor Landbø Opseth, Lundin Norway

Editorial content

SPE Oslo Young Professional Technical Presentation

On April 26th 2016 the SPE Oslo YP committee organised a technical dinner presentation at Olivia Aker Brygge. Dr. Branimir Cvetkovic gave a talk about Modelling a Naturally Fractured Carbonate Reservoir with FMI Well Data and gave valuable advice to the Young Professionals from his own extensive career in the hydrocarbon industry on how to cope with the difficult job market in the current low oil price environment. We are grateful to Branimir for his very interesting presentation and his willingness to share his experience with the young professionals. The presentation was well received and we look forward to another technical presentation in the upcoming SPE season.

Student Young Professional Quiz Night at the University of Oslo

On April 15th close to 50 students and young professionals met for the annual quiz event. The quiz had an oil and gas theme and contained questions from engineering to geosciences and general industry knowledge. It was a great success and we thank the SPE Board and our sponsors for financial support to make this evening happen. We all look forward to the next quiz night.

Both texts provided by Steven Mueller, SPE YP Oslo Chair

SPE Oslo section holds Lunch & Learn on CO_2 status in Norway

In May, SPE Oslo hosted a session on the status of CO_2 in Norway and how CO_2 could be used for enhacing production of hydrocarbons. Mr Svein Staal Eggen, Senior Advisor from Gassnova, introduced the status and projects Gassnova is working on while Gudmund Olsen, Manager Reservoir Engineering, from AGR, presented the possibility of CO_2 storage and EOR . Presentations from the session are available on request—please contact Maria Djomina (maria.djomina@agr.com).

SPE Oslo members gathered on Wednesday, June 1st at Restaurant Olivia on the boardwalk at Aker Brygge to learn more about the Pil & Bue and Ivar Aasen field development projects from Erik Oppedal of VNG Norge (Pil & Bue Development Project Manager) and Marius Aardal of Det Norske (now Aker-BP) (Investor Relations Advisor) respectively.

The theme of the tech evening was to have two to three small to mid-sized E&P companies present in Norway to provide a walk-through of the life of a field development project from field discovery to eventual production. VNG Norge's Pil & Bue field development project is currently approaching decision gate two (DG-2), concept select followed by FEED and FID, where the Ivar Aasen field development project is currently under execution and construction approaching DG-4 (field start up) by December this year.

Erik introduced VNG AG and VNG Norge to the audience setting the scene as to how the company has established itself in Norway and eventually making the discovery of the Pil & Bue neighbouring reservoirs in 2014. Being the second largest discovery on the NCS in 2014 and exceeding all expectations, decision was rapidly taken to proceed with finding a concept given that the discovery proved economic. Erik walked the audience through the steps VNG Norge and partners have taken and are currently taking to bring the field to life by year 2020/21. Significant data collection during the exploration stage was highlighted as being key to optimising the concept that will be taken forward from DG-2. In the short time since discovery, many challenges have been overcome already, but there are still many more to come and the project organisation shall grow in order to meet these.

Marius presented the execution stage of the Ivar Aasen field development after the development concept was chosen at DG-2. Development drilling is currently underway and the wells that have been delivered to date are amongst the best in their class for both drilling and completion activities on the Norwegian Continental Shelf. An overview of the facilities was presented and highlighting how many people and global locations are involved for the planning, delivery and construction of these. At the time of presenting, the topsides were ready for shipment from Singapore with the jacket already in-place in the field. Given the complexity of the project and the many variables involved, the key message from Marius was that after concept selection, good planning upfront has assisted this major project in getting to it's current position without failure and is on track for successful implementation on time and within budget constraints in December 2016.

We thank both Erik and Marius again for their very informative presentations and wish both companies best of luck with their projects in the future.

Text by Christopher Trzeciak,
Senior Drilling Engineer, VNG

SPE Bergen has elected a new Chairman of the Board

SPE Bergen Section has elected a new Chairman of SPE Bergen Board! Brynjulv Kvåle, Customer Service Manager in Altus Intervention has 20 years of industry experience and a number of years in SPE. He will be leading our local section and further promoting SPE spirit in Bergen. We look forward introducing our new board in the upcoming issues of The First Magazine.

Annual SPE Bergen sailing with Statsraad Lehmkuhl

SPE Bergen Sailing with Statsraad Lehmkuhl is one of the most important industry networking events in Bergen and this year it took place on the 26th of May. This year's sailing event has gathered a full boat of industry professionals. With that, seafood and a fantastic weather - not more you need for a great networking event. SPE Bergen would like to thank those who took time to participate and further support our section's work.

SPE International HSSE-SR Conference

The 2016 SPE International HSSE-SR Conference was held 11 -13 April in Stavanger. 800 participants from 53 countries and 280 companies, together with a bunch of volunteers, made this a remarkably successful event. Among many accomplishments, the leadership team was significantly diversified with more women serving in leadership roles than in the past. Across the Executive Committee and Program Committee there were 65 women of the 160 member team.

Three Norwegian universities participated in the 2016 PetroBowl Europe Regional Qualifier, which had an impressive number of 23 contesting teams. While the University of Bergen was beat by Delft University, and NTNU got knocked out in the quarter final, Stavanger University became the first Norwegian team ever to win the qualifier. They will advance to the PetroBowl championship at the SPE Annual Technical Conference and Exhibition in Dubai September 26th.

The International Association of Oil & Gas Producers (IOGP) presented Muriel Barnier of Schlumberger with the Outstanding Young Professional Award. Barnier's winning video presentation focused on how the HSE for Youth program, which she developed and manages, helps share the industry's experience within a wider community to keep people safe and make the oil and gas industry more acceptable and sustainable to the wider world. In addition to developing the Schlumberger HSE for Youth program, she has coauthored five SPE papers and has two master's degrees and a bachelor's degree, all with highest honors, each time graduating as class valedictorian.

From left: Jon Oscar Spieler, Madhan Nur Agista, Camilo Andrés Cárdenas Medina, Sindre Forsetløkken, Jugal Bodawala.

Photos taken by: Helle Navratil

More than 200 guests enjoyed the world-class barbecue with drinks, entertainment and music when SPE Stavanger hosted the annual BBQ Dinner and Dance Party May 27th at the new and beautiful Clarion Hotel AIR close to Sola airport.

Island Offshore was awarded the prestigious Oilman of the Year for their important role in increasing the profitability on the NCS through Light Well Intervention.

The following individuals were also awarded:

- Engineer of the Year:
  Per Atle Flytlie, OMV Norge
- Young Engineer of the Year:
  Rufat Babayev, Statoil
- PhD Student of the Year:
  Mahmoud Khalifeh, UiS
- Master Student of the Year:
  Håkon Sunde Bakka, UiS
- Bachelor Student of the Year:
  Ivar Wathne Oftedal, UiS

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The Role of Geomechanics in Simulation

by Tim Wynn, Lead Geologist, AGR

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Lead Geologist and

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The relevance of geomechanics

Reservoir simulations are performed using industry standard software packages that utilise finite difference calculations of changes in key parameters (saturation, flow, pressure etc.) within and between cells at certain time steps. These calculations usually treat the rock properties such as porosity, and permeability as constant in any given cell throughout the simulation. Geomechanical models can allow some of these parameters to be changed in response to deformation imparted during the production / injection operations.

An important element of understanding the effects of geomechanics on a reservoir is the effective stress concept. This concept has a number of forms with varying degrees of complexity but at its simplest, the stresses acting on a rock at a given point in time and space can be defined as the total stress acting on that point (from gravitational and/or tectonic loading) minus the pore pressure. Therefore, changing the pore pressure during reservoir development will change the effective stress which in turn may lead to deformation and changes in other material properties such as porosity or permeability.

Rocks can deform in a variety of ways which are dependent on the material properties, the stress state during deformation and the rate of deformation. The largest distinction is between recoverable deformation (elastic behaviour) and non-recoverable deformation (viscous or plastic deformation). In very simplistic terms, most rocks will deform elastically at low stress levels or with small strains and viscous deformation occurs at higher stress levels or larger strains. In terms of timeframes relevant to geomechanics the two extremes are small scale, rapid and large changes in pore pressure and stress that can be induced during drilling or stimulation operations vs. the much larger scale, longer timeframe changes in pore pressure and stress during tectonic deformation. Reservoir development effects relevant to simulation sit in-between these two extremes of scale with the potential for field scale changes over 10's or even hundreds of years.

Key geomechanical material properties in simulations

The key material properties used in simulations that are potentially affected by geomechanics are compressibility, porosity and permeability. There is a further distinction between these values in rock matrix and open fractures. Matrix compressibility is the inverse of bulk modulus (K_m) which is a key component used in the elasticity equations to relate stress and strain in the Earth under stable conditions. K_m can be measured relatively accurately during hydrostatic loading experiments in the laboratory. At the field scale, the total bulk modulus (K) may vary due to a number of other factors such as variations in porosity and the presence of open fractures. During changes in reservoir pressure, bulk modulus, porosity and permeability can all vary due to the changes in the effective stress load borne by the rock system (matrix plus fractures).

Geomechanical processes during production or injection

If we imagine a typical gas bearing sandstone reservoir undergoing depletion we can qualitatively assess the effects of that depletion on the rock system. As the depletion progresses, the effective stress increases. Initially, the matrix and any open fractures with deform elastically, matrix porosity will decrease by an amount controlled by the strength of the rock. This porosity reduction will probably also reduce the matrix compressibility. This effect is mirrored in any open fractures but the magnitude is more marked with large changes in fracture compressibility and porosity expected during early depletion. Matrix permeability may change (i.e. decrease) during early depletion but the effects are often minimal. Fracture permeability is a cubic function of fracture aperture (which also controls fracture porosity) so any open fractures may see a large drop in permeability during early depletion. This effect assumes that the fractures are primarily affected by stresses acting to close the fracture normal to its orientation. If shear stresses acting parallel to the fracture are also considered, these may act to slip the fracture and maintain or create new permeability pathways. So far in our example description, these

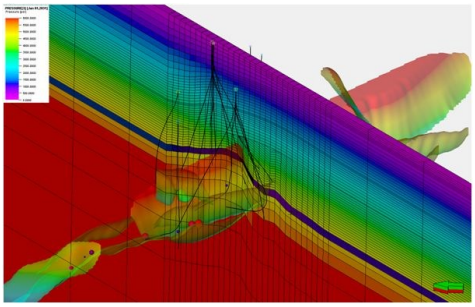
strain effects are largely elastic (i.e. recoverable) in the matrix and a combination of elastic and plastic (i.e. non-recoverable) in the fractures. As depletion progresses further the effects on the matrix may become more marked with the potential for plastic deformation (compaction) occurring. This can lead to significant changes in porosity as seen in many depleted chalk reservoirs although the relationship to permeability is less obvious. In some cases the permeability is not reduced as much as expected. This could be due to slip on existing fractures or the creation of new shear fractures as the effective stresses exceed the shear strength of the rock. Some of these shearing events may be large enough to create earthquake events.

In addition to the potential for changes in the reservoir itself, there are also possible changes in the overburden. Even if the reservoir rock is strong and will only deform elastically during any planned depletion, weaker rocks and/or faults and fractures in the overburden may respond to the strains by deforming plastically. In extreme cases where there is significant reservoir compaction, this can lead to significant surface subsidence and earthquakes in the overburden (e.g. Groningen Field).

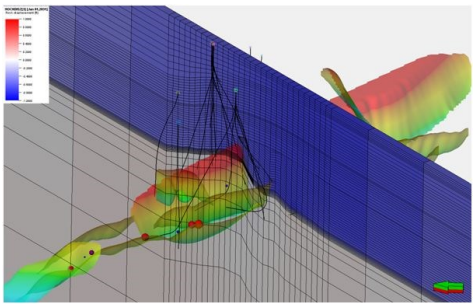
EOR, steam flooding, water injection or CO_2 disposal operations can not only induce similar changes to those described above but there is the added effect of thermal stresses affecting the near wellbore environment around injectors. Where cooling can occur around water or CO_2 injectors, contractive strains will cause an increase in tensile stresses around the wells. This may lead to a local reduction in the tensile fracture gradient meaning fracturing of the formation (or the overburden) is more likely during continued injection. This effect is occasionally exploited during water injection to increase injection rates and conformance but it may lead to unwanted injection pathways if it is not properly controlled. Conversely, during steam injection, the compressive stresses may increase as well as the pore pressure leading to material failure from shear.

How to model geomechanical processes

The practicalities of implementing these changes in reservoir models can be addressed through coupled simulations. Initially, data should be interrogated to determine whether there are relationships that may warrant geomechanical modelling. Some examples are; (open fractures controlling mud loss intervals or PLT inflow points, measured changes in reservoir porosity or permeability in later wells vs earlier wells or injection water with tracers shortcutting to producers via fractures. Geomechanical simulators such as Visage, Elfen or Comsol utilise implicit or explicit finite element formulations where the stress, strain and geomechanical property changes in the reservoir are tracked as material properties and/or changes in the grid cell dimensions. Two way coupling allows for output from a predefined simulator timestep (temperature, saturation, pressure) to be used as input to a geomechanical simulation. After the geomechanical simulation, the reservoir compressibility, porosity and permeability properties can be updated either via simple correlations relating to the geomechanical model parameters or to more sophisticated constitutive material property models. The next reservoir simulation timestep is then performed using these updated properties and so on.



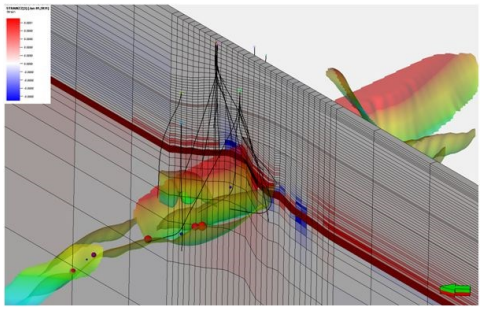
Modelled maximum depletion in a producing gas reservoir (psi). Larger cells with horizontal layers on the edges of the grid are part of the geomechanical model buffer zone. Faults are coloured by depth.



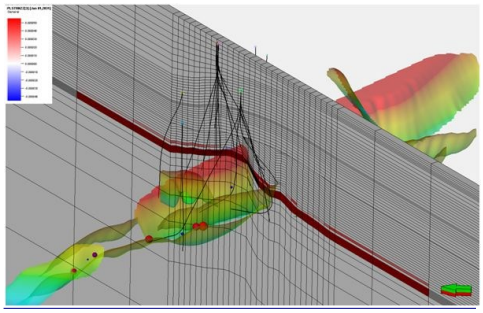
Vertical displacement (feet, blue is subsidence) above a gas reservoir at maximum depletion.

To sum it up

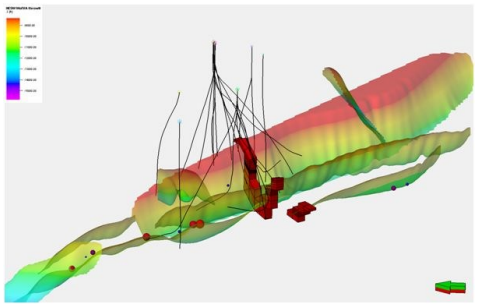
In summary, where the amount of depletion / pressurisation in a reservoir is low or the expected strains are small, it is unlikely that coupled geomechanical simulations are required. However, where the reservoir pressure changes are expected to be large or the reservoir +/- overburden may be particularly sensitive to the planned operations, coupled geomechanical modelling should be employed to investigate the potential effects and provide bounds on parameters such as production or injection rates and final pressures at abandonment.



Elastic (recoverable) strain associated with maximum gas depletion. Red is compressive, blue is dilational.



Plastic (permanent) strain associated with maximum gas depletion. Same scale and colour key as elastic strain picture. Note that most plastic strain is restricted to the reservoir interval (compaction).



Fault related plastic shear strain (red = zero) and some fault related microseismic events within the reservoir interval at the time of maximum gas depletion.

In it for the long haul

by Astri Sivertsen, Norwegian Petroleum Directorate (NPD)

In a world of dwindling petroleum resources, Norway is a lucky exception. More than half of its oil and gas is still waiting to be produced.

This year marks the fiftieth anniversary of the very first exploration well spudded on the Norwegian continental shelf (NCS). Since production began in the early 1970s, the oil and gas industry has contributed more than NOK 12 000 billion in current value to the country's gross domestic product. Roughly 100 fields have been brought on stream during these last four decades, and the petroleum sector has become Norway's largest, in terms of government revenues, investments and export value.

Eighty-two fields were in operation at the end of 2015, compared with 51 ten years earlier. This illustrates the massive development activity that has taken place in recent years.

From production started to the end of 2015, the NCS has yielded 6.9 billion standard cubic metres - over 43 billion barrels - of oil equivalents. According to the Norwegian Petroleum Directorate's estimates, the NCS contains a total of over 14 billion scm oe petroleum.

"More than half of the resources on the Norwegian continental shelf have yet to be produced. This provides a basis for continued oil and gas production for many decades to come," says Bente Nyland, director general of the NPD.

At the turn of the year, 53 companies were involved on the NCS – twice as many as in 2000. New players mean greater diversity, which in turn may spur new and innovative ideas, and thus contribute to further discoveries and enhanced value creation, she adds. We may also see more companies joining forces to strengthen their positions, like the recent merger between Det norske and BP Norge.

The petroleum industry is currently under pressure from low oil prices and high costs, and Nyland sees a tendency for companies to prioritise short-term earnings over long-term value creation.

Bente Nyland, director general of the NPD, is upbeat about the future of Norway's oil and gas industry. (Photo: Emile Ashley/NPD)

She does, however, acknowledge that the industry has invested a lot of effort in increasing efficiency, and that we are beginning to see results in the form of lower costs. For a selection of fields currently being planned, the cost estimates dropped 20 per cent from the autumn of 2014 to the autumn of 2015, and has since continued to fall.

Furthermore, oil prices have nearly doubled since the beginning of this year. But experience tells us that the industry will probably need a couple of years to gear up to full speed, the director general observes.

Nearly 3 billion scm oe – 20 per cent of the total resource base on the NCS – are still to be discovered. Almost half of this volume is believed to lie in the Barents Sea, and one fourth in the Norwegian and North Sea respectively. As described in the NPD's Resource report of April this year, liquid is likely to account for about half of the total undiscovered resources. The estimate for liquid is highest in the Barents Sea and lowest in the Norwegian Sea. Where gas resources are concerned, the estimate is significantly higher in the Barents Sea than in the other parts of the NCS.

"The Barents Sea has become a very promising petroleum province," says the director general, and refers to the recent, 23rd licensing round where all ten production licences are located in this area. For the first time since 1994, new exploration acreage was made available to the industry, and the new blocks in the southeastern Barents Sea generated a lot of interest. In addition to three production licences in the new area, new blocks near the most promising, previous discoveries were also awarded.

In the southeastern Barents Sea blocks, licensees are required to drill four exploration wells within three years. The first well is planned for next year already.

"The drilling of new wells in this region will provide us with valuable knowledge about the Barents Sea. Hopefully, it will also strengthen the resource base for future developments," Nyland concludes.

Organisations don't innovate—people do

by Katinka R. Kolsaker, Senior Advisor and Partner (translated by Silje Graffer)

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Why innovate? The answer is short and brutal. Changes are increasing in both scope and speed. If things never changed, businesses and organisations could continue to do what they are currently doing, and we wouldn't need to think and work differently. We wouldn't have to worry about situations where new players suddenly appear and jerk the rug from under the feet of established organisations and business areas. We could have taught ourselves new technology when we were tired of the old, instead of having to learn something new when you've just gotten used to the previous. Rapid changes makes us vulnerable. We are reminded about our privileged position when our greatest concern is that our new environmentally friendly diesel-car turns out to be a serious pollution source instead during just one short and cold winter.

Some businesses make a conscious decision to keep changing. It's easy to forget that choosing not to change is also a decision. ROI is usually associated with the risks of investing in assets - meaning "return on investment". However, "risk of ignorance" would also be a correct interpretation of the acronym. Managers are not only responsible for their own decisions, but also for the questions they did not ask, relevant thoughts they left in the back off their minds and the decisions they didn't execute. Thankfully, help is at hand - there's a solution that goes against these processes: Employee-driven innovation is about making use of the whole organisation in order to make it equipped to challenge itself, innovate and be better prepared for the future. To open up innovation for all competent minds is smarter, more collaborative and leaves more room for innovative solutions than having only a small group of employees, managers and maybe a few consultants responsible for innovation.

Research on "Workplace Innovation" and employee-driven innovation teaches us how to involve the entire organisation in challenging, renewing and developing every aspects of the business, and how to make management comfortable with innovation management . In collaboration with NTNU (The Norwegian University of Science and Technology) we have transformed research and findings into a practical training methodology for the workplace and identified four priority areas for businesses that want to succeed with "Workplace Innovation" and employee-driven innovation.

Innovation at the workplace - four factors that make us innovative at work

A study by IRIS / NTNU looks at a wide range of twenty organisations, which all have in common that that they succeed with involving employees in renewing, innovation and improvement. From this study and from the participants in the innovation courses we run for organisations, we have discovered some common features worth sharing:

1) Competence in Innovation is the 'you need to smile'-course of our time.

The definition of Innovation is *to develop new solutions that are so attractive and useful that they are selected and are applied.* Only one out of four major organisations in Norway think they succeed in some or a greater degree when it comes to innovation. Many have a false start, with an idea and a thought about something that seems to be "smart, exciting and something that's definitely achievable." Even though you could imagine such a solution and you enjoy the challenge, the chances are that you are unlikely to succeed. However, if the end goal is rooted in a need for change based on actual challenges in the business rather than a preconceived idea or solution, the chances for success doubles, according to the research.

Innovation is about far more than just products, services and new technology. It includes everything from how the business is organised, who to collaborate with, to how we communicate and create commitment and engagement to the values and attitudes we choose to promote. At a societal level innovation can be about finding new and effective solutions to municipal structures, solve challenges arising from an aging population, reception and inclusion of asylum seekers and refugees into the Norwegian society and the development of new industries where cornerstone companies downsize and are forced to close

down. MDG (The Norwegian Green Party) define themselves as being on nature's side and refuse to be defined within the more socialist or conservative parties policies on the issue. Thus, we as a society are challenged to think in new ways when it comes to the dimension of party-ideology. When Robert Reich speaks to students about the need for cohesion in the US economy, he is urging them to innovate and contribute to the development of new political and ideological solutions for the country.

Many are - with good reason - unsure how to create new solutions. "Where do you start with innovation and what procedures need to be followed?" Many in Norway remember Jan Carlzon's unrelenting focus on spreading high quality customer service into the SAS organization in the 80s. Competence in Innovation is the 'you need to smile'- course of our time. It is a skill everyone within an organisation need to have at heart if the organisation wants to challenge itself, be able to handle change quickly and improve and renew every component of its value chain.

Many people misunderstand innovation as a trial and error process only. Employee-driven innovation is about equipping people in the organisation with knowledge about innovation and training them to be able to identify needs and develop solutions and new values around creation. When we cultivate the ability to innovate within all levels of an organisation we become more adaptable and sturdy in the face of change. We can develop valuable improvements and in some cases the value added will be formidable. Without having such expertise internally the process of innovation can be costly trial and error experience, or become nothing at all - which in time can mean the end of the business.

2) A culture that discourage or encourage innovation

When it comes to culture we think of how we do things here in our culture. The Swedish author Selma Lagerlöf said that "culture is what is left when you have forgotten what you have learned." Businesses that succeed with employee-driven innovation have some cultural similarities: The culture is characterised by **mutually trusting** relationships, both between employees and in relation to management. It feels **safe** to share knowledge and ideas. Employees identify themselves with the business and experience joy and **pride** in being able to help develop it further. The culture within the business is characterised by **tolerance** about the fact that everyone's different, and that we can all make mistakes and be open about it so that everyone can learn from it. **Openness** is cited as the main factor. Everyone having a good understanding of the organisation and having an expectation of everyone's need to contribute to the development of the business lifts both the ability to innovate and the level of engagement from the employees.

3) A good work- and employee- environment ('Medarbeiderskap') welcomes innovation with open arms

'Medarbeiderskap' is a term that exists in both Norwegian and Swedish, that directly translated means 'Employeeship'. This term is rooted in the Nordic culture where equality, equal worth and democratic mindset are existing qualities and values that are taken for granted both in society and at work. We see managers more like a colleague with some management responsibility than as a distant and elevated position. 'Employeeship' in this sense stands for a human-centred organisation, a mindset focusing on partnership and participation rather than a 'top-down' hierarchical structure.

Good 'Employeeship' means that managers and employees have a shared responsibility for their own development, to develop each other and the business. Employees need room and the possibility to control their own work to see the possibilities, think in new ways and act accordingly. The relationship between autonomy and engagement is evident in businesses that succeed with employee-driven innovation. You yourself might test how creative and innovative you are when you are disengaged and feel like you aren't being listened to. A study conducted by VIRKE (The Enterprise Federation of Norway), shows that entrepreneurs have more job satisfaction than others. This also applies to employees who has the safe space to innovate and develop new projects in their work. Having both the organisation and the employees in development fuel positive ripple effects. Organisations that have succeeded with employee-driven innovation may experience significant additional benefits in terms of increased attendance, productivity and reduced sick-leave.

Employee-driven innovation demands a team spirit where every player helps each other to grow and values their individual strengths. PhD and Associate Professor in Innovation at the Department of Learning at The University of Aarhus, Lotte Darsø, defines competence in innovation as a social intelligence and competence where we are good at cooperation and benefitting from each other's differences. We have experienced innovation team that has failed because they cooperated and communicated poorly and others that failed because they worked so closely that they went into the 'group think' trap. A third danger is becoming so welded and introverted that you as a group disregard involvement of important stakeholders outside the group.

4) A culture of innovation requires innovation in how the management operates too

For managers to encourage their employees to excel at innovation, it is required that managers at all levels have a good understanding of what distinguishes innovation from other processes and projects, and how much more fragile and sensitive innovation can be in comparison to other processes. It is a finely tuned balancing act for managers to stop ideas and innovation that aren't relevant, whilst simultaneously not killing the innovation initiative. We have experienced the horror scenarios where engaged employees deliver dreams and visions for the business and then having to defend the idea in front of a leadership acting like a ruthless courtroom. Other times, we have seen leaders who take the credit for their employee's idea and then end up losing their most valuable employees to another employer where they hope to be appreciated.

The new oil is not in the ocean or deep within the mountains. It is found in the underused resource of employee-driven innovation - we just need new methods of encouraging it.

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Career Planning: Here is What You Should Do First

Text by Alahdal A. Hussein, Petroleum Industry Professional

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Whether you are a university student, a fresh graduate, or a young professional, if you really have a burning desire to create a successful career, and make it to the top in your field, then self-evaluation and self-reflection is the first step to start with.

Don't wonder, and for sure, don't underestimate this, because if you really want to have a successful career, if you want to become an authority in your field, and make it to the top, then you should start it right.

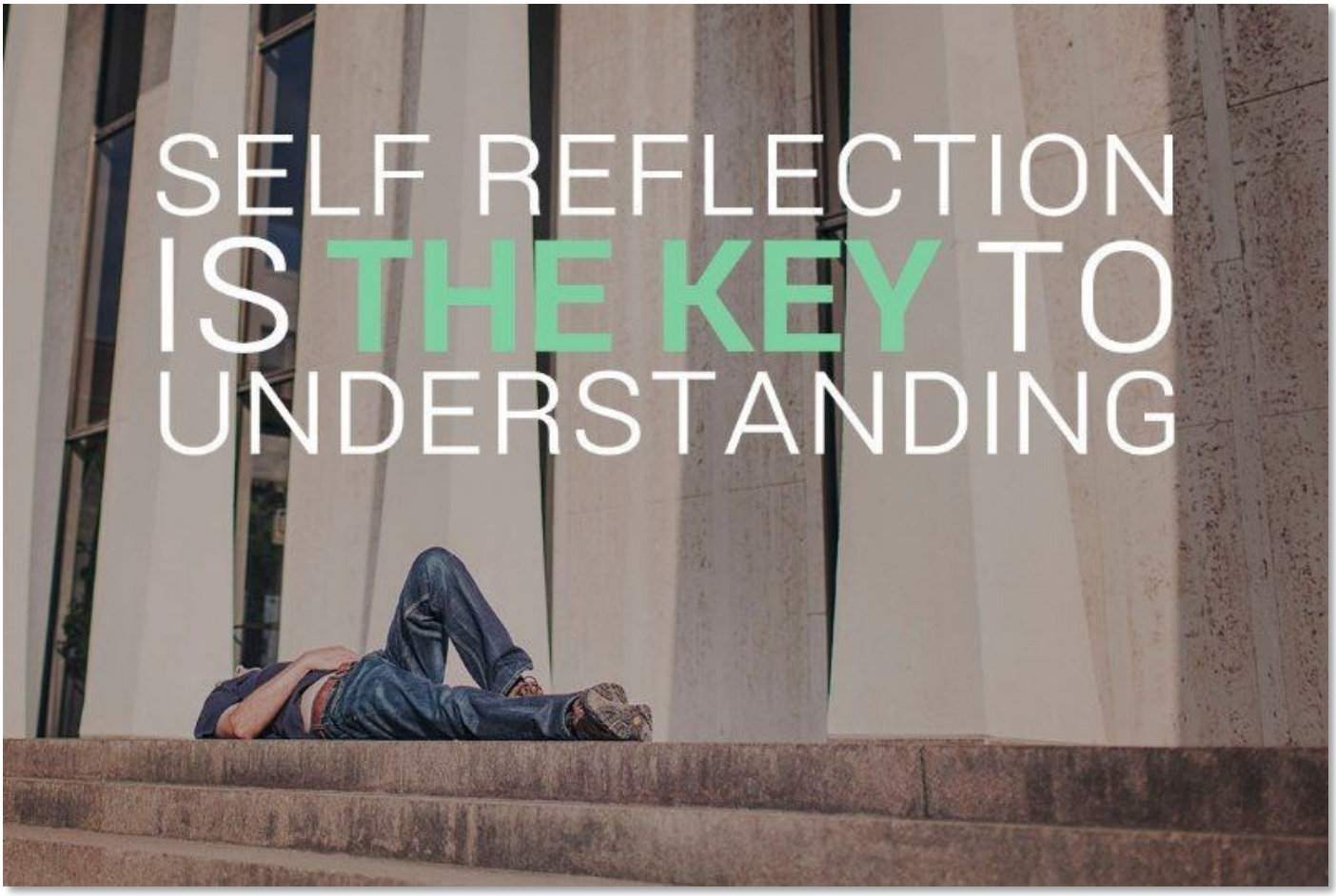
And to start right, you should know yourself better, you should know your strengths and weaknesses, your values and priorities, your skills and competencies, what you are good at and what you are not and what is your passion and interest. And that can only be done through self-evaluation and self-reflection and here is why.

When planning our career path, many of us tend to make a very big mistake. They do not conduct any self-evaluation and self-reflection to better understand themselves and evaluate their skills, competencies, and learning progress.

They only try to gather some information for the sake of getting things done such as preparing their CV, cover-letter to apply for a job. They don't go in-depth, in an organized way to collect information for the sake of knowing who they really are, what they want and try to make sense of these information to plan and decide their career path.

Whether it is due to lack of time, lack of awareness of its importance, or in worst case not knowing it is something that should be done. They directly jump into preparing a CV and cover-letter, choosing their career path and start to approach companies looking for a job. And that is the biggest mistake they make in their career life.

To understand why it is so, consider the following example. Imagine building a five-story house on a ground that you know nothing about it. You did



little to no research to find out the strength of basis and whether that place is suitable to the type of house you are building or not. Instead, you just jumped directly into the construction phase, building your house on a ground without a proper evaluation of the basis.

By the time you are done, you realize that your house could collapse at any time because of the weak basis. And you end up forced to move and build another one which costs you your time and money. This is exactly the same scenario as building a career path without first doing any self-evaluation and self-reflection.

Many people out there end up taking a wrong career path, wasting their time and energy because they did not take the time to understand and evaluate themselves, their capabilities and what they really want. And if you don't know yourself intimately, you can't build a successful and enjoyable career.

If you are a young professional or in your mid-career, you still have the time to check if you are in the right direction and improve yourself. And if you are a recent graduate or a university student, it is much more better to do it now, and plan your career the right way instead of wasting your time taking a wrong path and not knowing what you really want.

And if you are unemployed as a result of being laid off or could not secure a job, taking the time to do this self-evaluation and self-reflection will extremely help you to assess yourself, and your progress. It will give you a better picture of who you really are, a picture which maybe you could not see before because you were busy with your work or your studies.

It will also help you gather all the details about your experiences, activities, projects, workshops, training courses and many other things in one place. And all these details will later be used to improve your CV and cover-letter, and build a strong online presence by updating your profiles. And doing so will increase your chances of getting what you want and opportunities coming down your way.

Now, if you are ready to start it right, to discover who you really are, what you really want to be, and build a career based on what you are passionate about rather than what you are told to be or what circumstances made you be, there are some useful reports available to achieve that.

Based on my personal experience, I have prepared a self-evaluation report which discusses the steps used to do self-evaluation and self-reflection. The document lists 19 steps to follow in order to collect the information needed to plan your career and life in general.

Please contact Alahdal directly to get hold of the report.

You can also visit his website where more articles are available within career management, personal development and industry insights.

Cost—Cutting—A Risky Business?

by Nikolai Jørgensen, SPE Oslo Section Treasurer, Trainee Broker in Marsh Energy Practice

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2015 was one of the toughest for the oil industry worldwide, following many good years of high prices for Brent crude.

Norway's situation was no exception, but as an "oil reliant" economy, the impact has been felt. A few examples of the influence of the "crash" of the oil price are:

- significant changes to the number of employees in companies,
- renegotiation of supply contracts and
- shelving of construction projects.

On the 28th of April, The Norwegian Petroleum Safety Authority released their report on Safety on the Norwegian Continental Shelf (NCS) for 2015 entitled: "How secure is the Norwegian petroleum industry?" One of their conclusions was that although the general risk level is much improved compared to 8-10 years ago, 2015 had an increased level of risk compared to 2014. The report acknowledged the contribution of the COSL wave incident to this statistic, but expressed concern with a general increase in risk in 2015, given the industry focus and emphasis on Health, Safety and the Environment (HSE).

From a risk perspective, we encourage The First readers to respond to the following three questions:

1) What are the main challenges, if any, to maintaining acceptable risk levels to petroleum operations in the current cost-cutting environment?

2) In your experience, have cost-cuts led to an increase in risk levels to operations in the past? If so could it happen again?

3) Is an "acceptable" balance between the oil companies and suppliers being upset by the pressures of the current oil price?

Please take the anonymous survey HERE.


GOD SOMMER!

Thank you!


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