IENE – 3rd SE Europe HC Upstream Workshop

Presentation - I Inchenko

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SE Europe Exploration and Production – A short Historical and Personal Synopsis

Ladies and Gentlemen, I have been asked to address the workshop with a few words that express my thoughts on activity within the upstream oil and gas sector in SE Europe.

My purpose for attending this workshop, apart from catching up with co-workers and friends from the past has been to understand how we have moved on in my absence from work in the area for some time and gauge the progress we have made within this important area within the world energy arena.

Although over the last ten years or so I have been involved mostly with projects in the UK sector of the North Sea, my experience in SE Europe goes back to the late 1980's with a company called Enterprise Oil. Enterprise was primarily a UK North Sea upstream oil and gas company which expanded into international projects following various key exploration successes, the jewel being the Nelson oil field currently operated by Shell, which was brought on stream in 1994. Having produced some 470 MM bbl of pipeline oil it is still in production.

Such key successes energized and encouraged the company to step out internationally and in the late 1980's following a farm-in agreement with the Agip (ENI) subsidiary called Petrex, participated in the major onshore Southern Apenninic oil discoveries of Monti Alpi and Cerro Falcone, and with Total in Tempa Rossa, further to the south east on a separate geologic trend. The former two fields comprise the greater part of the Val D'Agri oil complex which currently produces about 85,000 bopd, more than 65% of Italy's liquid hydrocarbons.

The billion-barrel resource potential of these Italian discoveries was considerably in excess of expectations, with carbonate reservoirs in geologically complex terranes. The geologic models we constructed underpinned our enthusiasm to replicate such success further afield. We sought, applied for and were granted licences and became an established operator in the earliest competitive licensing rounds offshore off Romania and Bulgaria and later onshore in Greece and Albania.

The current speakers at this conference have addressed the various different basins and the complex hydrocarbon habitats that are still being unraveled. They continue to yield many surprises in terms of exploration results and carry with them challenges in development and bringing the produced resources commercially, to market.

The past had its own challenges, Enterprise Oil focused on oil, onshore and in shallow water, gas was considered a bit of a nuisance, generally to be avoided. In the Black Sea in Romania Enterprise operated the Doina discovery well in 1995. The well targeted an oil play in Tertiary reservoirs but discovered gas. This gas although supplemented by further discoveries on trend is yet to be commercially produced. First gas, I believe is expected in 2019, nearly 25 years following discovery! Similarly, in Bulgaria, Enterprise participated in the Galata discovery well targeting a carbonate reef, much as in the significant successes that are being made and are attracting attention in the eastern part of the Mediterranean Sea. In this instance too, gas was encountered, not in the reef reservoir objective, but a carbonate sand above, with great disappointment at the time! However, the gas was subsequently developed, the field is still in production and at peak provided about 16% of Bulgaria's gas requirements.

So, let us cross the Adriatic Sea from Italy into Western Greece and Albania, where our geologist's creative ideas anticipated a similar hydrocarbon habitat to the Southern Apennines of Italy. Enterprise participated in the first Greek International Licensing round in 1997 and was successfully awarded two onshore licences as operator. The NW Peloponnesos and Ioannina licences have after more than a decade, been re-awarded and operated by Hellenic Petroleum and Repsol (original award to Energean) respectively. Not only is the geology complex in these areas but acquiring seismic data is difficult within a mountainous terrane and great care has to be taken in all activity because of sensitive and historically important environmental considerations. At the time, Enterprise rose to these challenges, establishing good relations with all the authorities, local stakeholders, an active informative public relations campaign and by going that extra mile and spending that extra dollar to ensure positive outcomes for all sides! When it came to drilling activities, the well sites were planned such that there was zero run off and even rain water was collected for appropriate disposal. In Ioannina, a water well was drilled to monitor any possible changes to the aquifer chemistry. I am sure that the current operators of these licences will be similarly inclined with the ever-growing scrutiny of oil and gas activities and further development of environmental regulations.

Enterprise was unfortunate with the three wells it drilled, in that significant hydrocarbons were not encountered. However, and importantly, the Demetra-1 well drilled over 2001-02 in the Ioannina licence did not reach the 4,500m plus deep carbonate reservoir objective, terminating in the evaporite seal section, perhaps a hundred or so metres short, due to overriding operational constraints. The low oil price at the time and Enterprise's acquisition by Shell meant that we could not build on the progress that had, nevertheless been established. Looking back, I am very encouraged that the company's programme and ideas were very much on the right track. Subsequently, within the same structural trend northwards into Albania, Shell currently operates the block 3 licence where several deep carbonate reservoir oil discoveries along a structural high called Shpiragu have been made which potentially prove the original exploration concepts. This should give ample encouragement to the current licence holders, notwithstanding the technical, operational and environmental challenges.

So, what about the future? We have moved on significantly, responding to world events and modifying our approach and attention. Oil and Gas are back on the agenda, with active licensing rounds and full - cycle operations. Gas is now taking centre-stage and is the focus of activity generated by the discovery of major resources in SE Europe. The significance of carbonate reef reservoirs as in the Zohr find, a game changer for the region cannot be understated! The progress in operational and production technology where the deep water, reluctantly approachable 20 years ago, is now routinely included and reflected in in the licensing picture, future strategies, and acreage on offer seems to be keenly contested, encouragement fueled by the significant potential size of the prize!

As in the past, but with increasing attention to the energy issues resulting from focus on climate change, the pressure towards an ultimate end game of a non-hydrocarbon world economy, coupled with the complexities that geopolitics brings, our business still faces continuing and significant challenges. Oil and gas are still central to world energy requirements and are likely to continue to maintain this stage, with gas becoming the transitional energy source.

Given recent encouraging gas discoveries of world class resource volumes and the position and the importance of SE Europe on the world energy stage, it is of fundamental importance that we maintain momentum, encourage co-operation across the spectrum of individuals, political and commercial entities to over-ride the many challenges of the future that we face.