

# FIXING THE TALENT PROBLEM

Given the growing industry demand for technical talent, managing human capital may well prove to be at least as important as managing physical assets for E&P companies over the next 25 years – and beyond.

Damon Beyer  
Katzenbach Partners LLC  
Houston

BP's temporary shutdown of its Prudhoe Bay oil field in Alaska in early August triggered one of the latest in a series of shocks to global oil prices. BP based its decision on the company's discovery of a minor oil spill caused by a severely corroded pipeline – a discovery that, as one journalist noted, drew attention to "the broader dangers of wear and tear facing the nation's aging energy infrastructure."<sup>1</sup>

But corrosion of a different kind has been eating away at the energy exploration and production (EEP) industry for decades – corrosion of the pipeline for technical talent. And unlike the 16 miles of physical pipeline that BP decided to replace, this problem cannot be fixed in a matter of weeks.

In this article, we briefly outline the magnitude of the talent shortage problem in the EEP industry and offer our perspectives on steps that companies can take, both in the short term and over the long haul, to redress the shortfall. Our recommendations are based less on pure theory and more on examination of some innovative people practices at two companies that are doing a lot of things right in the talent management department – Schlumberger and BP.

## A looming crisis

According to industry prognosticators, the world's energy supply will need to grow by more than 50% between now and 2030 simply to meet the demand created by a moderate, average annual global economic growth rate of 3%. In practical terms, meeting that demand will require locating new fossil fuel deposits in increasingly remote or technically demanding locations, then extracting and processing the deposits with increased attention to growing environmental concerns.

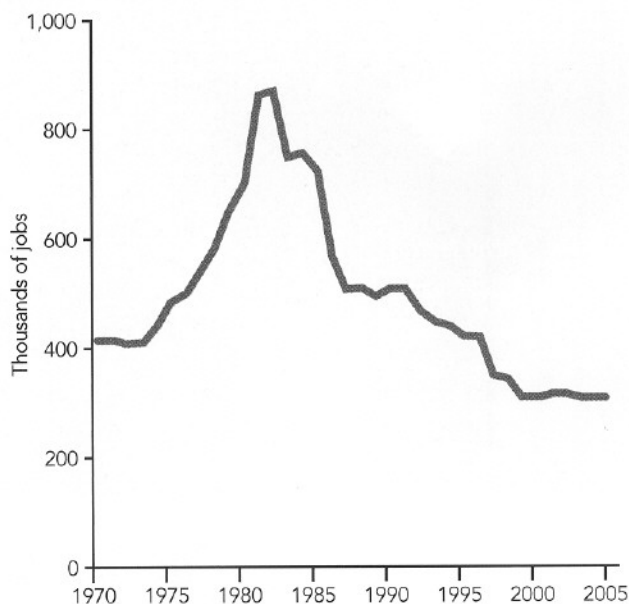
These complex operations require high-level technical expertise that is woefully lacking in the US and Western Europe, and in other markets such as Indonesia, China, and Africa where the demand for such talent is even greater.

<sup>1</sup> Jim Carlton, "Oil Price Surges as BP Shuts Off Big Alaskan Field." *The Wall Street Journal*, August 8, 2006, p. A1.

By "technical talent," we mean people specifically trained in fields such as petroleum engineering, geology, and geophysics. The shifting demographics in the supply of such workers and their potential replacements over the timeframes we are discussing are shocking:

- The average age of workers in the oil and gas industry is 49, compared with an average age in the 30s for other technology-focused industries
- A quarter of US employees in the most scarce EEP skill sets will be eligible for retirement by 2009
- By 2010, there will be a 38% shortage of engineers and geoscientists and a 28% shortage of instrumentation and electrical workers

Fig. 1: US petroleum industry employment



Source: API employment survey, 2005

- Enrollment in critical US undergraduate programs such as petroleum engineering fell 85% from 1982 to 2003. Although most jobs in the industry in this period were created outside the US, it's unlikely that non-US engineering programs will train enough people to fill the global employment gap. The indus-

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try's historical solution to the problem of geographic imbalance – the use of expatriate professionals – has become both politically and economically unattractive

- In addition, cutbacks in EEP hiring from 1984 to 1999 have produced an industry-wide gap in middle management that must be addressed. Most of these positions must be filled by people with training and experience in the areas we are discussing

Most industry executives that we have spoken with are keenly aware that the talent shortage is a critical problem that must be addressed sooner rather than later. More than 500,000 petroleum-related jobs were lost between 1982 and 2000 in the US alone.

This fact, along with increasing global demand for energy and the demographic challenges described above, have led to increased poaching of talent in the industry. The need to retain and motivate existing workers is as important a challenge for most companies in the industry as is locating new talent.

Traditional thinking tends to address this problem with compensation. You need more engineers, so increase your offer to engineers. The problem with relying on this approach is that money alone is not the most effective way to win the war for talent, it's just the most expensive way – someone can always “up the bidding.”

While it is true that better pay packages can attract talent in a tight market, our research confirms that it only levels the playing field temporarily. Companies looking to win the long-term battle for scarce expertise should focus instead on non-monetary levers like exciting career paths, the opportunity to work with good managers, and meaningful work assignments.

These aspects of the work experience promote employee loyalty, long-term motivation, and productivity better than money does – and these combined elements are much more difficult for competitors to copy. Given the growing industry demand for technical talent, managing human capital may well prove to be at least as important as managing physical assets for EEP companies over the next 25 years – and beyond.

### Making talent a strategic priority

Just as a successful business strategy is more than the output of a company's annual planning process, a successful talent strategy is more than the sum of typical HR best practices. Four principles separate the average EEP from the innovative one: the best companies attend to the middle “B” players; they manage beyond skills to create “thinking” networks; they invest for the long term; and they pay just as much attention to the informal aspects of organization as they do to formal processes and structures.

It's easy to assume the problem starts and ends with recruiting. In our experience companies with the best talent practices go well beyond the simplistic “hire the best” and “rapidly promote the high potentials” thinking that is commonplace today. Of course tending to the top is important in markets where good people are scarce, but *at the scale of a major oil company, improving the performance of the average employee is worth a whole lot more.*

### Fig. 2: Key issues revealed by API 2005 survey

#### Top 5 workforce issues

Scale: 1 = not at all, 2 = low, 3 = medium, 4 = high, 5 = extremely high

Issues	Average score
Age demographics	4.5
Recruiting challenges	4.1
Skill pool management	3.9
Attraction and awareness of youth to energy industry	3.6
Image of the energy industry	3.6

Source: American Petroleum Institute workforce challenges survey, May 2005

Another oversimplification that is easy to make is that it is all about “the right skills at the right levels.” According to this thinking, performance is certain if your seasoned senior executives spend all their time on strategy and your middle and front line managers work out the details of execution.

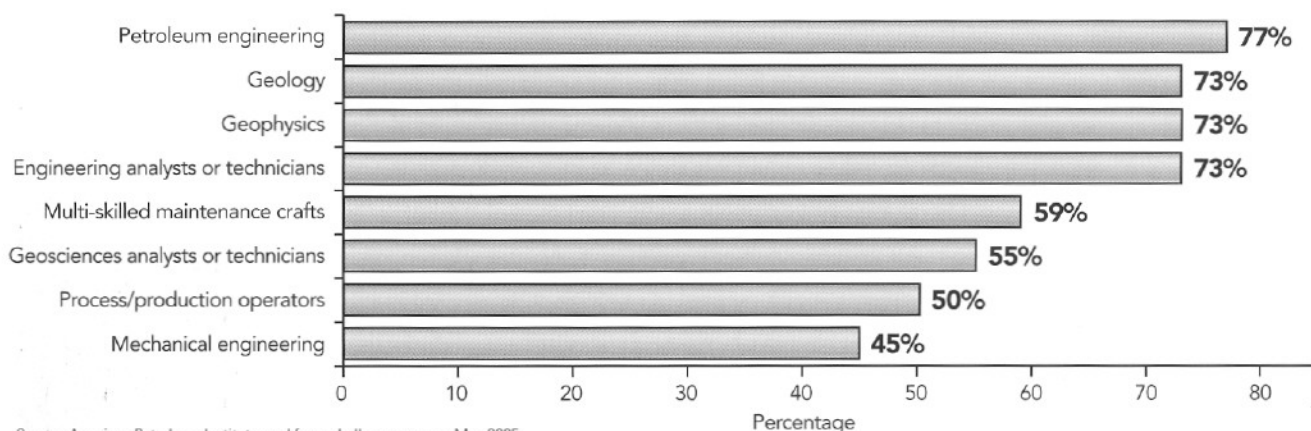
While it is true that the types of problems encountered at the different levels will vary, *finding real solutions in increasingly complex global organizations requires that leaders at all levels balance big picture skills with immediate, practical problem-solving abilities.*

Building on Saj-nicole Joni's research in her book *The Third Opinion*, the most successful talent strategies aim to create highly effective internal networks of “application thinking,” “expert thinking,” and “exponential thinking.”

Roughly speaking, application thinking is the discipline of solving routine problems efficiently. Applica-

**Fig. 3: Key technical skill gaps identified by survey respondents**

**Top 8 scarce skills**



Source: American Petroleum Institute workforce challenges survey, May 2005

tion thinking is most commonly needed on the front lines, e.g. the pump breaks so you get the maintenance engineer to fix it. Expert thinking brings the best experience to bear on more complex problems and creates custom, highly tailored solutions.

Increasingly, the technical ranks of EEP companies are asked to work in this way, applying their technical expertise to find and produce oil and gas in more and more difficult locations. Exponential, or “out of the box” thinking, is the art of seeing very difficult problems from new broader perspectives.

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Historically, management of EEPs has tended to focus on the long-term economic cycles surrounding the company’s portfolio of hard assets. But if they are to grow effectively and profitably, this emphasis will need to shift, or at least expand, to include leadership and technical talent from the most senior levels to the front line.

*Furthermore, the most successful players will recognize that attracting, developing, and retaining the right talent requires a long-term view in an industry inherently plagued by short-term price volatility.* The boom/bust cycles have historically led to overly reactive hiring practices that hurt the depth and breadth of industry talent over the long run.

Finally, the best companies will recognize that getting the most out of the talent they have depends on purposefully reshaping their informal organization – the networks of communication, information, and

knowledge sharing that are not on the formal organizational chart. *Employing techniques to help these networks work better is vital to success* – particularly on the front lines where consistent execution and continuous improvement of application thinking is the name of the game.

The most successful EEP companies will be the few that respond to the global talent challenge with innovative people strategies and human capital management practices that build on these four principles. We now take a brief look at two players that are making steady progress along this path.

### **The Schlumberger approach**

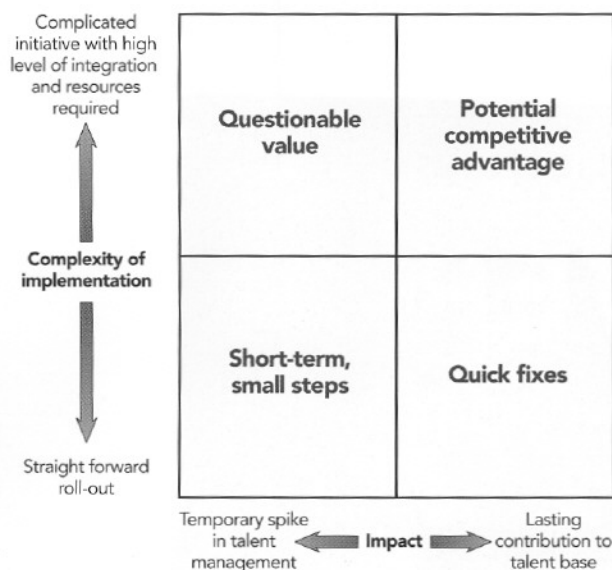
For Schlumberger, talent management is one of the two central strategic drivers for business growth. (The other is technology.) While recognizing that not every solution will scale perfectly to the largest majors, we believe that Schlumberger’s approach to managing its human capital positions the company well to grow profitably along with projected energy demand and offers lessons for the whole industry.

Schlumberger takes the sophisticated view that Human Resources is a strategic asset and not just an internal company function. This allows the company to see its talent pool as larger than its existing employee base. And the company successfully executes against this idea of an expanded supply of talent through its global network of university alliances.

*Human resources as a strategic asset*

*BP’s Front-Line Leader (FLL) Program. . . is based on the idea that the best people to develop training programs for managers on the front line are. . . managers on the front line.*

**Fig. 4: Framework for assessing talent shortage solutions**



Source: Katzenbach Partners LLC

Schlumberger pays a lot of attention to its existing work force. For example, engineers going to work for Schlumberger know they will be receiving the best training – both classroom and hands-on project work – in the industry. All engineers headed for the field, for example, must go through a three-year education program combining both types of training.

Schlumberger also treats its HR positions as strategic roles. High-performers at Schlumberger often are required to do a stint in HR, and an assignment there is viewed as a gold star on a Schlumberger resume.

*University alliances*

Schlumberger decided a decade or more ago to invest heavily in developing local sources of technical talent in the markets they participated in by addressing the supply issue “at the source.” The company’s network of university alliances helps it create a truly global recruiting pool, which allows the company to access the best local talent in dozens of countries around the world. As a consequence, the company has the unique ability to bypass the expat problem by relying heavily on local talent.

One key to the program is Schlumberger’s designation of a number of its high-level executives as company “ambassadors” to 44 engineering programs around the world, including MIT, Kazakhstan’s Kazakh National Technical University, Peking University, and Universidad Nacional Autonoma de Mexico (UNAM).

In addition, the company has a number of initiatives including research alliances, scholarships, and support of women in engineering that promote a virtuous cycle of recruiting and talent identification. This level and breadth of investment is strikingly similar to the relationship top consulting firms and investment banks have with leading business schools.

Schlumberger’s outreach to universities has paid big dividends in terms of the diversity of its employee and management make-up. The company employs people from 140 countries, and 10 different nationalities are represented in 16 of its highest-level executives. While this kind of diversity looks politically correct, its real significance is practical. Diversity pays big dividends recruiting in an industry where most of the growth is outside the US.

Because of its long-term commitment to treating talent as a strategic priority, Schlumberger is very well positioned to confront the talent shortages facing the industry. Our next example, BP, illustrates how one of the major players in the industry handles talent management challenges at one of the most difficult places for a large company – the front line.

**BP winning the battle in the trenches**

As any football coach will tell you, setting the right strategy – calling the right play at the right time – is at

**Fig. 5: Talent management lifecycle**



Source: Katzenbach Partners LLC



best only half the battle. The real challenge is execution. With almost 100,000 employees, the scale of BP's front line execution challenge is enormous.

BP has identified what it calls its First-Level Leaders (FLLs) as the single most critical element in its entire talent base. Getting the most out of these roughly 10,000 managers is obviously a challenge. But BP has developed an informal network of front-line application thinking that, to our knowledge, is unique in the industry.

BP's FLL Program was launched in 2002 and is based on the idea that the best people to develop training programs for managers on the front line are . . . managers on the front line. In our experience the best front-line managers are masters of two highly valuable skills – tactical problem solving and employee motivation. Because of the variety and specificity of problems that FLLs tend to encounter, the ability to share “best answers” with their peers allows them to significantly improve average performance in the field.

Although it was risky and complicated to empower thousands of front-line managers to design their own training, BP decided that since FLLs are closest to front-line problems, they are better suited than anyone else to create programs to equip employees who face similar problems on a day-to-day basis.

By leveraging internal assets while retaining face-to-face training where possible, BP has developed a whole new program that is cost-neutral to former offerings but which at the same time enables the company to avoid a one-size-fits-all approach to training. Local managers select trainers for the FLL program, ensuring that course content will relate to local challenges. At the same time, all programs must achieve buy-in from HR and existing BP learning and development professionals, creating consistent quality and standards throughout the company.

BP employs specific metrics for assessing the efficacy of its FLL Program, and by all measures it's a success. In 2005 alone, 3,000 FLLs attended the program. Graduates consistently rank 10% higher than non-graduates on measures such as communication, interpersonal skills, team leadership, and general management. Moreover, the program has allowed BP to mothball numerous ad hoc training courses that the FLL Program replaced around the world.

### **Talent management considerations**

A successful EEP talent management strategy must overcome a myriad of issues. Firms should not wait for a consensus to emerge on EEP talent management because best practices cut across industries and lasting impact can be achieved only by programs tailored to individual companies. In particular EEP companies must address:

- An aging workforce demographic
- Employee retention issues related to departures later hired as consultants
- Recruiting challenges – locating and hiring needed skills, attracting young talent, creating incentives for baby-boomers to stay beyond retirement
- Skill-pool management – talent and leadership development, passing knowledge from one generation to the next
- A popular perception of the industry as lacking future potential, career stability, high use of outsourcing and contractors, and safety and environmental records

While the talent shortage facing the industry is severe, there are, as we have seen, numerous ways for EEPs to make the most of the talent they have while ensuring access to the skills they will need down the road to meet growth projections.

The careful reader may have noticed that we have assumed throughout that most EEP companies will focus on growing with the industry rather than looking for ways to maintain profitability by shaving costs. While we lack the space to defend this assumption here, it is based on our analysis of which strategy – growth or margin – will most benefit a given EEP company in terms of shareholder value.<sup>2</sup>

With rare exceptions, most companies in the industry, including the super-majors like BP and ExxonMobil, will provide the most value to their shareholders by pursuing a growth strategy. Given current problems in the talent pipeline, we hope we have drawn their attention to some of the steps they might take in executing such a growth strategy.

### **About the author**

*Damon Beyer [damon.beyer@katzenbach.com] is a partner at the Houston office of Katzenbach Partners LLC. He consults to senior managers on issues of business strategy, operations effectiveness, leadership, and organizational performance. Previously, he was a partner in the Texas office of McKinsey & Co. where he was a leader in the operations and energy practices. Beyer earned a BS degree from the University of Louisiana and holds an MBA from Harvard Business School.*



<sup>2</sup> Our analysis is based on a metric called RVG (Relative Value of Growth) that was developed by Katzenbach Partners. For details on RVG, see April 2005 Harvard Business Review article, “The Relative Value of Growth,” by Nathaniel J. Mass.