

Presentation by Martin Redford
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To The International Energy Consultants Organisation

What does an oil company want from a seismic and survey consultancy?



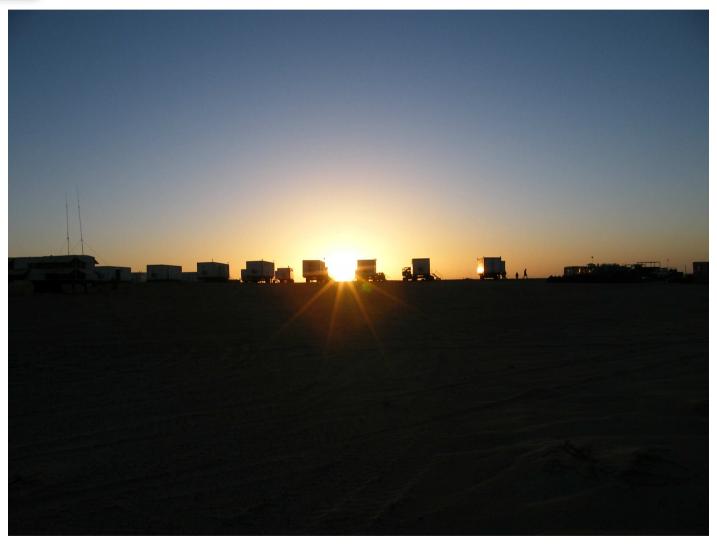
What does an oil company want from a seismic and survey consultancy?

Scope of presentation

- ❖ Brief overview of Petro-Canada, International & Offshore Business Unit
- Overview of Petro-Canada Geophysical Operations
- Why do we need consultancy support ?
- Roles and work scope for consultants
- Current working practices
- Thoughts for the future
- Presentation will focus primarily on the use of consultancies to support Geophysical Operations



What does an oil company want from a seismic and survey consultancy?



Dawn, BGP Crew 8624 base camp, Sirte Basin, Libya



Petro-Canada and I&O overview

- Petro-Canada is head quartered in Calgary with over 5,600 staff worldwide
- Current production is approximately 420,000 boe/d
- Operating earnings in 2007 US\$2.4 billion
- International business headquartered in London
 - Four regions

North West Europe – Aberdeen, Den Haag, Stavanger North Africa Near East – Rabat, Tripoli, Damascus North Latin America – Port of Spain East Coast – St John's Newfoundland

Geophysical Operations for all regions is coordinated from London



- Geophysical Operations functional support is provided from International headquarters in London
 - team of 3 permanent employees with 2 'semi-permanent' consultants
 - This team is responsible for project design, contracting, project management with support for day to day operations from personnel in overseas offices
 - When necessary the line responsibility for larger projects is devolved to the regional/local offices, but functional responsibility remains with Geophysical Operations group in London (matrix organisation)
- Currently we employ consultant project managers in

Tripoli (2)

Damascus (1)

Rabat (1)



2008 workload (completed)

Seismic - 2,500 sq kms land 3D Libva

- 1,500 kms land 2D

500 sq kms land 3D (Syria)

Site surveys - UKCS, Norway

EM surveys - Norway
Engineering surveys - Trinidad

2008 workload (continuing into 2009)

Seismic - 13,500 sq kms land 3D – Libya/Syria

(currently five 3D crews in operation)

Additional 2009 workload

Seismic - Libya, Syria land 2D/3D

- Morocco land 2D

- Norway, Trinidad marine 2D/3D

Site surveys - UKCS, Norway, Trinidad

Engineering surveys - Trinidad

Metocean surveys - Trinidad





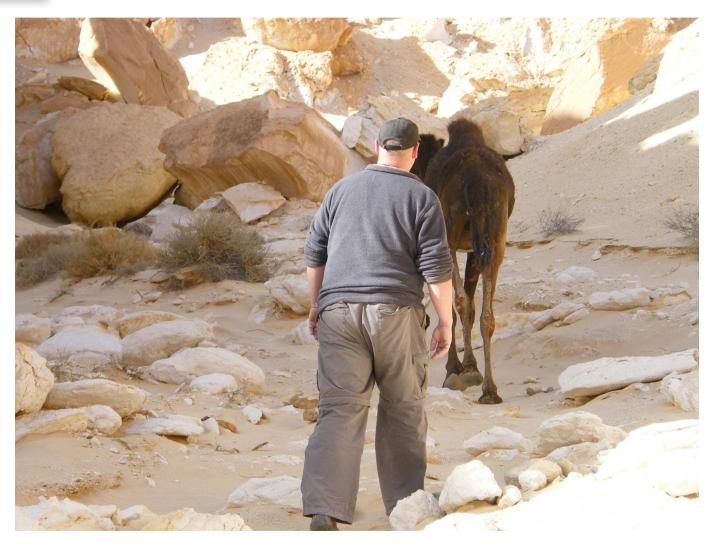
Vibrators in action, BGP Crew 8626, Sirte Basin, Libya



- In support of these operations we currently employ the following consultants
 - 2 technical specialists (project design, processing London)
 - 4 seismic acquisition project managers (Tripoli, Damascus, Rabat)
 - 1 'floating' seismic processing consultant
 - 2 seismic processing consultants (Tripoli)
 - 12 field based seismic acquisition consultants (8 Libya, 2 Syria, 2 Morocco)
 - 12 field based seismic HSE consultants (8 Libya, 2 Syria, 2 Morocco)
 - 2 field based seismic UXO consultants (Morocco)
- Our standard policy is to always have company representatives (consultants) on all of our projects



Petro-Canada Operations



Petro-Canada Acquisition QC, BGP Crew 8620, Sirte Basin, Libya, and friend



Why do we employ consultants?

To meet shortfalls in our internal resources

- to meet fluctuating demand
- to augment expertise

Where do they come from ?

Consultancies that can provide

- continuous access to resources
- wide range of skills and expertise
- administrative and technical support
- flexibility
- track record of consultant retention
- full compliance with our contractual terms and conditions



Petro-Canada Organisation

What can we sustain

- Most oil companies, especially those heavily involved in exploration are 'mean and lean'
- Necessity to retain core expertise, systems, broad knowledge base
- Unsustainable to maintain expertise in all disciplines at all times

Fluctuating requirements

- Exploration is cyclic, workloads rapidly change
- Business environment fluctuates

Long term plans

- Corporate management of business portfolio
- Identification of key resources



Petro-Canada Organisation

Employees

- Versatile
- Broad knowledge base
- Experience

Roles we are good at

- Overview
- Project Management
- Prioritisation
- Multi tasking
- Up and Out

Roles we are not so good at

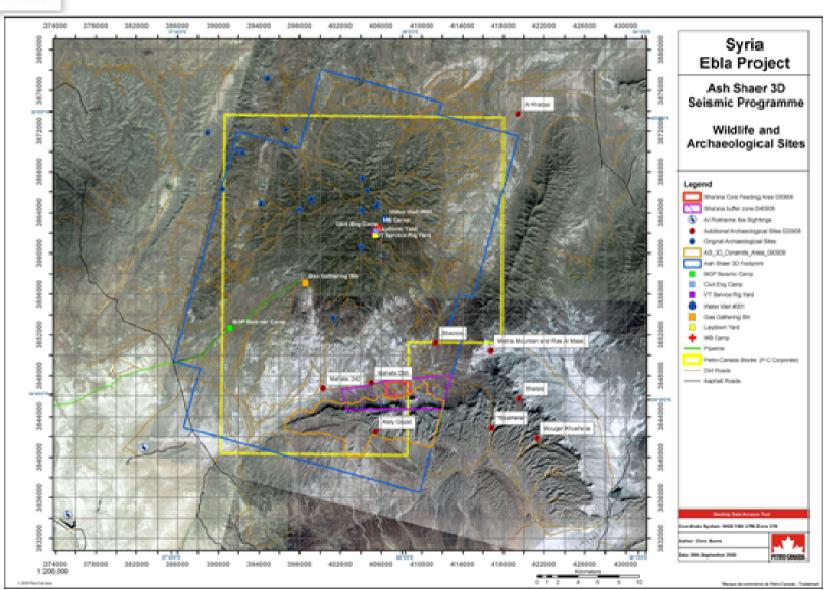
- Detailed knowledge
- Coverage of all eventualities
- Experience of latest innovations
- Meeting demand with internal resources



- What services are required?
 - Project managers
 - ❖ Field personnel company representatives (acquisition, processing, HSE)
 - Technical specialists in support of planned or ongoing operations
 - ❖ Technical Studies in support of planned operations (e.g. EIA's)



Petro-Canada Operations





- What do our consultants do ?
- Project managers
 - Full management of the project
 - ❖ HSE
 - Financial
 - ❖ Technical
 - Logistics including personnel
 - ❖ Often represent company at partner meetings, including NOC's
 - Can be employed from project conceptual design but more likely put in place just prior to activity commencement

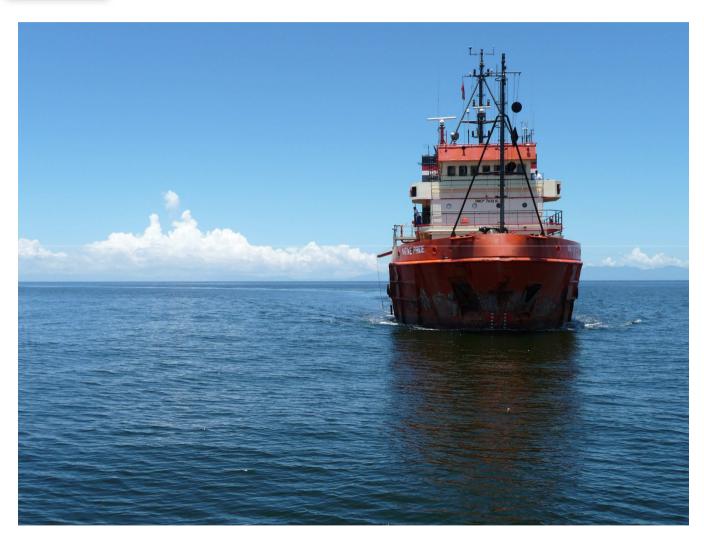


Project managers (continued)

- Usually based in local office
- Line reporting to asset but functionally to Geophysical Operations in London
- * Responsible for project delivery to pre set objectives
 - ❖ Zero Harm
 - Cost
 - ❖ Technical compliance
 - ❖ Time
- Requirement for strong team players with broad knowledge base



Petro-Canada Operations



Capital Signal survey vessel, Native Pride, Block 1a, Trinidad & Tobago



Field personnel

- Prime role is to ensure contractual compliance
 - ❖ HSE, Technical, Financial, Time
 - ❖ Necessitates technical specialists with strong leadership skills
 - Often ex contractor Party Chief level
 - Provided with strong internal support but given high level of independence
 - Necessitates ability to make 'on the spot' decisions that benefit the project, e.g. amendments to technical specifications
 - One stop approval of activity performance for preparation of invoicing etc



Field personnel (continued)

- ❖ To ensure contractual compliance we need personnel who can act in supervisory and advisory roles – not as 'policemen'
- Adaptability is key
 - Every contractor is different
 - Each contractor has it's strengths and weaknesses that need to be quickly identified and catered for
 - ❖ Not all clients are the same and we need personnel to adapt to our style but they are expected to comment if they identify weaknesses and to advise solutions – and they do!
- Should be considered by entire crew as key members of the team
- Should be able to rely on their consultancy to be able to support logistically and technically



Petro-Canada Operations



Dawn, BGP Crew 8624, Sirte Basin, Libya, Tool Box meeting



Contractual terms and conditions

- Cost we do not routinely competitively tender for these services, we prefer a negotiated rolling call-off basis with a selection of consultancies
 - Contracts usually include a 'shopping list' of a broad range of roles, services, deliverables etc
 - This allows us to cover as many eventualities as possible through one contract
 - ❖ There are some problems in enabling these contracts to cover more than one country, region – tax, legal basis etc. There may be several country/region specific contracts with the same consultancy



- Contractual terms and conditions (Italic)
- In some areas it is difficult to work with non registered companies
 - ❖ A compromise has been to contract a front end company that then sources services from the market (Italic system)
 - Italic is becoming more widely used in all our areas of operation
 - ❖ Italic is only used to source personnel, not services, studies etc

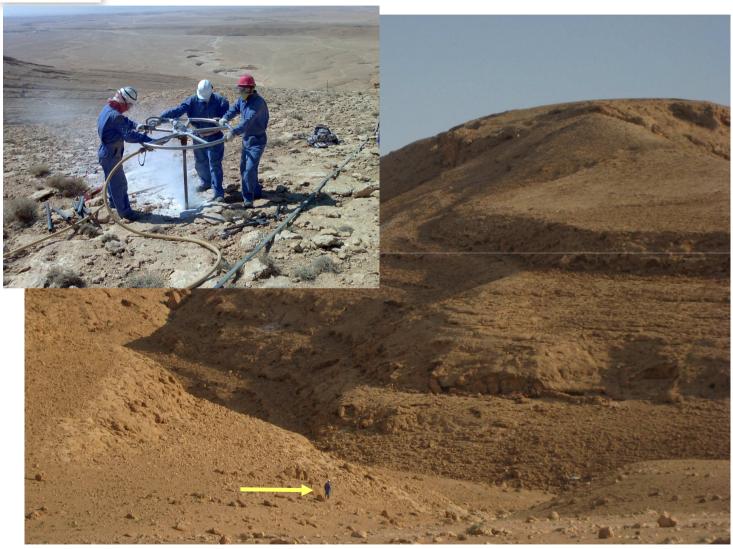


Contractual terms and conditions (Italic)

- It has the advantages of cost reduction through administrative optimisation but needs very careful pre selection of companies invited to offer services
- ❖ Now have one electronic source of invoices, one contract to administer
- Functions still have the responsibility to select from Italic identified resources with no constraint on selection based on price
- Has increased competitiveness between consultancies but reportedly this has not been met with universal acclaim



Petro-Canada Operations



Shot drilling, BGP Crew 8628, Jebel Jezel, Ash Shaer, Syria



- Contractual terms and conditions Rates
- Want highly motivated personnel so there is a need to ensure consultancies treat their supplied personnel fairly BUT
 - We negotiate rates with the consultancy NOT the consultant
 - Obviously consultancies need to be financially viable and clearly the result is that consultants will not receive the entire fee we pay the consultancy – this is a continuous bone of contention



Contractual terms and conditions – Rates (continued)

- ❖ Whilst we do not routinely know the percentage with held we are keen to ensure that this is reasonable so that consultants refrain from project hopping
- ❖ A low with held percentage can often infer the consultancy will be unable to offer the support we require and may be little more than an agency
- We have in the past paid standby rates to ensure preferred consultant availability
- We consider the notion of sliding scales for with held portions of fees for long term assignments a benefit to consultant retention



Summary

- Dependence on consultancies to provide personnel and expertise to support our operations will continue
- We will continue to strive to build lasting relationships with consultancies and preferred consultants
- Consultancies and consultants will continue to be carefully selected to match specific project requirements and to ensure continuity
- It is understood that the relationship between consultancies, consultants and oil companies is not always consistent
 - At Petro-Canada we are employing you because we cannot fulfill the role ourselves, because of lack of resources or lack of expertise
 - consultants are treated as fellow employees and it is often difficult in our organisation to know who the consultants are
 - but we expect total buy in and commitment whilst acknowledging that some period of adjustment may be needed before a solid working relationship is established





Start of another day in paradise, Sirte Basin, Libya