

# GeoWorld

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## Geoservices Brazil - Quality Mud Logging Services Ensure Major Growth

### Business Back up to Full Speed

Geoservices is going for growth, as well as profitability, and we are taking steps to ensure that this happens sooner rather than later. Our level of activity in 2001 has already enabled us to recover the level of turnover we had before the divestiture of our directional drilling business in October 2000.

As predicted, the financial results for 2001 were a significant improvement on 2000. When exceptional items are excluded, we show a net profit of about 7 million Euro from a turnover of 177 million Euro. The main reasons for this come from a better focus on a limited number of business segments (our core businesses), and a tight control on fixed expenses. The revenue growth in 2001 was achieved with the same level of overheads that we had in 2000. We expect revenues to increase further in 2002 with significant growth in our core business activities.

Geoservices is more than ever the world leading mud logging services supplier and we stand out as being the only company capable of providing a consistent, quality, high-tech mud logging service on a global scale. Our strategy to promote our Well Intervention services (related to client operating expenditure - OPEX) is working well and we are seeing a substantial increase in these activities.

Well testing is running at full capacity and we can now foresee some areas for specific growth. Field Surveillance concepts are better understood and will soon lead to significant results in the field.

We must remain focused on our priorities while maintaining and even improving our present record of Quality and Safety standards. We also need to enhance our services and respond to more demanding customer requirements through the deployment of new technology.

The Geoservices Team has a challenging future to look forward to.



Bruno Burban



Beno t Debray

Geoservices Mud Logging activity in Brazil has increased spectacularly since we restarted operations with Petrobras in 1998. From then until 2000, Geoservices had just a few logging units working in the Campos and Santos offshore basins and sometimes in the Amazon basin. Between 2000 and 2001, we experienced a big surge in activity resulting in a threefold increase in the number of units. This growth reflected the international major oil companies increased activity in Brazil as well as the appreciation from Petrobras for our quality services. During 2002, however, we expect our fleet of mud logging units to double again, with the contracts split between Petrobras and the various international Majors.

Pascal Mirville, South Latin America District (SLAM) Manager says: *This expansion has not been easy and has required a lot of time and dedication from our people. Thanks to the professionalism of our field personnel and the commitment from our management team, we have been able to cover the requirements of our clients which, day-by-day, are becoming more exacting.*

#### Teamwork

The Mud Logging Department has a dedicated team including a Logistics and Maintenance section headed by Victor Jaraba, who has spent a lot of effort ensuring that the equipment and units arrive on time. His team have performed extremely well, always antici-



Geoservices has been providing mud logging services on the Stena Tay, the largest semi-submersible rig in the world, for the two years it has been in Brazil. Our clients on board have included Shell, Petrobras and TotalFinaElf and we will soon work for ExxonMobil.

pating potential last-minute problems. The day-to-day operations are supported by Cesar Lobato and Alessandro Miranda, making sure that people and equipment come together as they should to carry out our service. Working closely alongside is Fernando Mello, our Sales and Marketing Manager, who has been very successful in establishing a strong working relationship with Petrobras. David Barton, Mud Logging Manager, said: *All in all we have had no major problems and our clients have been very pleased with the work we have done, which is all due to a magnificent team working well together.*

#### Competence Assurance System (CAS) Training

Due to the strong growth in mud logging activity, the SLAM District Training Center, located in MacaØ, had to increase its rate of training. From January 2000, 19 Basic Mud Logging courses, 3 Advanced Mud Logging

## Geoservices Brazil... continued

courses, 7 Data Engineering courses and 9 seminars were carried out. Flavio Barros, an experienced Data Engineer, was selected from the field to become our first Brazilian training instructor, and he has since trained a large number of mud logging geologists.

### *A Fertile Field for new ML Technology*

Because many of the operations in Brazil involve deepwater drilling offshore, the latest mud logging technology is needed for optimizing drilling time and reducing costs. Since 2000, Geoservices has been providing its enhanced services such as Reserval™ and ALS-EVE on a permanent basis in all units provided to Petrobras. We are now providing the Cuttings Flow Meter (CFM<sup>®</sup>) hole cleaning and wellbore stability monitoring service on a dynamically positioned drill ship. Didier Mareschal, who is in charge of promoting our Enhanced Mud Logging services declared; *this is the first CFM<sup>®</sup> service worldwide in a water depth of 1924 m. In addition we had a variety of mud types since the build-up section was drilled with Oil Base Mud and the 1000m horizontal drain with Water Base Mud*. Gilles Roussiaux, CFM<sup>®</sup> Product Specialist, came to supervise the operation and train Data

Engineers, Roberto Mejia and Edwin Casimiro before they went on board. The CFM<sup>®</sup> s contribution to the drilling program was such that we can foresee a strong future for this service in Brazil.

We are also starting our Pre Vue pore pressure prediction service on a HPHT offshore well in Natal, in the north east of Brazil. *No doubt the extensive experience of our Pre Vue Engineer, Leoncio Chiri, who started working for Geoservices in the early '80s, will be a significant advantage for making this job successful.*

### *Well Established for the Future*

Geoservices is now the most experienced mud logging company for deep offshore operations. This offshore experience has led to us participating in all recent deep water drilling records. The last one, in Brazil, was reached in February of this year with the drilling rig

Deepwater Frontier in the Campos Basin with a water depth of 9347 ft (2849 m).

Omar GonzÆlez, HSEQ Manager for Latin America and the person who contributed this article to GeoWorld, sums up by saying that he believes; *the keys to our success are a large investment in our personnel and R&D, an improvement in the Safety of our business and an insistence on quality services through the implementation of a Quality Management System based on ISO standards*.



Some of the very successful mud logging team in Brazil, from left to right: Jober Coelho (ML Technician), Aldir Blanc (ML Technician), Eni Horsth (Logistics Supervisor), Victor Jaraba (Maintenance and Logistics Manager), Alessandro Miranda (ML Operations Assistant), Didier Mareschal (CAS And New ML Technology Manager), Cesar Lobato (ML Operations Manager), Fernando Mello (Sales and Marketing Manager for Petrobras) and David Barton (ML Manager).

## New Operations & Maintenance Contract is Biggest in Venezuela

Guy Torcatis, our Base Manager in Maracaibo, was proud to announce recently that Geoservices had won the largest Operations & Maintenance contract in Venezuela, from SINCOR (Sincrudos de Oriente C.A). This is an excellent achievement for our Field Surveillance business segment, especially since we were up against 17 other companies for the prize. The contract, which is for a duration of four years, is on the Zuata Field and includes the supply of all documentation, Computerised Maintenance Management System (CMMS) implementation, supply and training of personnel, vehicles etc.

The next step will be to include new services oriented towards optimising the production of this field. As ever, we will be continually looking for ways to add value for our client.

## Geoservices Presents New Technology in Japan

At the beginning of June, JØr me Breviÿre (R&D Fluids Project Manager) went to Japan not for the football World Cup but to present a technical paper to the 43rd Annual Logging Symposium for the SPWLA, (Society of Professional Well Log Analysts). The paper, entitled *Gas Chromatography - Mass Spectrometry (GCMS) - A New Wellsite Tool for Continuous C1-C8 Gas Measurement in Drilling Mud - Including Original Gas Extractor and Gas Line Concepts. First Results and Potential* (J. Breviÿre, Geoservices; B. Herzaft, IFP; & N. Mueller, Inficon), deals with Geoservices latest developments in wellsite gas analysis and in-situ reservoir fluid evaluation. JØr me s presentation was extremely well received by those present at the conference and stimulated many questions from the operating oil companies. A copy of the paper or a Portable Document Format (PDF) version can be obtained from Marketing/Communications, on request to [luangraj@geoservices.com](mailto:luangraj@geoservices.com).



**Well Test Training off to a good start**

We recently started training courses for Production-related services in the Jakarta Training Center. The first course was on Well Testing and was held in April for eight new trainee operators.

After the very successful launch of the mud logging training section in August last year, we are now looking forward to using our new Well Test setup to provide a standardized training program to employees and clients alike. With the new facility, we will be able to produce even better trained operators and engineers which can only benefit all our clients operations.



Taking part in the recent well testing training in Jakarta, from left to right : Yozaros Harahap (Jakarta Production Coordinator), Priyo Wisnu, Ewan Jones, Dominique Aufiero, David Di Maggio, Mickael Rouxel, Johnson Thomas, Bernard Boutefeu (WT Instructor), Yudha Patria, Peyman Shadoust, Ari H. Ibkar (District Production Manager)



**Achieving our goal in Korea!**

After almost two years of drilling inactivity in the Korean domestic market, Geoservices was awarded the mud-logging contract for KNOC's 2002 drilling program. Operations started in March with the DooSung semisub for three development and one exploration well, on which KNOC confirmed the use of the Reserval™, already successfully used

in the previous 1999 ~ 2000 campaign. The fact that the timing of this long-awaited drilling program matches with the 2002 World Cup in Korea & Japan is of course pure coincidence

By the end of March, CFBGC (Geoservices joint-venture in China) had successfully passed its 3-year ISO 9002 re-certification audit by DNV. It was quite a challenge preparing this audit, just a few months after the merger with Petrotech Reservoir Services (see Geoworld Dec. 2001). The full cooperation of all personnel, experienced and newcomers together, in implementing all procedures in such a short period of time was the key factor in its success.

The first major field development ever by a foreign operator in Bohai Bay was launched in March and CFBGC is playing an active role on this project by providing enhanced mud logging services. CNOOC remains the major offshore player in China with an aggressive exploration/appraisal program throughout 2002 and for which CFBGC is the sole mud logging services provider.

With several overlapping full-package testing operations in June, we are getting back up to full speed on the well testing side after a 1<sup>st</sup> quarter that was too quiet, following a series of dry holes. Meanwhile, on the Well Intervention side, our operations in all offshore areas (Bohai, South and East China Sea) are keeping our clients happy. Two major bids currently under evaluation could even further develop our strong market position in this service line. In early June, new equipment (EMROD™, WTD, BEST) left Paris for China, soon to be followed by a complete set of production logging



Sandeep Kale (Geoservices Data Engineer), on the left, was presented with a safety award by T. Wayne Brewster (ChevronTexaco Drilling Supervisor) for his safety suggestion on jack-up Nanhai-1 in Bohai bay. Improving Safety on drilling facilities is definitely a question of teamwork involving all contractors CFBGC / Geoservices personnel is proactively cooperating with ChevronTexaco, as well as other operators, on this issue.

tools. Our staff is really excited about getting trained and ready to put this equipment into service, thanks to some new contracts already in-hand.



**Managers' HSEQ Seminar**

Dubai provided an excellent setting to discuss the varied challenges within this large and culturally diverse area. The range and flavour of topics presented during a very full two days illustrated the flexibility and close team spirit existing between the Middle East District and Corporate Management.

The primary theme of the seminar was our global standards for Health, Safety, Environment and Quality, with an element of Security management. Safety concerns were focused on closer management communication, particularly through client presentations and work-site visits. Our message was simple to succeed in a highly competitive market we must stay one step ahead of our competitors certainly in the Safety and Quality of service we provide. The corporate and local management team presented a spectrum of carefully chosen subjects. Interactive presentations prompted lively exchange on topics such as Safety Case Histories, Risk Assessment

NEWS FROM THE DISTRICTS

and local Job Safety Analysis Controls, Worksite Audit and Inspection, Defensive Driving, Alcohol Misuse and Security Police. Communication was certainly optimised!

The District requirement for compliance with ISO 9000:2000 ensured open discussion, as Quality targets include the certification of three main offices (including the UAE Offices) before the end of 2002. Objectives, challenges and local actions for the next year were presented by each local Country Manager with input on developing systems (GeoTrack\*, CAS, KM, G Stock) as well as new Production challenges and targets, new ML technology, personnel training and optimisation. Extremely valuable information exchange and time well spent.

\*Geotrack is the new name for V3



Some Field Surveillance Services will be provided using a portable data acquisition computer similar to this one

Engineer, with the purpose of monitoring the implementation of this new activity in all the District Bases. He reports directly to the District Manager, Robert GrØgoire and both of them work closely with the Sales Marketing & Development and Technical Departments in Head Office to achieve optimum results.

Our clients are showing a lot of interest in the new service. This is especially true for the new technologies which answer their needs for gas lift wells.

In West Africa, we are in a position to propose an extended range of services that are all complementary

to each other. Our clients have reacted positively to our entry into this market due to the fact that we have a history of always being in tune with their diverse needs. From Well Testing to Well Intervention, EPF and Field Surveillance, we are capable of making full use of the synergies between these production-related activities.

All Country Managers in the West Africa District are fully

involved in the development of this new market in their respective countries and are gearing up to increase their part of the rig-less activity market.



Alain Evenat in Bu-Attifel with the Super Kenworth truck he plans to equip with Well Intervention equipment.

**Well Intervention Trucks**

The North African Desert is no place for wimps! Roads to wellsites are not a problem; there are none! Well Intervention in these extreme conditions calls for heavyduty specialised trucks. With our PLT/Perforation Kenworth Trucks, we can reach remote locations from our Bu-Attifel or Zella Bases. Alain Evenat is preparing a new Super Kenworth truck and working on plans to install a Well Intervention Unit. The recently introduced Retrievable Tubing Gun Perforating Service, with better performance and no debris downhole is having a lot of success.



One of Geoservices PLT/Perforation trucks which makes inroads where there are no roads.



At the recent managers' seminar in Dubai, from left to right. Front row: M. Raman, K. Naik, M. Lewis, M. Badcock and Sami BA. Second row; T. Bartley, K. Cheeseman, D. Kumar, Z. Mansoor and R. Taylor. Third row: A. Gray, L. van den Heuvel, D. Testud, Y. Douarin and Shajahan V.



**Introducing Field Surveillance**

The West Africa District is actively participating in one of the most interesting projects currently being developed in Geoservices, the birth of our Field Surveillance business segment in the area.

In order to stimulate this activity in the District, Patrick Ferrando has been given the role of District Sales & Marketing

NEWS FROM THE DISTRICTS



North Latin America

**Return to Trinidad & Tobago**

We are back in Trinidad & Tobago. In conjunction with Petrospec Technologies, Inc., Geoservices recently hosted a Pore Pressure seminar for many of our clients in these Caribbean islands. Over forty participants from ten operating companies attended, as well as representatives from the Ministry of Energy. Our thanks go to BP Trinidad & Tobago LLC for the generous use of their conference centre to host the event.

The seminar, as well as reviewing causes and current theory relating to geopressure, also included a number of training exercises to help participants get a feel of what is involved in the Pore Pressure Prediction process. Geopressure related problems cost the industry an estimated US\$ 1.25 billion annually (source: Harts E&P) and a lot of interest has been shown in our real-time Pore Pressure Prediction service, Pre Vue, in Trinidad & Tobago. The Columbus Basin, offshore Trinidad, exhibits some of the highest known sedimentation rates of any worldwide sedimentary basin. The basin is marked by complex faulting, mixed lithologies, and large gas accumulations, all of which make geopressure prediction more difficult. Accurate prediction

of geopressure is seen as critical for future drilling programs in the deepwater and ultra-deepwater systems of this challenging basin.



North Sea

**Ready for take off**

The present plateau market means it's time to take stock of resources. Two rig-downs have been accomplished safely, and much maintenance work is in progress, ready for the next upsurge. This is not too far away as we will shortly rig up the Sedco 712 for Shell commencing Maddoes development. The Maersk Gallant has arrived on station and is set to drill a HPHT-classified well. Meanwhile the Clyde platform has just started another infill sidetrack operation for Talisman. So quite a lot of crew re-assignments underway!

Those of you that have been interested in the onshore NAM operation, can be advised that it is still drilling, albeit slowly, and the ALS-K and Reserval™ services are being tested to the full. Denmark sees the mobilization of a Geothermal onshore well near Copenhagen. If you fly via Kastrup airport look out the south window as you will fly almost directly over the site. This will be followed by a

second well near Malmo Sweden. Not surprisingly, we have many applications to be part of this assignment! Simon Batchelor is continuously running CAS training modules to improve the knowledge and skills of our field crews, ready for their next assignments.



Participants in one of Simon Batchelor's CAS courses in Aberdeen take time out to simulate a major decalibration! From the left: Francesco Bellegia, Doug Tyson, Maneesh Pulamanthol Pisbarat, Simone Rattazzi and Gvydas Juska.



North America

**Contrasting locations**

Geoservices Inc. continues to expand its mud logging services and operates in some very different environments. Two such examples are an offshore location in the Gulf of Mexico and an onshore site in South Texas.

The offshore rig is the Ensco 7500, a next generation dynamically positioned semi-submersible located over Total-FinaElf's Matterhorn Development, in the Mississippi Canyon field in approximately 2816 ft (858 m) of water. We are providing ALS-2 and enhanced services



Delegates from the Pore Pressure Prediction seminar in Trinidad & Tobago surround David Cook (extreme left) acting NLAM District Manager, Ben Hurn (just behind David to the right) temporary ML coordinator, Trinidad, and Mark Herkommer (front centre wearing white shirt, tie and halo!), President of Petrospec Technologies Inc. The photo was taken by Derek Smith, Geoservices representative in Trinidad & Tobago.



Some of the Geoservices crew on board the Ensco 7500 in the Gulf of Mexico, from the left: Joaquim Cardozo (TDC) Leon Normore (ML) Chris Rose (ML) and Colin Wilkinson (TDC).

including the Reserval™ service. The Ensco 7500 is capable of drilling in up to 7500 ft (2286 m) of water and is equipped with some neat modern facilities, the favorite one for the Geoservices crew being the small, but well-equipped, gymnasium.

The onshore contract is now on its second well in the Pharr/McAllen region, just 10 miles (16 km) from the Mexican border in South Texas. We have a two-man crew on this job with both Geo FID gas equipment and the Reserval™ service. All well data, including gas data, are being transmitted in real time to Houston.



Geoservices mud logging unit on location with the Nabors 726 rig in the Pharr/McAllen region of South Texas, USA.



## Top students get hands-on training from Geoservices in the Paris Basin



At the Geoservices wellsite training centre, from the left: Sabrina Van de Beauque (TFE Geologist) and ENSPM students Hugo Coumont, Mohamed El Amine Bencherif (in front), Gautier Daniau and Ruth Andres.

Not too far from our Head Office in Paris, there is a wellsite with not one, but two Geoservices mud logging units on location. One unit assures the mud logging of the well for our client, the Canadian oil company Vermillion Rep SA, while the other serves as an onsite training centre for Geoservices. Located near Coulommiers, just 75 km away in the famous cheese-producing region of Brie, it is also close enough to be used for office-bound personnel to get their first sight of a drilling rig. On the 18<sup>th</sup> April last, it was the turn of Juliana Besson-Leaud (Operations), HØLne Haraux (Budget & Control) and Judy Luangraj (Marketing/Communications)

to witness the delights of steaming mud and a spinning kelly.

In the training unit they met a multinational group of students from the top French petroleum university, the Ecole Nationale SupØrieure des PØtroles et Moteurs (ENSPM) and a TotalFinaElf Geologist who were all being trained in the fine art of practical geology and mud logging by Geoservices instructors Michel Maume, JoØl Betton and Jean-Pierre Gilot. A total of 16 ENSPM students were on site rotating round the clock, in groups of four on six-hour shifts. The full course usually lasts about 17 days - half a day for course introduction, 4 days ML techniques, 4 days monitoring and analysing well data, 8 days ML Unit management and half a day for the final well report.



Michel Maume at the rig site with, from the left, HØLne Haraux, Judy Luangraj and Juliana Besson-Leaud.

## Competence Assurance System Achievements

The first CAS-structured Mud Logging course in Maturin (Venezuela) was held from the 9<sup>th</sup> to the 25<sup>th</sup> May under the responsibility of Orlando Villalba. Orlando was recently appointed training instructor and CAS coordinator for the North Latin America District (NLAM).

During the 17-day course, subjects such as Safety, Job Mobilisation & Rig Up, Sampling, Principles of Well Control, Data Acquisition & Monitoring were all covered.

The group completed the course successfully with an average score of 95 %, demonstrating the participants high motivation and general ability. Congratulations to all who contributed to the success of this first CAS milestone in Venezuela.



Participants in the CAS-based training in Maturin, from the left: Orlando Villalba, Neyomaira Melendez, Jose Ramos Espana, Josefina Zambrano, Frank Brannan, Luis Caballero, Omar Zunita, Raul Larrotta, and Fabio Ghilli.



## ISO 9002 for Venezuelan Bases

Last February, the Maturin Base in Venezuela received its annual Maintenance Audit for the ISO 9002 certification it holds from BVQI. In March, the first Quality Audit for ISO 9002 Certification was done for the Ciudad Ojeda Base. The Ciudad Ojeda audit took two days to complete and the result is that this Base will also receive ISO 9002 Certification soon. Omar Gonzales, appreciated the effort made by all the personnel of both Bases in achieving these results and especially Adelaida Ascanio, HSEQ Coordinator for Maturin and Maibelys Velásquez HSEQ coordinator for Ciudad Ojeda.

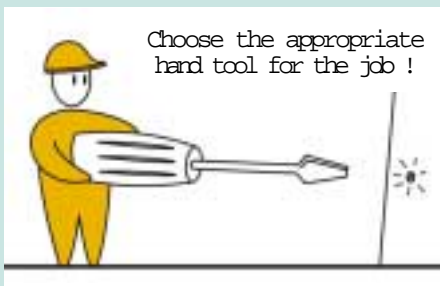


Following the BVQI Audit in Ciudad Ojeda in March, from the left: JosØ Martinez (Lead Auditor BVQI), Omar Gonz/Elez (HSEQ Manager LAM), Dusan Milosavljevic (Base Manager), Adixo Mata (Production Coordinator) Maibelys Velasquez (HSEQ Coordinator), Hern/En Salazar (Mud Logging Coordinator) and Ernesto Prieto (BVQI Auditor).

## Safety Section

### Hand Tools

Most of us use some sort of tools at work or at home without stopping to think about the potential risks. Next time you pick up a screwdriver, consider for a moment the accidental damage it could do to your face if it slipped whilst you were pushing and twisting *towards you* to tighten or remove a screw? Consider the cut from a *blunt* chisel due to excessive pressure, or the damage to your eyesight if that *splayed* chisel splintered having been beaten for too long.



**Prevention is better than cure – so a little forethought, preparation and a few precautions will go a long way to reducing these risks.**

The following guidelines will help:

- u Plan the task (for a few minutes) and select the correct tools (good condition).

- u Wear appropriate personal protective equipment (safety glasses, gloves etc)
- u Renew worn out tools (pliers with jaws that have lost their grip)
- u Replace hazardous tools (non retractable blade cutters)
- u Reject damaged tools (cracked hammer shaft)
- u Only use hand tools for the purpose the manufacturer designed them (instructions)
- u Ensure no one else is in range of your activity (potential casualty)
- u Do not rush a job (major factor in reducing risk)

These simple steps will help protect yourself and also those working around you. Set a good example - there are already far too many injuries, both at work and at home, caused by “*hand tool abuse*”.

***It is a sad, but powerful reminder, that almost 20% of accidents in our industry are associated with tools.***

Please take the time to prepare, pass on advice and report any safety experience which will enable us to reduce risks further (through training, supervision, documents, CAS, tool quality etc.).

u  
 Congratulations! If you have read this far you have won a Geoservices key ring. To claim your prize, simply e-mail [ross@geoservices.com](mailto:ross@geoservices.com) with your postal address and we will send it to you.



Rick Maddock, who celebrated 20 years with the company last year, receiving his long-service award from Derek Arnaudy in Head Office.

## GeoWorld

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