



## Oceaneering buys semi for FPS conversion

Oceaneering International Inc. purchased the semisubmersible OCEAN STAR from Diamond Offshore Inc. Oceaneering will market the rig for conversion to a floating production system, and may offer it in the Gulf of Mexico as a multiservice vessel to support construction and intervention operations on subsea production facilities, including light workovers. The rig has been cold-stacked offshore Louisiana since 1987. Oceaneering Production Systems will manage the unit.

The OCEAN SCOUT is a structurally enhanced Breit/Odeco twin-hull design built for use in moderate environments by Bethlehem's Sparrows Point, Md., yard in 1974. The unit's inherent structural strength and its comparatively light utilization make it a good candidate for conversion to a FPS. With lower hull dimensions of 221 feet by 201 feet, the semi has ample deck space for installation of production processing equipment.

At its maximum operating draft of 54 feet, the rig displaces 12,868 long tons and has a variable deck load of 1,640 long tons in the drilling mode. The OCEAN SCOUT is rated for water depths up to 1,000 feet.

Oceaneering did not disclose the price it paid for the rig. Given the decreasing number of semisubmersibles available for floating production systems or dedicated intervention service, Oceaneering is optimistic it will be successful in marketing the unit.

Company officials said the semi is not a candidate for conversion to a FPS for a project with South Africa's state oil company Soekor.

## LL&E sets \$206 million budget for '96

Louisiana Land and Exploration is increasing its 1996 exploration and development budget by 14 percent to \$206 million, reflecting higher levels of exploratory activity. Exploration expenditures are being increased by more than 30 percent to \$114 million, which includes \$88 million for drilling activity and \$21 million for seismic costs.

LL&E said high potential opportunities are

expected to account for more than 35 percent of exploration spending. The high potential category includes at least two subsalt wells in the Gulf of Mexico.

About 84 percent of LL&E's exploratory budget is earmarked for domestic projects. International development spending is focused on the Thelma and Brae fields in the UK North Sea and the Kakap concession offshore Indonesia.

Company officials said the budget is consistent with its strategy of creating shareholder value through exploration. The base provided by the low risk exploration portion of LL&E's portfolio is complemented by numerous high potential opportunities that expose the company to significant growth in reserves and future production.

Many of LL&E's key exploratory wells are scheduled to be completed during the first half of the year.

## Aker Omega wraps-up first phase of tension raft jacket study

Aker Omega Inc. completed Phase 1 of its Tension Raft Jacket Joint Industry Project, which evaluated different tension raft jackets with varying deck load capacities.

The tension-raft jacket is a new deepwater design structure said to be more economical and less complex than conventional tension-leg platform designs. The structure's buoyancy is derived almost entirely from a pontoon or raft that is positioned below the current of a maximum storm wave.

The raft would be made of pretensioned tubular steel tendons attached to conventional TLP foundations. The raft supports a jacket and deck that are similar to those of a fixed platform jacket structure.

Oil companies participating in the joint study are Amoco Production, BHP Petroleum Americas, BP Exploration, Exxon Production Research, Norsk Hydro, Shell Development and Texaco.

Aker Omega's joint industry project manager Phil Abbott said Phase 1 was successful. The joint study examined design criteria, development of fabrication and installation methods, plus costs and schedules of nine dif-



ferent cases — including eight in the Gulf of Mexico and one for the Norwegian Sea. The company now proposes to extend the study's initial phase to conduct additional work on the production platform concept in 1996.

Aker Omega wants to conduct a Phase 1A extension study that will include a detailed investigation of the pressure compensated raft alternative suggested during the earlier study.

Aker Omega will subcontract failure modes and effects analysis to an internationally accepted certification agency to provide further data of the pressure compensated raft concept.

A Phase 1B extension during 1996 may include additional dynamic analysis work on the base case, which is the tension raft jacket equivalent of the Ram-Powell TLP in the Gulf of Mexico.

## Petrobras offers details for foreign investment opportunities

Petrobras officials are circulating among potential investors a document that outlines how private sector domestic and foreign companies can fund future projects on the Brazilian continental shelf.

Petrobras says its major projects will require a \$17 billion investment over the next four years, but the company will seek outside sources for a portion of those funds.

Now that Petrobras' monopoly status is ending, the company is finding it compete for international funding sources to line up the investment necessary for costly deepwater drilling and production projects that are required for the country to become energy self sufficient. Most analysts think there will be international interest in Petrobras' projects and licenses, particularly those in the deepwater Campos Basin area in the South Atlantic.

The document, *Perspectives and Challenges in the Brazilian Oil and Gas Industry*, was prepared by Jose Fantine, Petrobras' superintendent of Planning Services.

Petrobras officials want to raise around \$10 billion from outside interests.

Petrobras' move follows an earlier vote by Brazil's Congress to end the state oil company's monopoly and allow foreign and other domestic

companies to invest in the country's oil and gas projects.

Brazil's new regulations are expected to allow private companies to farm-in and establish joint ventures to drill and produce reserves particularly in costly deepwater areas. Outside funding also may be used for major pipeline projects to bring reserves to shore. Private investors most likely will be allowed to invest in the Campos Basin area. Private funds also will be sought for Brazil's refining, terminal operations and marine transportation.

Meanwhile, Petrobras continues to pursue the technological development of subsea boosting systems through its program for technological development in deep and ultra-deep water, known as Procap 2000. An endurance test of a twin-screw multiphase pump prototype is being conducted by Petrobras at its land-based test site in Atalaia, in northeast Brazil.

Petrobras officials report that negotiation for Procap's design, construction and testing of a full subsea multiphase pumping unit prototype is under way.

Another ongoing project for which Petrobras may require foreign investment is the planned gas-driven subsea separation and boosting system, called Petroboost. This would be the first subsea boosting prototype to be installed in site. Petroboost is scheduled to be deployed at the Marimba field in 1996.

Petrobras also is developing the VASPS concept with British Petroleum, Agip, Mobil. This project too may attract foreign investment.

Petrobras continues its participation in the Deepstar joint industry project, which involves 16 oil companies and more than 40 vendors that have grouped together to develop deepwater technology.

## HeereMac derrick barge is for sale

The HeereMac-managed derrick/accommodation semi DB 100 is being circulated for sale for about \$40 million. The unit is believed to be a candidate for conversion to a floating production system.

The Brazilians reportedly expressed some interest in the vessel. The unit was built in 1979 and is capable of accommodating 548 workers.

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## Offshore News Digest

### U.S.A.

**Era Aviation completes purchase of Alaska Helicopters.** Era Aviation Inc., a subsidiary of Rowan Companies Inc., completed its earlier announced purchase of certain assets of Alaska Helicopters for about \$10 million — \$3 million in cash and the balance in a promissory note due next December. The assets include the hangar and office space adjacent to Era's facilities at Anchorage International Airport, 15 Bell helicopters and related spare parts.

**Additionally, Rowan Companies completed the sale of its three submersible barge rigs to Falcon Drilling for about \$12 million.**

**Cliffs Drilling to redeem shares.** Houston-based Cliffs Drilling Co. will redeem all of the issued and outstanding shares of \$2.31235 convertible exchangeable, preferred stock on Jan. 17 for \$25.69 per share plus \$0.218403 per share in accrued and unpaid dividends. Holders of preferred stock may elect to convert any or all of their shares into common stock at the rate of 1.89394 shares of common stock for each share of preferred stock.

**University tests 3-D virtual reality.** The next step in geophysical exploration is under development in Houston — 3-D virtual imagery. First created at NASA to solve astronaut training problems, the Virtual Environment Technology Laboratory was transferred to the University of Houston in September 1995. Dr. R. Bowen Loftin directs the lab and guides efforts of professional staff and graduate students who work on both private and government projects. The laboratory uses five Silicon Graphics ONYX computers to create and manipulate databases that form the 3-D images. Radio-controlled spectacles are used to view the images. The lab uses a 10 foot by 10 foot, two-walled imaging system. By the end of January, a four-walled "cave" will be installed. One current project includes salt dome imaging from seismic data, a study that investigates the suitability of a dome to store hydrocarbon-laced soils. Subsea International and the laboratory are exploring the application of this technology to operator training for remotely operated vehicles.

The Virtual Environment Technology Laboratory is not the only facility developing this technology. Amoco, British Petroleum, Exxon, Shell and Texaco have small research groups working to de-

velop 3-D virtual imaging. Future applications for the oil industry are many — geophysical interpretation, reservoir modeling, multi-phase fluid flow modeling, drillbit design, oil tool performance modeling and personnel training are just a few of the many ways this evolving tool will be used.

### Gulf of Mexico

**Platform rig will work on Chevron's Vancouver field.** Houston-based Nabors Drilling USA Inc. will mobilize its API platform drilling rig NO. 85 in late 1997 to work for Chevron in the Vancouver field in Green Canyon Block 205. The rig will be employed on a spar platform moored in about 2,700 feet waters. The platform rig will undergo modifications, including enhancement of its dynamic motion characteristics, before starting the Chevron job. This contract marks Nabors' entry into the deep-water development market.

**Forcenergy acquires stake in two blocks.** Florida-based Forcenergy Gas Exploration closed two deals that resulted in increased ownership in Vermilion Block 261 and new ownership of Vermilion Block 262. The company estimates that its proven reserves will increase by about 6.8 Bcf as a result of these transactions. Forcenergy hiked its interest in Vermilion 261 to 55 percent from 25 percent and became operator by swapping its interest in the Eugene Island Block 24 field to Pennzoil. As part of the transaction, Forcenergy also acquired a 100 percent interest in Vermilion Block 262.

**Aker Omega to study Texaco's Petronius field.** Houston-based Aker Omega is conducting for Texaco Exploration & Production a conceptual screening study for development of the deepwater Petronius field. The discovery is in Viosca Knoll Block 786 in 1,750 feet waters. Marathon Oil holds a 50 percent interest in the prospect. Aker Omega will study the commercial and technical feasibility of various production systems. The objective is to identify a short list of preferred facility concepts and development scenarios for further evaluation. The study is scheduled for completion this month.

A number of candidate production systems will be evaluated including a subsea production system tied-back to a new shallow-water host platform and several floating systems. These include converted and newbuilding semis, tension-leg platforms and spar structures. A matrix of design variations will be studied, including full versus initial processing and drilling versus workover capability. The production system also will be required to support water injection and secondary recovery operations.

**Flextrend Development encounters pay in Viosca Knoll area.** Flextrend Development Co., a subsidiary of Leviathan Gas Pipeline Partners, logged 100 feet of vertical pay in two different reservoirs in the Viosca Knoll Block 817 A-2 well. The well will be plugged back and sidetracked as a high angle production well bore. Tatham Offshore is a partner in the well.

**Platform salvage project on tap.** Diamond Services will remove Murphy Exploration & Production's Vermilion Block 86 "A" and "B" platforms offshore Louisiana. Diamond Services will use its derrick/pipelay barge DIAMOND 85 for the job, which gets under way this month. The two four-pile platforms are in about 42 feet waters.

## Latin America

**Petrobras places charters for three Farstad vessels.** Brazil's state oil company Petrobras awarded long-term contracts to Norway's Farstad Shipping for two of its anchor-handling tug/supply vessels and one platform supply vessel. The vessels will support exploration and production in the South Atlantic. Petrobras chartered the 13,000-bhp AHTS FAR CRUSADER and FAR CENTURION for five years. One contract begins immediately; the other starts next November. The Brazilians also chartered the 5,250 bhp-platform supply FAR SLEIPNER for one year starting in March. The CRUSADER and SLEIPNER have been working for Petrobras; the CENTURION will mobilize from the North Sea after being upgraded with firefighting equipment. The latter vessel has been working on the North Sea spot market.

**Stolt Comex diving support vessel will handle hurricane repair tasks.** Stolt Comex Seaway confirms that its diving support vessel SEAWAY PELICAN is under a minimum three-month contract to carry out repairs to platforms damaged by last October's Hurricane Roxanne, which hit the Bay of Campeche region. Work, including hyperbaric repairs, will be carried out this winter.

**Spanish shipyard will convert semi to floating production system for Marlim field.** Spain's Astilleros Espanoles received a \$64 million contract from Brazil's state oil company Petrobras to convert the semisubmersible ILIAD into a floating production system for the deepwater Marlim field offshore Brazil. When the conversion is complete, the unit will be renamed PETROBRAS XXVI and will become the fourth FPS deployed in the Marlim field. The floating production system will be installed in about 3,250 feet waters in early 1997 and will be

capable of processing 100,000 b/d of crude, 88 MMcf/d of gas and about 150,000 b/d of water. Conversion work, which will get under way early this year, will be handled at Astilleros' Cadiz yard. Delivery is scheduled for 1997. The FPS has been designed to operate for 20 years.

## Liverpool Bay

**First gas flows from Hamilton North field.** BHP Petroleum's Hamilton North field has started producing in Liverpool Bay off the UK's west coast. Initial output is being used to commission systems and pipelines offshore and onshore and subsequently PowerGen's new onshore power station at Connah's Quay before full contract deliveries start in mid-1996. Four fields -- Douglas, Hamilton, Hamilton North and Lennox -- are being developed in Liverpool Bay. BHP expects first oil from the Douglas and Lennox fields to begin flowing sometime in January. Gas production from the Hamilton field is expected to begin in early 1996 followed by the Lennox field in several years.

## North Sea

**Statoil moves forward with Aran Energy acquisition.** Statoil officials said all conditions have been fulfilled for it to acquire Irish independent Aran Energy. Statoil's offer has been accepted by shareholders representing 85.4 percent of the company's stock. The remaining shares will be purchased over the next few weeks. Statoil officials said Aran's acquisition will speed the development of its international production, and brings interesting exploration acreage and development projects. Aran has interests in Britain's producing Gryphon, Alba and Dunlin fields, is involved in the Schiehallion development west of the Shetlands and operates the Connemara license offshore western Ireland. Aran also holds interests in oil and gas fields in the Gulf of Mexico.

**PGS to shoot seismic off Norway.** Norsk Hydro selected PGS Exploration to shoot a 3-D seismic survey offshore Norway during 1996. The contract carries options for 1997 and 1998.

**BP to drill well near Gyda field.** British Petroleum plans to drill a new exploratory well near the Gyda field. The semi MAERSK JUTLANDER will drill the prospect JU2 southwest of the field's platform.

**UK officials give approval for Amerada Hess's Telford field.** The UK Secretary of State for Trade and Industry has given Amerada Hess its approved



to develop the new Telford field, which straddles UK Blocks 15/21 and 5/22. The field contains an estimated 48 million barrels of oil and 74 Bcf of gas. Telford will be commercially developed using subsea facilities tied-back to the operator's Scott platform. Telford's first phase of development calls for seven wells in the central and Marmion areas of the field. Reserves in East Telford and West Telford may be tapped later. As reported last week, Rockwater won a major \$60 million contract to perform Telford's engineering, procurement, installation and commissioning of subsea facilities. Rockwater also will fabricate and install two manifolds, a shutdown valve structure and a 492 foot riser caisson that will be installed on the Scott platform.

**Engineering alliance to drill wells in Cyrus field.** British Petroleum awarded a multimillion-dollar engineering alliance contract for two wells in the Cyrus field to an alliance of Baker Inteq, Schlumberger and Transocean. The agreement is the first stage of awarding life-of-field contracts to provide a complete range of activities for well construction, well management and data services.

**Bardex to supply BOP handling package for Britannia project.** Britannia Operator Ltd. placed a contract with California-based Bardex Corp. to supply a BOP handling package for use on the Britannia field's drilling/production/accommodations platforms. The package will consist of motorized trolleys for horizontal translation with hydraulic cylinders having a total lift-lower capacity of about 84 tons, plus a BOP handling control panel and interconnecting hydraulic umbilicals.

**Total tests gas, condensate.** Total successfully tested its N33 well drilled from the Alwyn platform. The well produced 56 MMcf/d of gas and 5,600 b/d of condensate from a deep horizon below existing producing reservoirs. The discovery is being evaluated by an extended well test program already in progress. Additional delineation wells are planned.

**Statoil submits plans for three fields.** Statoil has filed development plans with Norwegian officials for three satellite fields near the producing Gullfaks fields. The prospects -- Gullfaks South, Rimfaks and Delta -- would require a \$1.03 billion investment to commercially develop. The accumulations hold an estimated 260 million barrels of oil with associated gas. The fields are slated to come on stream in late 1998. Other Gullfaks licensees Norsk Hydro and Saga agreed to the development program.

**Statoil completes first multilateral well.** Statoil completed the first multilateral or multibore well drilled from its Statfjord C platform. Involving drilling branches from a main well below ground, this technique allows a single well to drain several separate oil or gas structures. The method can reduce well costs while generally giving higher productivity and greater recovery, and will be used on other fields already in production. Statoil reports that savings on drilling and completing multilaterals exceed over \$1 million for each additional branch drilled. In subsea wells the method also cuts a number of development costs.

**Talisman launches bid for Goal Petroleum.** Canadian independent oil company Talisman Energy launched a cash tender offer worth close to \$200 million for Goal Petroleum. The deal is part of Talisman's move to boost its share of the North Sea market.

**Neste sells stake in upstream gas venture.** Neste is selling its 50 percent stake in the upstream gas venture Sovereign Exploration to partner North Gas. The move will complete Neste's withdrawal from the UK oil and gas sector. Financial terms will be finalized after the Schooner and Windermere developments, in which Sovereign has a stake, come on stream in 1997.

**Worldwide FPSOs increase by one-third.** UK-based Smith Rea Energy Analysts says in a study that 78 floating production/storage units were operating, under construction or conversion at year-end 1994. Analysts forecast that another 25 to 30 units will be added to the fleet in 1995. The North Sea leads all geographic regions in the number of FPSOs. Moreover, data from Offshore Data Services' Offshore Field Development International database shows 75 floating production and storage systems planned and under construction worldwide. Data shows that some 37 units are scheduled for installation in 1996, followed by 21 in 1997, 5 in 1998 and 3 in 1999.

**Coflexip to install Njord field's flowlines, risers.** Coflexip Stena Offshore, Norway, won a \$58 million contract from Norsk Hydro to engineer, manufacture and install more than 10 miles of flexible flowlines, risers, integrated service umbilicals and power cables for the Njord field. Njord is being developed with a floating production unit moored in 1,080 feet waters; 15 subsea wells are tied-back to the FPS. Production will be exported through a 10-inch diameter flexible riser/flowline to a floating storage unit stationed 8,200 feet away. Coflexip's contract includes construction work needed to de-

ploy the two floating units on the field. Installation is targeted for mid-1997.

**Dutch officials give OK to three new satellite fields.** UK independent Clyde Petroleum won approval from Dutch officials for simultaneous development of three satellite gas fields off the Netherlands. Each prospect, P/2-NE, P/2-SE and P/2-South, will be commercially developed using a low-cost, unmanned reusable jackup production platform tied-back to the P/6-A processing facilities. Gas reserves from P/2-NE will be piped to P/2-SE, then transported to P/6-A processing facilities, a distance of 17 miles. These fields will come on stream in early and mid-1996; P/6-South will start producing in late 1996.

**ERC Tigress, Shell develop production management software.** Houston-based ERC Tigress and Shell International Exploration and Production, The Hague, will build an open architecture oil and gas production management tool for multiple platforms and multiple databases that rapidly identify problem wells. The tool, called Puma, quickly recognizes problem wells by comparing actual production rates and pressures against those that might be expected theoretically. The prototype allows users to optimize production by integrating well and reservoir data in a common database that may be accessed by all members of a multi-disciplinary asset team. The new software is said to reduce costs for data management and visualization. Shell and ERC Tigress expect to provide the first commercial version of Puma by next fall with a full commercial release the following year.

**Hydrocarbons found in 64 percent of wells drilled in '95 on Norwegian continental shelf.** Hydrocarbons were found in 64 percent of the wells drilled on the Norwegian continental shelf in 1995, but most were small finds, officials report. Proven resources were placed at roughly 320 million barrels of oil and 75 Bcm of gas. These figures are provisional since testing still must be completed on some of the bigger discoveries. Statoil was operator for 15 of the 36 exploration or appraisal wells completed off Norway in 1995, and made discoveries on 10 of them. Additionally, 23 of the total wells drilled are classified as discoveries, with 11 of them new. One of last year's discoveries, Statoil's Statfjord North, is already producing.

**Three workers killed in explosion at Amec yard.** Three workers were killed and four were injured in a Dec. 22 explosion at Amec's Howdon yard near Newcastle-upon-Tyne. The UK Health and Safety Executive has launched an investigation into the

accident. Amec also is probing the accident. HSE said the accident was caused by a catastrophic pressure release while workers were testing pipework on a module for Maersk Oil & Gas. Amec said the procedure was routine and is carried out on all modules built at the yard.

**Heidrun project wins '96 OTC award.** The 1996 OTC Distinguished Achievement Award has been given to Heidrun field development operator Conoco Norway. The Heidrun development features the world's first concrete-hulled tension-leg platform. The award, which recognizes companies for outstanding contribution to development new technology, will be presented to Conoco Norway President Mike Johnson May 7 at the Offshore Technology Conference in Houston.

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## West & East Africa

**UMC seeks jackup for Ivory Coast drilling program.** United Meridian Corp. has a three-well plus one-option jackup requirement off the Ivory Coast beginning between April and June. A 180-day tender for a 300 foot jackup is expected to be issued.

**New cargo/utility vessel added to West African fleet.** Trinity shipyard's Equitable Shipyards, New Orleans, delivered the newbuilding cargo/utility boat AFRICAN STAR, a 135 foot aluminum unit, to O. K. Shipping Ltd., Allschwill, Switzerland. The high speed vessel will transport containers and other cargo to the coasts of Angola, Congo, Equatorial Guinea, Gabon, Nigeria and Zaire. It also will service offshore facilities of those countries. The AFRICAN STAR can haul up to 80 metric tons of cargo and has quarters for 12. The vessel is powered by five Cummins KTA-19-M3 diesel engines developing a total of 3,000-hp.

**Magnetic gravity survey planned offshore Eritrea.** Carson received a contract from Anadarko to shoot a magnetic gravity survey over the Red Sea's Zula Block offshore Eritrea. The survey will define 24 sites Anadarko identified by reprocessing existing seismic data.

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## Middle East

**Problems develop in Red Sea's Suakin 2 well.** International Petroleum Corp.'s first drillstem test on the Suakin 2 well, which was conducted open hole at a depth of 9,027 feet to 9,148 feet, was aborted due to the formation caving in and plugging up the test string. During the kill operation the contents of the test string was reverse circu-

lated out; about five barrels of oil/mud mixture was recovered. The crude is being analyzed in Dubai. Diamond Offshore's drillship OCEAN CLIPPER is drilling at 10,140 feet; drilling will continue as long as prospective sands combined with good gas shows are being observed, which has been the case since 9,800 feet. The Suakin structure is within the Delta Tokar Block, which is operated by International Petroleum Sudan Ltd.

## Southeast Asia

**Maersk tests second successful exploratory well off Thailand.** Maersk Oil and Gas and partners drilled and tested a second exploratory well on the large Benchamas seismic structure on Gulf of Thailand Block B8/32. Maersk will drill additional wells immediately. Four drillstem tests were conducted on some of the sands encountered in the most recent well, yielding cumulative daily flow rates of 33.3 MMcf/d of gas and 7,575 b/d of oil or condensate. Maersk's partners in the Benchamas wells are Rutherford-Moran Oil Corp., Pogo Producing and Thailand's Sophonpanich Co. Ltd.

**Malaysia's Petronas starts work on gas receiving project.** Malaysia's state oil company Petronas has started work on its Sabah gas receiving project, which calls for installation of a 40.3-mile gas pipeline that will extend from the Erb field to Kota Kinabalu. The West Erb facilities will be upgraded and a new onshore gas terminal will be built. Look for the project to begin operations in late 1997.

**Basic Petroleum considers venture for exploration in Philippines.** Manila-based Basic Petroleum & Minerals Corp. is negotiating a possible joint venture for oil exploration in the Philippines with Mobil and Enron. Basic Petroleum is conducting separate negotiations with Mobil and Enron for joint development of potential oil and gas fields in the Lingayen Gulf in Pangasinan province.

**ROVs continue to break new ground in Amoco's Lihua 11-1 field.** Work on the initial phase of Amoco's multi-well Lihua 11-1 field development is nearing completion, with several of the ROV-dependent subsea tasks completed ahead of schedule. The field, located offshore China, is the first of its kind to use ROVs as the primary interface with the subsea production control system. Sonsub's two customized Advanced Remotely Operated Work Systems — Tritons 24 and 25 — along with tooling modules, control vans and other support equipment developed specifically for the project were mobilized onboard the NANHAI TIAO floating production system and arrived at the field site last

June. Sonsub has 17 men onboard the FPS, operating the vehicles and the guideline-deployed measurement/installation and retrieval tool, which takes detailed subsea measurements that are used in fabricating jumper spools. The current installation phase of the work is expected to be completed by late March.

**Sembawang ventures into China.** Singapore-based Sembawang Shipyard entered a joint venture agreement with China Offshore Oil Bohai Corp. to operate the Bohai Sembawang Shipyard (Tianjin) in northern China. Plans to upgrade the yard call for adding a 10,000 dwt capacity floating dock, lengthening and upgrading an existing graving dock for vessels up to 70,000 dwt, and adding another crane and other equipment to handle repair services.

**Sonat to market semisubmersible work unit.** Sonat Offshore acquired the exclusive right to market Far East Livingston Shipyard's semisubmersible work unit POLYPORTIA for the next several months. The unit is in FELS Singapore yard and is being offered as a candidate for conversion to the deepwater drilling mode.

**Statoil buys Ampolex Orient.** Norway's Statoil is buying Ampolex subsidiary Ampolex Orient, operator of the Lufeng 22-1 oil field in the South China Sea. Ampolex's floating production vessel SANTA YNEZ is not part of the deal and is expected to be sold separately. Ampolex Orient submitted a development plan for the field in early August; approval is expected soon. Upon completion of the deal, Statoil will hold a 75 percent interest in the field. CNOOC holds the remaining 25 percent. Statoil is expected to use one of its multipurpose shuttle tankers to replace the SANTA YNEZ. Lufeng 22-1 is scheduled to come on stream in 1997.

**Intec Engineering to design single point mooring for Malaysian project.** Intec Engineering (SEA) won a contract from Malaysian Refining Co. Sdn. Bhd. to provide a single point mooring system, a large diameter pipeline and onshore pipeline facilities for offloading VLCCs at the refining company's project in Melaka. Malaysian Refining Co. is a joint venture of Petronas, Conoco Asia and Statoil.

## Former Soviet Union

**Azeris, Russians discuss forthcoming Caspian Sea project.** Lawyers representing Azerbaijan International Operating Co. recently met with Russian officials in Moscow to discuss details of the group's forthcoming \$7.5 billion development program in



the Caspian Sea offshore Azerbaijan. Both sides discussed details of the plan to export early oil from the Caspian to Novorossisk, Russia's main export terminal. Discussions also were held between Turkish government officials, Azerbaijan's state oil company SOCAR, Azerbaijan International Operating Co. and the Georgia International Oil Corp. on commercial issues involving the export of Azeri field crude to the Black Sea by way of Georgia.

**Deadline nears to bid in Ukraine's licensing round.** The Ukraine's First Offshore Licensing Round, which covers approximately 19 million acres in the Black Sea, will close Jan. 31. Lease terms include a five-year exploration period with optional extensions and seismic and drilling requirements.

**Iran, Russia agree to set up joint venture energy companies.** Officials with Iran and Russia announced plans to establish joint venture petroleum companies in the exploration, production and product supply business sectors. While details of the

energy deal remain sketchy, Russian Deputy Prime Minister Oleg Davydov and Iranian Oil Minister Gholamreza Aghazadeh stressed that both countries want to boost cooperation and perhaps share facilities and strengthen technological ties.

## Australia

**Kufpec looks for project partners.** Kufpec is seeking partners for two prospects in Block WA-225P offshore Australia. The operator has a commitment to drill a single well in the area between May 1996 and May 1997.

**Rig runs wireline logs on Undan 3 well.** Diamond Offshore's semisubmersible OCEAN GENERAL is running wireline logs on BHP's Undan 3 well in ZOCA Block 91/12. The well's reservoir is comparable to that encountered in the Undan 1 and 2 wells. Undan 3 will be suspended for future production.

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