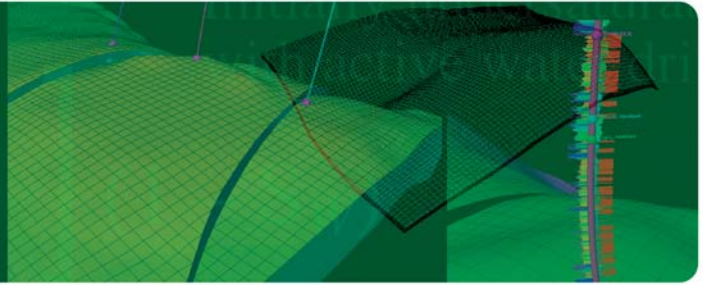


RESERVOIR SOLUTIONS



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O&G industry lauds new SEC reserves rules amid questions

The oil and gas industry welcomed the most sweeping changes in petroleum reserves reporting rules in more than 30 years as the U.S. Securities and Exchange Commission introduced final filing requirements Dec. 29. Revisions to Rule 4-10 of Regulation S-X and Regulation S-K are posted at www.sec.gov/rules/final/2008/33-8995.pdf.

Most in the industry expect the timetable for the January 2010 effective date to hold firm and are urging the SEC to clarify compliance details soon. See sidebar, “Companies plan for YE 2009 regulatory rules changes,” on Page 3.

The SEC will permit the use of new technologies to determine proved reserves if those technologies have been demonstrated empirically to lead to reliable conclusions about volumes. The SEC also will allow companies to disclose their probable and possible reserves.

Public issuers will have to report on the independence and qualifications of reserves evaluators or auditors and file reports if relying on a third party to prepare reserves estimates or audits. Companies also will report oil and gas reserves using an average price based on a prior 12-month period. That will mitigate distorted estimates that arise from a one-day price, said the SEC.

The rules elicited universal praise from industry, including the Society of Petroleum Engineers, and from investors. However, because some subparts of the S-X and S-K regulations are not codified

in detail, companies had wide-ranging, unanswered questions the first quarter.

Evaluators were requesting guidance on calculating price differentials for use with averaged benchmarks.

Accountants, reviewing the S-K disclosures, were asking for clarifications as to when a five-year reconciliation table for proved undeveloped reserves begins tracking historical data.

Qualifications of the technical person primarily responsible for overseeing the preparation of the reserves estimate will be submitted in the regulatory filing. However,

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Russian kids' drawing contest to go global.....Pg. 6



This drawing, “My Father is a Geologist,” by Olga Cherednikova, 15, received an award from the World of Science, a nonprofit partnership in Moscow. See Page 6.

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large companies relying on internal estimates wanted to know which level of overseer to document—corporate reserves managers, business unit reservoir managers or asset team managers?

Companies also commented to the SEC on estimated additional costs to set up processes to capture the new required data under a response deadline of Feb. 13. The Commission is reexamining the burden of revised-information collections.

Initially, the SEC estimated that, on average, each company would incur a burden of 35 hours to prepare these disclosures each year over a three-year period. The agency upped its estimate to 100 hours added preparation time per company per year and 150 hours per year for foreign private issuers.

The SEC also estimated that 75 percent of the burden for public issuers would be carried out by outside professionals. “Some of our clients will report 3P reserves with price sensitivity cases,” said Don Roesle, CEO at Ryder Scott. “That will result in more documentation by their staffs and increased review by us.”

Highlights

■ Prices used to establish the economic limits of the reserves will be calculated as the unweighted arithmetic average of the price on the first day of each month within the 12-month period prior to end of reporting period. Prices are held constant over the field’s economic producing life. The only exception is where sales prices are tied to futures contracts, which

may contain escalations based on future conditions. Companies were asking the SEC to clarify how to determine price when contracts expire during the reporting period. Mixing contract and market prices during the period and averaging those would result in a nonsense answer.

■ Public issuers are allowed to report reserves from non-traditional sources. Extraction of unconventional resources is an oil and gas activity if the final product is oil or gas regardless of extraction method. End products include synthetic oil and gas. Under those guidelines, bitumen extracted through mining operations is reported as oil reserves if the end product is synthetic oil.

■ A producer can report an adjacent undrilled area as proved if reasonably certain that it is continuous with the drilled area and economically productive. The SEC will be looking at “development spacing areas” rather than “drilling units.” That allows producers to estimate proved reserves with reasonable certainty at greater distances from productive areas through the use of reliable technology. Industry is no longer constrained by the unrealistically high criterion of certainty to book PUD locations farther than one offset unit from the producer.

■ Companies can cite reliable technology to justify establishing reasonably certain fluid contacts. Without a compelling technology case, lowest-known and highest-known hydrocarbon limits as seen in well penetrations still apply.

■ An operator can book incremental proved reserves from planned improved recovery projects if “reasonable certainty” of future production is based on a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole. Analyzing the totality of reservoir properties in the aggregate is a departure from the old rules. In the

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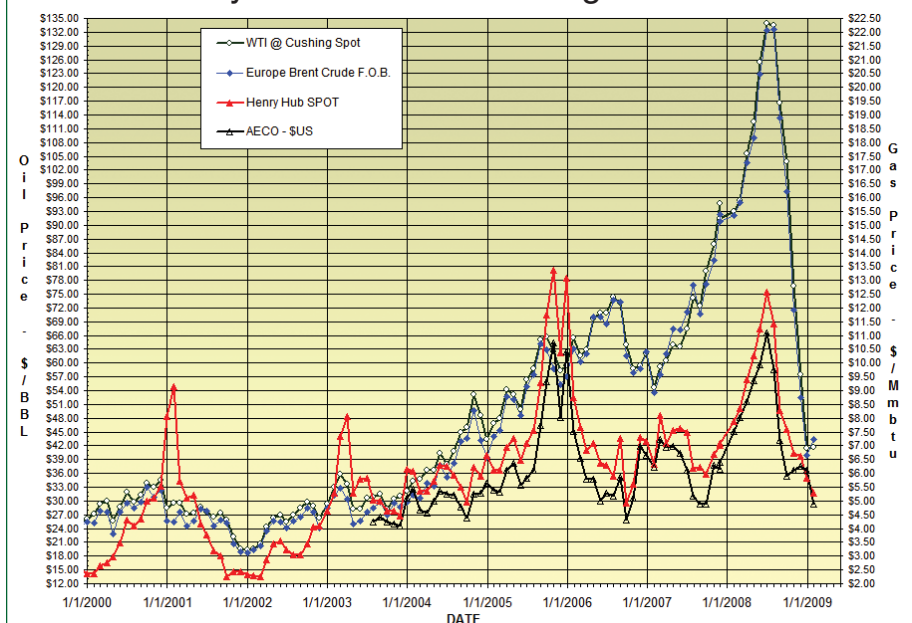
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Price history of benchmark oil and gas in U.S. dollars



The historical price chart shows published, monthly-average, cash market prices for WTI crude at Cushing (NYMEX), Brent crude and Henry Hub and AECO gas.

past, the subject reservoir had to have an equal or better value for each of six variables—porosity, permeability, permeability distribution, thickness, continuity and hydrocarbon saturations—compared to those for the reservoir with the pilot or used as an analog.

■ Under the old rules, improved recovery techniques had to be proven to be effective in the same reservoir or in an analogous reservoir in the same geologic formation in the immediate area. The new SEC definition does not stipulate that an analogous reservoir has to be in the immediate area or in pressure communication. In expansive geological plays, such as the U.S. Barnett shale, true analog and subject fields could conceivably be on opposite outer extremities of the formation. However, they will have to be in the same geological formation, have the same drive mechanisms and depositional environments and have similar geological structures. Reviewers were questioning whether subject and analog fields will have the same drive mechanism, as published, or same type of drive mechanism.

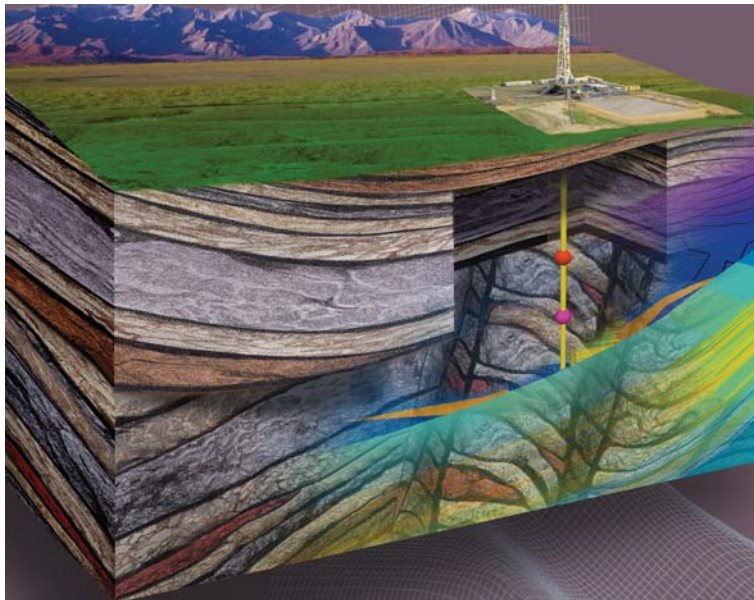
Other Highlights of Regulation S-K disclosures

Public issuers can optionally disclose the sensitivity of reserves to price with price and cost schedules and assumptions for each scenario. All will be required to disclose material changes each year to PUDs, investments to convert PUDs to proved developed categories and why PUDs remain undeveloped past five years.

If 15 percent or more of the company's total proved reserves in BOEs are in a single country, then the producer has to breakout those quantities in the filing unless the host country prohibits that disclosure and it would result in making public reserves in particular fields. Based on potential competitive harm, companies are objecting to this "and" statement requiring both conditions for the exemption. If the rule is not revised, then companies with a major field in a host country would be required to report material reserves, in effect, by field, absent objections by the country.

In a revised Form 20F, foreign private issuers are required to file the same disclosures as U.S. registrants unless prohibited by home jurisdiction.

Editor's Note: It is not the intention of this summary to fully present the new SEC regulations in their entirety. The views expressed in this article do not necessarily represent the opinions of Ryder Scott or its employees. For a complete review of the posted rules, go to the Web address cited in this article. Ryder Scott assumes no liability for the use or misuse of the material in this article.



Companies plan for YE 2009 regulatory rules changes

In anticipation of 2009 year-end regulatory reporting, public oil and gas companies were proceeding at full speed the first quarter with plans to revise internal guidelines and staff training and manuals for estimating reserves. **John Heine**, spokesman for the SEC, said Feb. 10 that the agency fully intended to implement the new standards on schedule.

At the same time, industry hopes that the process doesn't stall because of potentially drawn-out deliberations between U.S. regulators and accounting standard setters. The SEC, in its late December announcement, said, "As we discuss our revisions with the FASB (Financial Accounting Standards Board), we will

consider whether to delay the compliance date further."

In late January, Texas A&M University professor **John Lee**, who as a fellow with the SEC last year, advised the agency on rules proposals, said that a slide in the deadline was a "slight possibility." While remarking that his comments only represented his views and not the SEC, he added that a delay would occur if the FASB does not agree that the changes in the rules are consistent with FASB 69.

"The SEC cannot dictate what the accounting standards can be," Lee said.

Other speculation focused on whether the newly headed Commission will freeze the pending rules to honor the spirit of a White House memo. Industry lobbyists in Washington, D.C., wanting to forestall any motion for a revote by the commissioners, were arguing in February that technically, the regulations are exempt from the freeze because they were approved by an independent governmental agency.

During the waning days of the Bush administration, some doubted that the SEC would approve the final measures before President Obama's team took over. Undeterred, the SEC approved the regulations while, on another front, the government watchdog battled a storm of criticism from the public for what was perceived as lax regulation of financial markets leading to a so-called once-in-a-lifetime economic meltdown.

"With each day that passes, the likelihood of a freeze becomes less and less," said a corporate reserves manager at a major who asked to remain anonymous.

SEC fellow to speak at Ryder Scott conference in May

SEC to scrutinize probable and possible reserves, use of seismic, says Lee



Lee

John Lee, a fellow at the U.S. Securities and Exchange Commission last year during the rulemaking process on new reserves disclosures, will be the guest speaker at the Ryder Scott Reserves Conference in Houston, Friday, May 8. He prefaced recent comments, stating that his opinions were not those of the SEC or its staff members.

Lee said that engineers at the Commission will review the optional disclosure of probable and possible reserves with

greater scrutiny as they learn to deal with the new rules.

"The greater uncertainty in 2P and 3P reserves means greater risk to the investor," the Texas A&M University professor said. "The SEC is going to monitor it because its first responsibility is to protect the investor. But filers need the opportunity to report probable and possible reserves. Investment decisions are based on 2P."

Lee said that the proposed rules last June had to be rigorous and demanding. "Any changes in the final rules cannot be more demanding than those proposed. That's good protection for the public," he remarked.

Lee also said that if a quantity was proved under the old rules, it will be proved under the new rules. For instance, fuel gas consumed in operations would still be allowed to be reported as reserves, he remarked.

The new regulations only mention seismic analysis once and state that "a company may disclose that it used a combination of seismic data and interpretation, wireline formation tests, geophysical logs and core data to calculate the reserves estimate."

Lee said, "In combination with other technologies, seismic can be used to get a valid geological model and should be proven in practice to find contacts in the

RYDER SCOTT '09

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"Evaluation Challenges in a Changing World"

Guest Speaker: John Lee, recent SEC fellow

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Parking, breakfast/lunch, reception provided

Six to eight CEUs; Ethics course; Agenda TBA

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formation." He remarked that companies would still be allowed to discuss seismic interpretations without regard to other analyses in press releases, but for filings, a company will have to support seismic with other evidence.

"The burden of proof is on the filer, but at least the opportunity to present a case is there," said Lee. He also said that it would be a good idea to post a question-and-answer section about the new rules on the SEC Web site.

For details on the upcoming Ryder Scott Reserves Conference, please see the display announcement on this page.

In the News

■ **Alan W. Farquharson**, senior vice president of reservoir engineering at Range Resources Corp., told the *Fort Worth Business Press* that "the (SEC) changes will help investors better evaluate a company's strength."

He added, "Most companies are not valued on proved reserves only, especially when you have shale plays, such as the Marcellus, Barnett and Haynesville shales."

■ **Aubrey McClendon**, CEO at Chesapeake Energy Corp., told the *Houston Chronicle* that "changes to the (SEC) reserve reporting requirements may provide a significant uptick in the company's proved reserves."

McClendon was also quoted as saying that the company could have 20 Tcf equivalents of proved reserves in 2010 compared to 12 Tcf reported in the third quarter.

■ **Larry Nichols**, CEO and chairman at Devon Energy Corp., told the *Houston Chronicle* in February that "three months ago, we recorded the largest quarterly earnings in history. Now, we recorded our largest-ever quarterly loss. (Had the new SEC rule been in effect), we would not have announced any writedown at all."

Please see In the News on next page

Roesle assesses Q4 reserves, SEC rules changes



Roesle

In a presentation to Citigroup Inc. recently, **Don Roesle**, CEO, discussed price- and cost-related fourth quarter impairments to petroleum reserves and the implications of next year's new U.S. reserves-reporting regulations. With year-end prices at \$44.60 a barrel for WTI crude and \$5.71 per MMBTU for Henry Hub gas, numerous reserves writedowns were reported in quarterly and 10-K filings.

At year end, most producers experienced a lag between the drop in commodity prices and trailing decreases in operating and development costs. "Proved producing reserves bookings were hit with low prices and opex and capex that did not decrease in the same proportion," said Roesle.

Some companies managed to document reductions in costs that were recognized at year end. "Companies had to present definitive, documented cases for cost reductions or use historical costs. Generally though, low prices and high costs increased economic limit calculations and reduced PDPs," said Roesle.

He also remarked that companies were removing proved undeveloped and behind-pipe reserves from the books because they were no longer economic. Falling prices also diluted discounted net present values, PV10s.

In discussing the U.S. Securities and Exchange Commission rules changes, Roesle said the Commission had "softened somewhat" the proposed time limit on the development of proved undeveloped reserves while stopping short of allowing "stagnant" PUDs.

Under the new rules, producers must file explanations of the reasons why material concentrations of PUDs in individual fields or countries have remained undeveloped for five years or more after disclosure as PUDs.

Roesle said that he anticipated that companies with shale plays and offshore and international properties would file exceptions to the time limits. He also discussed the SEC's allowance of the use of reliable

Potential Impact of SEC Rules Changes for 2010

- Change to PUD one-offset rule could significantly add to the proved reserves bases of companies with large portfolios of undeveloped locations, both infill and extension.
- Change requiring that PUD reserves be part of a development plan that with a five-year timetable could remove some "stagnant" reserves from company books.
- Voluntary reporting of non-proved reserves could significantly add to a company's reserves base and perceived asset value.
- Change from one-day to 12-month-average pricing could affect reserves depending on price volatility at year end.
- Use of new "reliable" technology could materially affect the assignment of reserves based on the application of seismic and well-test data to define downdip limits and areal extent of reservoirs.
- Implementation of new disclosure guidelines will significantly increase the information available to investors. The question is whether it will be helpful or confusing.

technology to justify reserves bookings.

"The producer will have to show a track record of successful, repeatable results from the deployment of a given technology in the reservoir," he said.

The SEC, in its principles-based approach, did not provide much specificity for which technologies would be used to build a case, but Roesle said that he expected companies to use seismic analysis, wireline formation tests and reservoir simulation.

His analysis included summaries of the new SEC regulations S-X and S-K in a 35-slide presentation followed by a question-and-answer session.

Ryder Scott professionals will offer additional analysis of new SEC disclosure rules at its annual reserves conference in May. See opposite page for further information.

In the News—Cont. from Page 4

■ St. Mary Land and Exploration Co. announced fourth quarter results in a news release stating that "the SEC recently published new rules for reporting year-end reserves that will go into effect for the calendar year 2009."

Stating that prices to be used to calculate year-end reserves will be based on an average, the company published a table detailing the reserves quantities it could recapture at various pricing assumptions. The SEC will allow optional price sensitivities to be filed in 2010.

■ TNK-BP said it replaced 82 percent of its petroleum reserves using SEC standards in 2008. However, using "the less stringent criteria" of the SPE Petroleum Resources Management System (SPE-PRMS), it replaced 146 percent of its reserves. The company said that this is the first time in six years that it has failed to fully replace reserves. The cause was a sharp fall in spot crude prices at the end of the year.

■ **Jeff Mobley**, head of investor relations at Chesapeake Energy Corp., told *Platts* that "the biggest thing is that they (SEC) will recognize unconventional holdings."

Drawing contest sparks kids' interest in O&G industry

Russian organizers ready to expand competition abroad; Research shows that viewing kids' drawings helps channel emotions in a world of constant change, they say



Crayon drawing, "I live in Izhevsk," by Karina Ragimova, 9.

Journalist **Dmytro Mossienko** turned to the American next to him at the children's art exhibit in Moscow, pointing to a girl's drawing. "The ambulance has an oil company's name on it," the *Oilmarket* editor mused.

Zigzagged strokes of crayon-green grass blades sprang off the illustration punctuated by colorful flower splotches. Basking under a smiling sun, kids played ball as smoke curled from a blue choo-choo train edging the playground—compositional elements juxtaposed to the hospital emergency.

Mossienko offered a newsman's analysis of the visual allegory—the ambulance, with RussNeft on the side, and frail figure on a stretcher symbolize the aftermath of a public scandal that the company suffered through in 2007. "You don't see honesty like that, except from a child," he said.

An art connoisseur with a more abstract view might say that the tension among the elements that the metaphor holds together is the source of its strength. Nine-year-old artist **Karina Ragimova** has a simpler explanation than journalist or critic.

"The drawing was a good chance to tell people about my beautiful home and about my mom's hard but interesting job in the oil industry," she said. Ragimova's composition represents her life in Izhevsk, the capital of the Udmurt Republic, where a subsidiary of RussNeft is a major local employer.

Her depiction and others won over judges in a nationwide drawing competition in Russia last year organized by Mir Nauki (World of Science), a nonprofit partnership in Moscow. Kids 16 and younger with parents in the oil industry submitted their oilfield portrayals in the "We are the Children of Oilmen" contest.

The winning entries were displayed at an exhibit at the Society of Petroleum Engineers conference in Moscow last October. Showings are scheduled across the country in various scientific and technical forums for a year. The oilfield scenes also competed in an-

other Mir Nauki contest, "Images of Science 2008," that ended in February.

Laureate Ragimova's real passion is drawing. "When my mom is out and I am at home alone, I make up different stories and create images of them with paints, crayons, clay and stained glass," she said. "The material does not matter. My mom says that I am a creative child, but it seems to me I am just good at it."

With government support, Mir Nauki launched the contest to attract children to the oil industry and to encourage them to "carry the torch" of their parents, said **Irina G. Terentieva**, executive director at Mir Nauki. The partnership was originally asked to establish this program by a large Russian oil company dealing with a scarcity of human resources.

"In the beginning, there was a skeptical attitude towards the contest," said Terentieva. "Oil company management did not realize the actual target of the project. They treated it as an ordinary exhibition of



Polina Fedoseeva, 10, receives a Mir Nauki award from Rick Tompkins, corporate business director internal audit at TNK-BP, at the SPE Moscow conference last October. Iskander Diyashev, SPE director at large, looks on. Photo courtesy Reed Exhibitions.



Drawing contest winners who received their awards at the SPE Moscow conference included, from left, front row, laureates Polina Fedoseeva, Andrey Prokofiev, Tatjana Stepanova and Svjatoslav Maslennikov. From left, back row, laureates Anton Baltachev (obscured), Igor Ustinov, Anastasya Belozeroва and Konstantin Terentiev. Photo courtesy Reed Exhibitions.

drawings.”

Initially, RussNeft Oil Co., TNK BP Ltd. and Gubkin Russian State University of Oil and Gas joined the effort. Momentum increased at the SPE conference as OAO Tatneft JSC, Schlumberger and Halliburton supported the program with gifts and assistance from their booths. Ryder Scott is an “information sponsor” for the program.

Hundreds of professionals from the industry visited the exhibit at the SPE conference. “We have received a number of requests for participation in 2009 and are proud to note that the requests have come from some big oil companies,” said Terentieva.

Some elements of the program are not without historical precedent. Petroleum engineer **Dmitri Zabrodin** keeps postcards of kids’ oilfield drawings that he bought about 10 years ago.

“The drawings were quite nice to see. The children were from Nefteyugansk, a city in western Siberia. It was a headquarters for Yukos at that time,”

said Zabrodin, vice president of Moscow-based FDP Engineering LLP, an alliance partner of Ryder Scott. The postcard series was presented in a booklet, “We Live in the Oilmen’s City.”

In the United States, Oklahoma’s Oil & Natural Gas Producers & Royalty Owners holds a contest for children’s oilfield drawings. However, the goal is to promote safety with a message to kids to “stay away” from potentially dangerous oil and gas operations.

Mir Nauki will accept entries for the 2009 contest from anywhere in the world. “Our contest is a Russian innovation, but we are ready to expand it abroad,” said Terentieva.

At the conference, SPE president **Leo Roodhard** said that he supported a broader effort internationally for the program. SPE made allowances to admit the youngsters to the conference hall so they could see their drawings on exhibit and attend the awards ceremony.

Mir Nauki is asking oil and gas companies to display the children’s drawings to enhance office décor.

“It’s the easiest way to cope with a featureless office space and create a relaxed, positive environment,” said Terentieva. Mir Nauki cites findings of psychologists, who say that wall hangings of the drawings help to maximize intuition and channel

Please see Drawings on Next Page



This watercolor painting, “At the Oil Field,” by Anastasya Belozeroва, 15, comes to life with vivid, hot and cool colors.

Cont. from previous page

emotions in a modern world of constant changes. That environment also increases productivity and fosters a creative environment.

Displaying the drawings also encourages the young artists. "I do appreciate the acknowledgement. If somebody likes my job, I want to create further," said Ragimova.

Volunteers are welcome. Terentieva said, "We always need volunteers to arrange pictures for exhibitions, work at exhibitions and advertise the contest. We would be most grateful if oil company representatives could hold a master class for children."

For more information on corporate support, acquiring drawings for display or entering the contest, please send an e-mail to Mir Nauki at info@mirnauki.ru or phone +7 495-250-61-78. The Web site is <http://mirnauki.ru>.

This year's contestants have a Sept. 30 deadline to submit their drawings. Laureates will be announced in



This drawing, "Big Russian Oil," by Konstantin Terentiev, 14, garnered honors in the "We are the Children of Oilmen" contest. For information on corporate support, acquiring drawings or entering the contest, please send an e-mail to Mir Nauki at info@mirnauki.ru or phone +7 495-250-61-78.

mid October.

Mir Nauki e-mailed New Year's greeting cards that featured a drawing, "The Oil Gold of Russia," by 10-year-old Polina Fedoseeva. She drew a blonde pig-tailed girl in a hard hat standing beside an oil rig. Inside the girl's thought bubble: a pile of gold coins.

You don't see honesty like that except from a child.



"We are the Oilmen," by Anton Baltachev, 10.

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