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White Nights and Polar Lights: Investing in the Russian Oil Industry

The basis of the economic revival of Russia and Western Siberia will not be some political laws. It will be the existence of strong companies. They will influence the new structure of the laws to be adopted. The oil companies are very active now. They should not wait. If they wait for political stabilization, it may take 1,000 years.

—Vladimir Spielman
Deputy Director of the Western
Siberian Geology Institute

In the second half of the 1980s the collapse of the Soviet empire created an unprecedented opportunity for Western businesses. With dizzying speed, nearly all of the world's communist states embarked upon radical programs of economic liberalization and declared themselves open for capital flows and foreign investment. Among the first to heed this call were Western oil firms, who rushed to investigate the vast petroleum reserves of what was once the Soviet Union. In many respects, investment in Russian oil seemed a perfect match between East and West. Western firms promised to bring to Russia the capital, technology, and managerial talent that the country so desperately needed. They also had the ability—and desire—to restore production levels in Russia's long neglected fields and provide the fledgling government with a valuable source of hard currency. For decades, oil sales had financed the Soviet Union's ambitious program of industrialization. Now, the continued capacity of the oil sector to generate tax revenues was vital to the success of political reform.

The potential for the Western oil firms was similarly vast. Even divorced from the other republics of the Soviet Union, Russia was still the world's largest single producer of crude petroleum. Its reserves of petroleum were the seventh largest in the world, and its reserves of natural gas the largest. Unlike many other oil rich countries, moreover, Russia was located directly next to the

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Professor Debora L. Spar and William W. Jarosz, Esq., Associate, Debevoise & Plimpton, prepared this case with Research Associate Julia Kou as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

lucrative European and Japanese markets, and boasted an existing network of pipelines and refineries capable of serving Western Europe. Finally, investment in Russian oil seemed relatively free of the currency constraints that dogged other potential investments, since oil exports could presumably be priced and sold in hard currency.

By the middle of the 1990s, however, a string of unforeseen events had significantly increased the risks of doing any business in Russia. The economy was in a shambles, the political situation remained unsettled, and, under nationalist pressure, the Yeltsin government had passed measures that taxed foreign-owned ventures nearly to the point of bankruptcy. The environment was particularly hostile for oil companies, which faced an onerous tax on export revenues. Still the sheer size of Russia's oil reserves and the oligopolistic structure of the international oil industry made it difficult for any Western firm to ignore Russia completely. Instead they ventured with varying degrees of caution, some anxious to grab the advantages of being first movers, others willing to exchange a smaller piece of the prize for a higher level of certainty. In all their calculations, though, the Western oil firms faced a common and generic, even if extreme, dilemma: how to balance the potential for very high reward with the possibility of very high risk. And in choosing their strategies, they all sought some means of defining and then hedging this risk.

The Russian Oil Industry

The petroleum industry in Russia dates from 1870, when the czarist regime recognized the market potential of the lands around the Caspian Sea and opened the entire area to competitive private enterprise. Because Russian industry at this time lagged significantly behind its Western counterparts, the first large-scale entrepreneurs were foreigners, who came to the region of Baku to develop the oil fields and export their production to serve a growing world demand. The Rothschilds and the Nobels built their fortunes in this way, as did Shell, which began as a trade and transportation company for Russian crude. By the turn of the century, Russian oil was a major factor in the world market. The state, however, remained largely aloof from the fields, intervening only to collect taxes from the foreign ventures.

This cozy relationship ended in 1905, when strikes in the Caucasus threw the oil fields into turmoil and launched the ill-fated Revolution of 1905. Subsequent discoveries in Kazakhstan and the Urals reignited Western interest in Russia but, for the most part, foreign investors began to pull out of the country, eager to cut their dependence on what was quickly becoming an unstable and uncertain supply. Between 1904 and 1913, Russia's share of world petroleum exports dropped from 31% to 9%.[1] By the time the Bolsheviks seized power in 1917, the foreigners were virtually gone, and Russian oil came under the sole direction of the state. It remained there for the next 70 years.

Oil in the Soviet Union

As with nearly all industries, oil in the Soviet Union was centrally controlled and hierarchically organized. Responsibility for the industry was divided among several ministries—Oil, Geology, and Pipelines—each of which handled its own segment of the production process and was rewarded on the basis of quantity. Thus, the Ministry of Geology and the regional geological

1. Daniel Yergin, *The Prize* (New York: Simon & Schuster, 1991), p. 133.

associations tried to maximize the volume of reserves discovered; while the Oil Ministry and its local subsidiaries, known as production associations, tried to maximize the production of crude petroleum. Costs and profits did not enter anywhere into the calculations, since inputs were allocated and prices set by the central planning agencies. Through yet another agency the Soviet state also controlled oil exports, which were critical to the country's balance of payments and its hard currency receipts. Throughout most of the post-war period, petroleum and gas accounted for roughly 90% of the Soviet Union's exports, and allowed the state to purchase the imported foodstuffs on which it increasingly depended.

The structure of this system—hierarchical authority, conflicting goals, and split responsibility—pushed the oil industry inevitably towards inefficiency and over-production. Since volume rather than efficiency was measured, officials tended to overestimate their output and stretch their resources to the breaking point. This tendency became even more pronounced whenever price shifts or bad harvests compelled the central authorities to sell more oil on world markets. Vast discoveries in western Siberia had eased this pressure somewhat in the mid-1960s, but by the 1970s a continuation of standard Soviet practices had reduced yields there as well. With an abandon unheard of in the West, Soviet managers would repeatedly drill new wells rather than repair existing ones, and flood oil fields with untreated water to push the oil flows as high and as fast as possible.[2] By the mid-1980s, the combined effect of these practices was evident in Soviet production and export figures. Production of crude petroleum, for example, fell from nearly 12 million barrels per day in 1983 to 8.4 million in 1992, while exports fell from 2.6 million to 1.4 million.[3]

Simultaneously, the political structure of the Soviet Union was also rapidly unravelling.[4] With the ascension of Mikhail Gorbachev to power in 1985 the Soviet state entered the transition that would lead, ultimately, to its demise. In the process, the centrally-planned economy was dismantled and industries such as oil were revamped and restructured. More importantly, they were also re-opened to the outside world and permitted again to woo foreign investment.

Russian Oil in Transition

During this transitional period the structure of the Russian oil industry remained fluid, changing shape with the changing political priorities of the new government. Basically, though, the Russian industry retained the broad outlines of its Soviet predecessor. The Ministry of Ecology and Natural Resources controlled exploration for petroleum; the Ministry of Fuel and Energy oversaw production, transportation, and refining; and 32 production associations (PAs) were established to manage oil operations at the provincial level. In a more radical departure from past practices, the Russian government also founded five new companies—LUKoil, YUKOS, Surgutneftegaz, Sidanco, and Rosneft—that were designed to mirror and behave like vertically-integrated multinational energy firms.

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2. The technique of water-flooding involves injecting water into certain wells to increase the pressure and thus the yields of crude petroleum. If properly engineered and applied, water flooding will increase oil recovery. If performed incorrectly, however, there may be a short term increase in production, but it will be followed by reservoir damage and actual decrease in ultimate reserves recovery.

3. Oil exports to the West have remained fairly stable. Most of the decline in total exports has come from sales to the former Soviet bloc and CIS countries. U.S. International Trade Commission, "Trade and Investment Patterns in the Crude Petroleum and Natural Gas Sectors of the Energy-Producing States of the Former Soviet Union," Investigation No. 332-338, Publication 2656, pp. 2-5 and 2-9. (Hereinafter cited as USITC Report)

4. For a detailed description of the political and economic situation that prevailed in Russia at this time, see Alexander Dyck, *Russia 94: The Death of a System?*, HBS Case No. 794-107.

To facilitate investment, meanwhile, the Russian government passed a series of new and fairly radical foreign investment laws.[5] The 1991 Law on Foreign Investment explicitly allowed for foreign participation in the exploration of natural resources, granting a legal right for joint ventures with 30% or greater foreign participation to export 100% of their oil, stipulating only that exploration and extraction licenses be granted on the basis of public bid or auction. It also pledged the "full and unconditional legal protection" of foreign investments.[6] In 1992, the Law on Mineral Resources formally ended the state's monopoly on resource development and instead ceded to local governments the right to develop and exploit their own subsoil reserves. The Russian government, however, retained ownership of all resources. The Law on Mineral Resources also laid out in considerable detail the procedures for obtaining exploration and extraction licenses, and divided the responsibility for licensing between federal and local authorities.[7]

The weight of legislation, however, did little to change the underlying conditions for investment. Russia remained a perilous place by nearly all measures, with an inchoate political system and a rapidly deteriorating economy. Both the Soviet Union and the Soviet bloc had splintered into their component states, leaving Russia in the midst of a now-defunct trading and distribution network. Outside Russia's borders, many of the republics were embroiled in violent ethnic conflicts, while inside the Russian mafia was becoming a ubiquitous and ruthless presence. The ruble, pegged at 1.8/$1 during the communist days plunged to 150/$1 at the beginning of 1992, and then to roughly 3261/$1 by late 1994. The collapse of the communist system, moreover, had not been as clean as it had been elsewhere in eastern Europe, nor as controlled as it was in China. Instead, the system simply disintegrated, leaving little but the mafia and a handful of emerging private businesses to take its place. As price controls were gradually removed, inflation soared, letting loose a flood of popular discontent that often painted capitalism and foreigners as the source of Russia's woes. One of the few sectors that retained price controls, moreover, was energy, meaning that domestic fuel prices remained far below their international level, and even below the cost of production.

Most troubling of all for potential investors was the general uncertainty that surrounded any business venture in Russia. Despite rapid attempts to create a Western-style legal framework, Russia's legal system remained underdeveloped, lacking any serious foundation of contract, property, or corporate law. There were laws, to be sure, and courts, and jails, but no Western investor could be confident of how the laws would be interpreted, or on what grounds legal decisions would be made. Similarly, the pace of change in the country had tremendously complicated the old hierarchies of control, leaving investors—and oftentimes even officials—unclear about who had real power. This uncertainty was compounded in industries like oil, where finding the appropriate licensing agency was often critical. Even if the proper official was located, moreover, contracts for natural resource investments were notoriously difficult to implement, since the law required foreign firms to have domestic partners, and the partners were either the state or a state agency.

5. A full review of all of the Russian legislation which affects foreign investment in the petroleum sector is beyond the scope of this paper. See "Russian property law, privatization, and the right of "full economic control," 107 *Harvard Law Review* 1044 (1994).

6. See "Law on Foreign Investments in the RSFSR," 1991, at article 6.

7. The law provides for five types of licenses: 5-year exploration licenses; 20-year extraction licenses; licenses for nonextractive uses; licenses for the protection of geological features; and licenses for the collection of mineral samples. See USITC, p. 3-2; and "Law of the Russian Federation on Sub-soil Resources," dated February 21, 1992, effective May 5, 1992, as amended June 26, 1992.

Uncertainty also plagued the Russian tax code which, to investors at least, seemed driven by politics and arbitrary decisions rather than any economic motivations. Taxes in Russia, particularly in the oil and gas sectors, changed quickly and unpredictably, and included a number of overlapping components such as exports, production, profits, inputs, social costs, and repatriation. At times, the total tax burden on a venture was so high as to undermine any hope of profit—or even, in some cases, of recouping initial capital investments. In 1993, for example, officials from the Russian Subcommittee on Taxation acknowledged that taxes absorbed roughly 52% of the gross *revenues* of petroleum projects.[8] Price Waterhouse estimated the burden to be even higher, accounting for fully 75% of revenues and assuring a *loss* of $45 on each ton of petroleum produced in Russia.[9]

What made these taxes particularly ironic was that Russia was desperate for investment in its petroleum sector. The fields were in disrepair and the Russian production associations lacked access to the technology and expertise they needed to improve their yields. In 1993, 32,000 oil wells stood abandoned, even while the Russian government was critically short of hard currency and the Russian economy kept plummeting downwards. To bring Russia's energy sector back to the production levels of 1988-89, the industry needed an initial capital investment of $25 billion, and subsequent injections of around $6-7 billion a year.[10] The only realistic source for this capital was foreign investors, and particularly the large western energy firms with an obvious interest in Russia's vast oil and gas reserves. But before these investors would come, they needed some means to protect themselves against the financial, political, and physical risks of doing business in Russia.

Opportunities and Constraints

Nearly since its creation, the oil industry had been international in scope. The largest firms, known generally as the "majors", ventured across the globe in search of new fields and in the hopes of bringing these fields under their sole control. Through a fluke of geography and development, the majors tended to be Western, while the world's largest reserves of crude petroleum were located elsewhere, primarily in the Middle East, Latin America, and Russia. To bridge this gap, the majors had developed early into vast and diversified firms, bringing the exploration, production, refining, and transportation functions into a vertically-integrated whole. The size of these firms and the capital they required tended to reduce their number and drive the industry towards an oligopolistic structure. While the collusion that had marked the industry in its earlier days was gone, the big oil firms remained linked by their common interest in a global commodity that was still relatively hard to find and acquire. These links were made even stronger by the looming presence of the OPEC cartel which, even in its weaker periods, had a tremendous impact on petroleum supplies and prices.

Russia's position in the global industry was complex. Merely by virtue of the size of its reserves, it had been a player in the industry since the late 19th century. Once the early Western investors left, however, Russia's participation in international markets had been limited to the exports regularly channeled through its state trading agency. While this agency generally played by the rules

8. Sergey Gorbachev, First Deputy Minister of Finance, Second annual Russian Oil Conference, "The Russian Oil Industry: Foreign Investment Opportunities," London, February 11-12, 1993, cited in USITC, p. 3-3.
9. Byron Ratliff, Director of Petroleum Services, Price Waterhouse, Second Annual Russian Oil Conference, cited in ibid.
10. Deutsche Bank estimates, published in *Focus: Eastern Europe*, Jan. 6, 1993, No. 66, p. 4.

of the international markets, and indeed often mimicked OPEC's price behavior, it was never really part of the global industry, and had no direct contact with the Western majors or service providers.

Once liberalization re-opened Russia to the outside world, therefore, it was virtually virgin territory for the oil firms, comparable in many ways to the earlier great discoveries in the Middle East and Africa. As in these territories, there was a tremendous incentive for each of the major firms to establish itself quickly in Russia, gaining control over the fields before its competitors could do likewise. Given the size and reputed productivity of the Siberian fields, the stakes were particularly high. If a firm did not invest in Russia, it risked being permanently excluded from one of the world's largest single sources of crude petroleum. In the highly competitive oil industry, this exclusion could leave a firm with a serious disadvantage—especially since most of the other large sources of crude were located in the perpetually unstable Middle East.

Balancing these potentially high rewards, however, were correspondingly high risks. Under the conditions that existed in Russia, any investment was vulnerable to arbitrary taxation and possibly even expropriation. Soaring inflation and a plummeting ruble compounded exchange rate risk and operating exposure, while the tenuous state of Russia's legal system threatened to render any contract moot. Under these conditions, oil companies contemplating a Russian investment faced three major choices:

- Should they venture early into Russia, with all of its concomitant risks, or should they wait until some of the country's uncertainties were resolved?
- If they decided to go, what kinds of deals would best enable them to reduce risk to an acceptable level?
- Once the deal was structured, how could they bind their various partners to the necessary contracts and commitments?

As of 1994, Western oil firms had responded to these questions in a wide range of ways. Some jumped eagerly in, confident that the advantages of being first mover would, over time, outweigh the risks. Others waited by the sideline, fearful of being left out of the Russian game, yet unwilling to accept the level of risk it entailed. Still others tried to manage the process more directly, attempting to craft institutions and sanctions to compensate for their absence in Russia.

The three companies and strategies described below reveal the range of decisions that Western firms made. Taken together, they begin to suggest how firms approach risk in highly unstable environments, and how they can manage it to their best advantage.

Phibro Energy: First Mover's Advantage?

Phibro Energy Production, Inc. is a wholly owned subsidiary of Salomon Inc, the New York-based investment firm. In late 1981, Phibro Corporation, a large international commodities trading group, joined with Salomon to create the firm Phibro/Salomon. The friendly merger was designed in part to consolidate trading activities under Salomon's roof and use Phibro's cash flow to fuel Salomon's growth.

The strategy appeared to make great sense in the 1980s, as Salomon rose to become the leading stock underwriter in the United States. In late 1983, Phibro Energy, Inc. was formed as Salomon's energy trading arm and subsequently purchased a series of refineries in Louisiana and Texas. Then, in 1990, Phibro Energy focused its sights on the newly-opened Russian market and established Phibro Energy Production, Inc. ("Phibro") specifically to develop opportunities in Russia. If Phibro could enter the Russian market quickly, management calculated the company would gain both a significant source of crude petroleum and a key advantage over its larger rivals. With Russian oil, Phibro and Salomon could together build a web of oil transactions that extended from extraction, to refining, to the sale of oil futures.

Thus in November 1990, Phibro took the plunge. Together with the Russian state-owned production association Varyeganneftegaz ("VNG"), it formed the White Nights Joint Enterprise, a 50/50 Russian/American joint venture. The project, based in the Tyumen Region of Western Siberia, was granted licenses by the then Soviet government to develop and produce oil and gas reserves in three fields: Tagrinsk, West Varyegan and Roslavl. As one of the first major foreign oil joint ventures in the Soviet Union, White Nights received tremendous publicity in the international oil community and compelled other firms to hasten their own Russian involvement.

Financially, White Nights was established as a three-way partnership: VNG (50%); Phibro (45%); and Anglo-Suisse, Inc., a small Texas-based company, (5%). Technically, White Nights was conceived as a field development project, with Phibro providing capital to fund the services and technology required to boost yields in the existing fields and VNG providing the fields and attendant infrastructure. The partners negotiated a "decline curve", which plotted the expected production from the existing wells. Under the terms of the joint venture agreement, all oil "under the curve," would go to VNG, which would sell the oil to its traditional Russian customers and use the proceeds to reimburse Phibro for the costs of producing this "under the curve" oil. All oil "above the curve" would be exported and remaining after-cost proceeds divided among the venture's partners in accordance with their ownership interest.

From the start, Phibro's management was well aware of the risks that faced their venture. Most critically, in 1990, the Soviet Union still lacked a comprehensive legal and fiscal framework for foreign investment. Phibro's management, however, determined that the rules and regulations already in place, while less than ideal, were sufficiently adequate to proceed. Company executives also felt reasonably confident that the investment climate would improve along with the fast-evolving political climate of the time. To secure Phibro's long-term interests, moreover, White Nights was consciously structured to maximize the incentives for cooperation among the partners. Since VNG's profits came from its share of production in excess of the decline curve, its natural objective would be to expand output as much as possible. To do this, it would need the Western technology and management skills that Phibro could provide. Indeed, central to the agreement was the $40 million in capital which Phibro was committed to put up as the Western party's share of the venture's $80 million charter fund. It was envisioned that this $40 million capital infusion would be used to provide the advanced oilfield technology, services, and management skills which VNG lacked and which would allow White Nights to remain a viable joint venture for its full 25 year duration. Thus, both VNG and Phibro conceived of White Nights not as a terminal project, but as a long term partnership. If VNG wanted continued access to western technology for future projects, it would have a real incentive to do whatever was necessary to ensure the success of White Nights.

With this assurance, during 1991, Phibro committed $40 million in cash and VNG contributed $40 million in wells and infrastructure to the White Nights venture.

Early Setbacks

Shortly after White Nights began field operations in April 1991, the project encountered unexpected difficulties. The biggest problem was increased taxation. When the venture was formed in November 1990, it was subject to four taxes. By early 1992, however, the number of taxes had soared to a dozen, many of which were revenue-based, as opposed to the more benign profit-based taxes in effect at the outset. As a result, by the spring of 1992, White Nights was paying approximately 70% of its *gross revenue* in taxes to the Russian government, reducing its remaining cash receipts to an amount below actual production costs. The worst tax from White Nights' perspective was the export tax, levied at the arbitrary rate of 30 ECUs ($35) per metric ton (or approximately $5 per barrel).[11] Ostensibly, in accordance with a decree issued in July 1992, any foreign venture established prior to January 1992 was eligible for exemption from the export tax until it recouped the full amount of its initial investment. But despite repeated pleas by the foreign investment community, promises by the Russian government, and high-level bargaining between the U.S. and Russian governments, no producing foreign joint enterprise received an exemption under the 1992 Decree.

In addition to these tax and fiscal concerns, White Nights also ran into technical difficulties. To begin with, once operations were commenced in 1991, White Nights' two producing fields (Tagrinsk and West Varyegan) proved to be far less productive than the Russian geological surveys had indicated. In particular, recoverable reserves proved to be much lower than Phibro had been led to believe due to a combination of complex geology, overly-optimistic Russian reserve projections, low well productivity, and years of poorly conceived reservoir management. As a result, Phibro's original strategy of boosting output with expensive, advanced imported equipment operated by western crews did not make economic sense; the well production rates and reserves were simply not high enough to cover the costs. A second problem concerned VNG's domestic sales. As the Russian economy disintegrated, the state-owned enterprises found themselves locked into a system that no longer functioned. VNG was required by the state to sell oil to its traditional customers, most of whom were large state-owned refineries. But because these refineries were not being paid by their customers, they could no longer afford to pay VNG for their purchases, even at the extremely low, state-mandated prices that still prevailed in the market. As a result of these and other factors, the White Nights venture began running significant deficits, and Phibro was compelled to loan the project an additional $60 million beginning in late 1991. By the middle of 1992, the company braced itself for a potential $116-million pre-tax loss from the White Nights project.[12]

Staying the Course

Despite all these troubles, Phibro and Salomon remained committed to their Russian venture. The venture also began to show some signs of emerging from the Siberian morass. In June of 1992, White Nights exported its first full cargo of crude oil, and by mid-1993, Phibro had succeeded in boosting production at the venture by a third to over 26,000 barrels per day. More importantly, by negotiating a reduction in the decline curve in March 1994, the venture's exports—and thus Phibro's

11. The Export Tax, initially imposed at a rate of 33.8 ECUs/ton on January 1, 1992, fluctuated broadly throughout 1992 between 21 ECUs/ton and 48 ECUs/ton before settling at 30 ECUs/ton for 1993 and 1994.
12. *Petroleum Intelligence Weekly*, May 11, 1992.

potential ability to recoup its investment—eventually began to rise. As part of the renegotiation, White Nights also assumed from VNG all responsibility for domestic sales of below decline curve oil. Because White Nights was not tied into the network of old contracts that had bound VNG to the state-owned refineries, the venture's management felt confident that they would begin to receive payment for their local sales and, thus, that they could begin to reduce some of White Nights' accumulated debts.

On the political front, Phibro had also joined with other U.S. oil companies to exert pressure for an official exemption from the export tax. Chairman and CEO Brian Lavers, who had been recruited in mid-1992 following his retirement as Chairman of Shell Nigeria to restructure White Nights and make it profitable, remained guardedly optimistic. Like others involved in the Russian oil industry, Lavers found reassurance in a May 1994 decree that established a new procedure for exempting foreign ventures from the onerous export tax. Lavers also believed strongly that high-level lobbying by the U.S. Departments of Commerce, Energy, Treasury, and State, through the medium of the newly-established Gore-Chernomyrdin commission, would convince the Russian government that it was in its own best interest to remove the tax.[13] This confidence was rewarded when, by Decree 1611R of October 11, 1994, the Russian government exempted six western joint ventures from the export tax, including Phibro's White Nights project.

Mobil: Waiting by the Side

Founded in the late 19th century as the Standard Oil Company of New York, Mobil was one of the oldest and most influential players in the international oil market. In the 1920s, Mobil had been one of the first U.S. firms to enter the newly discovered oil fields of Iraq and in the mid-1940s it joined the American charge into Saudi Arabia. Over the years the company had diversified, extending its operations into all segments of the energy sector. In addition to its estimated reserves of 5.8 billions of barrels of oil,[14] Mobil also had significant refining and transportation facilities, and an international chain of service stations. Even at the production stage it was diversified, with massive gas fields supplementing its oil holdings.

From this vantage point, Mobil's enthusiasm for Russia was mixed from the start with a certain degree of caution. In 1988, the company's overriding objective was to cut costs, rather than increase reserves, especially in the face of sharply declining oil prices. Like many of the other majors, Mobil had discovered that exploration in the post-OPEC world was a trickier prospect, since increased oil production was keeping prices hovering at the $11-17/barrel mark. Below that, many exploration and development projects simply could not break even.

Thus, while Mobil was attracted by the huge reserves of Russia, and the potentially low costs of production, company executives were also reluctant to make any high risk investment in oil that they really did not need. And so, unlike Phibro, Mobil approached the Russian oil market with great caution. It sent investigative teams to Siberia, it established contacts within the Russian oil

13. U.S. Vice President Albert Gore and Russian Prime Minister Viktor S. Chernomyrdin signed a series of agreements on June 23, 1994 that established a major oil and gas exploration project by U.S. companies and called for joint development of a space station. The two parties also agreed to work together on various economic and environmental issues.
14. The figure actually measures oil and its equivalents.

bureaucracy; and it tendered, and lost, bids for several projects. But as of the summer of 1994 it had not made any significant investments in the Russian petroleum sector.

What Mobil had done was to reorganize the way in which it approached uncertain but promising areas of the world. In 1992, the company formed a new organizational unit, the Strategic Ventures Group, and charged it with exploring and developing new activities in the former Soviet Union, eastern Europe, Mexico, and Venezuela. Explicitly, Mobil's management recognized that the scope of business in these areas and the impact they could have on the global oil market was too large either to be ignored or to be handled within the customary corporate structure. So the decisions about whether and how to proceed in these high-risk/high-reward markets were spun off, directed, as Mobil's chairman and CEO described, towards the "hot pursuit of opportunities that may materialize."[15]

In Russia, however, the group moved slowly. Early in 1992, the company bid for a major exploration and production contract on Sakhalin Island in Russia's far east, but lost to the "3M" consortium of Mitsui, McDermott Engineering, and Marathon Oil. Soon thereafter, the Russian government asked the 3M group to consider including Mobil in the $10 billion project, but Mobil seemed in no great hurry to participate. Instead company officials reported that they were generally quite pessimistic about options in Russia, categorizing it as "one of the most politically risky countries in the world." Thus, even while acknowledging that there already was "not enough of the pie left to divide up," Mobil was content to wait.

Conoco: Crafting the Venture

In several respects, Conoco holds the middle ground between Phibro and Mobil. Whereas Mobil is one of the original majors and Phibro a recent entrant to the market, Conoco is part of the second tier of so-called independent firms, with a significant presence in the international oil market, but not the clout or network of a Mobil or Exxon. In Russia, it also chose a middle course, entering the country early but cautiously and committing to large projects while simultaneously trying to minimize its own financial exposure.

Conoco's involvement in the Soviet Union began late in 1989, when the company acquired several detailed geological studies and began to choose the most interesting targets for potential investment. It soon narrowed its focus to three projects—Shtockman, West Siberia, and Timan Pechora—and attached an in-house task force to each. It also decided even at this early stage to structure the projects as separate "subsidiaries" with "headquarters support" provided by a single administrative staff.

Once this basic structure was established, Conoco's management tried to outline some basic strategies for dealing with the vast uncertainties of Russia. For instance, rather than just accepting the technical and geological information provided by the Russians, Conoco sent its own team to re-evaluate and test potential production sites. Likewise, to ward off the possibility of Russian expropriation or breach of contract, the company began to think about increasing their own leverage in any project by providing equipment—particularly pipeline—that would not be easily available to

15. Allen Murray, cited in *Energy Economist*, March 1992.

its partners. And finally, in a fairly radical departure, it started to investigate outside sources of financing.

In plotting its actual involvement in Russia, Conoco adopted a conscious strategy of sequential investment, striving to gain experience and contacts in Russia before making any major or irreversible commitments. It began, therefore, with the Shtockman project, a joint venture between Conoco, Norsk Hydro—three Finnish companies—and the Soviet Ministry of Oil & Gas. The project itself was straightforward, designed to produce gas from existing wells and then construct a pipeline to transport the gas to European export markets. Conoco's financial involvement in the deal was limited, as was its downside risk. In Western Siberia, its second project, Conoco also moved cautiously, launching major studies of the region's production potential and putting the project on a timetable of contingent approvals. First came a joint Conoco/Soviet feasibility study, then a six-month period for consideration, and only then the creation of an official joint venture.

Only after these initial forays did Conoco shift its attention to its largest and most significant venture. In June 1992, it signed an agreement with its Russian partner Archangelskgeologia to establish a new joint venture named "Polar Lights." Located at the Arctic edge of the Timan-Pechora Basin, Polar Lights was considerably more ambitious than Conoco's earlier ventures, and indeed more ambitious than nearly any previous investment in the Russian oil sector. Unlike most earlier projects, Polar Lights was established in an area without any existing production capacity. The venture thus planned to design, build, and operate the total infrastructure that production would demand, for an ultimate cost of roughly $3 billion. To get even the initial phases of the project underway, Conoco and its partner needed to develop 24 drilling wells, install a central processing facility, and build a 37-mile pipeline capable of transporting 40,000 barrels a day of Russian oil. All of this was to occur, moreover, in a sparsely populated region with virtually no infrastructure and where temperatures regularly dropped to - 40 Fahrenheit. Despite these obstacles, and despite the sheer magnitude of Polar Lights, Conoco's management continued to see the venture as an experimental foray. As the company's CEO, Constantine Nicandros, explained, "We chose to participate in developing this relatively small field with two goals in mind" to use the project as a test case to learn whether or not we could successfully do business in Russia and, if we could, to use it as a platform for future investments."[16]

The magnitude of the deal also forced Conoco to experiment with ways of reducing the company's financial and economic exposure. First, the number of middlemen involved with the project was sharply limited. Polar Lights would itself control the flow of oil from the well-head to the shipment point and would also operate and finance the pipeline.[17] This control, presumably, would allow the venture to increase its leverage with the Russian government even while maintaining a healthy distance between Polar Lights and the Oil Ministry in Moscow. To increase it financial leverage and reduce its exposure meanwhile, Conoco went to great lengths to bring outside partners into the venture. It sought the active involvement of multilateral and U.S. government lending institutions and successfully lobbied the European Bank for Reconstruction and Development (EBRD) for a $90 million loan. The International Finance Corporation put up another $60 million, and the Overseas Private Investment Corporation an additional $50 million. Under the terms of the agreement, all partners to the venture would receive cash through the declaration of dividends by the Board of Founders, composed of Conoco and Russian members. By using institutional funds, Conoco clearly increased the pressure for production and hard currency revenues. But it also subtly changed the

16. Constantine S. Nicandros, "The Russian Investment Dilemma," *Harvard Business Review*, May-June 1994, p. 40.
17. See D. Schlegel, "Joint Venture Gets $200 million in Loans to Develop Russian Oil Field" (1993).

stakes of the Russian game. Once the international institutions were involved, the costs of violation, or even excessive intervention, rose higher, since lending institutions have much greater clout than any individual company. Or as Randall Fischer of the EBRD described: "The Bank has certain rights, most importantly to close the window on further operations with that country."

Moving Ahead

In 1994, it was still too early to predict the ultimate fate of Conoco's Polar Lights venture. On one hand, Polar Lights was being heralded as one of the most exciting and well-conceived forays into post-communist Russia. On the other hand, though, the same problems that had plagued Phibro and other Western investors were beginning to loom.

The taxation issue, for instance, remained painfully unresolved. Although Conoco had ultimately negotiated a formal exemption from Russia's onerous export tax, it was not clear whether, and for how long, the exemption would prove acceptable to the Subcommittee on Taxation. Moreover any significant increase in other taxes—on revenues, wages, or the like—could also jeopardize the project's future, especially at a time when oil prices remained stubbornly fixed at $11-17 a barrel.

Meanwhile, even though production at Polar Lights had been slated to begin in 1994, Conoco's management was still wrestling with its partner and a host of Russian authorities over the details of its contractual terms. Negotiations were proceeding amicably for the most part, but many issues remained still unresolved. Export licenses, for instance, which were critical to the venture's commercial success, were being held up in Moscow, and the basic infrastructure at the fields remained wholly inadequate. Late in 1992, moreover, a little-known environmental group had brought suit against the Russian government, charging that it had undermined the national interest in approving the Polar Lights project. While the suit was subsequently dismissed, it created an air of uncertainty, and prompted even the chief engineer of Archangelskgeologia to complain that, "Patience is running out. If the Americans, after investing a bundle of money in the project, see that no work can be done this winter, they'll give up and go home."[18] Conoco had also suffered a blow in its Shtockman project: after the consortium had spent tens of millions of dollars surveying the region, the Russian government had summarily awarded the production concession to a hastily-assembled Russian group. Conoco and its partners received no compensation for their efforts.[19] In the summer of 1994, CEO Nicandros broke from his customary enthusiasm to characterize the Russian investment climate as "one of complete disarray."[20]

To settle this disarray, Nicandros and other investors continued to stress the importance of a strong and transparent legal framework. Along with representatives from Western governments and lending institutions, they lobbied Russia's fledgling government to pass legislation that would clearly define the financial and legal basis for investment in the petroleum sector and create some mechanism for resolving disputes. In the summer of 1994, many industry insiders thought the legislation was only months or weeks away from passage.

But then in August, Russian President Boris Yeltsin dismissed the draft law under consideration by the parliament, claiming that the document revealed an "anti-reform approach".

18. Quoted in Vasily Zakharko, "World 'Shark" is Near," *Izvestia*, December 17, 1992, p. 7. Reprinted in *The Current Digest*, vol XLIV, no. 50 (1992), p. 23.
19. *Economist*, "Russia's Cold Shoulder", March 13, 1993, pp. 73-74.
20. Nicandros, p. 40.

Yeltsin argued that the existing legislation on mineral resources was specific enough to make any new law redundant. In interpreting this unexpected move, the *Financial Times* wrote: "Mr. Yeltsin's dismissal of the draft law, and his evident reluctance to propose an alternative, suggests he would prefer this area, as others, to be regulated by his decree."[21]

21. John Lloyd, "Yeltsin Dismisses Draft Law to Build Up Oil Investment," *Financial Times*, August 5, 1994, p. 2.

Exhibit 1 Major Oil Fields in the former Soviet Union

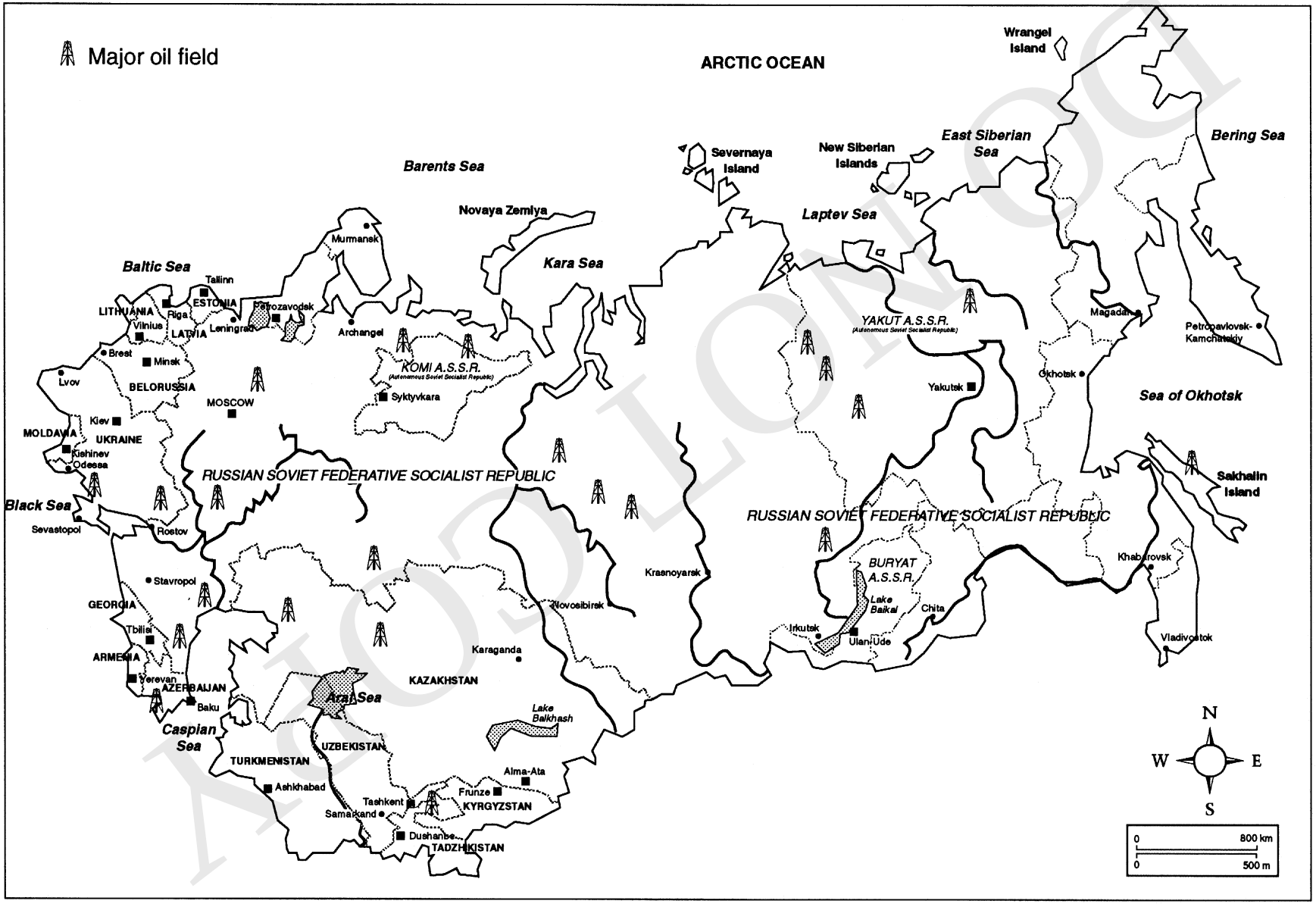
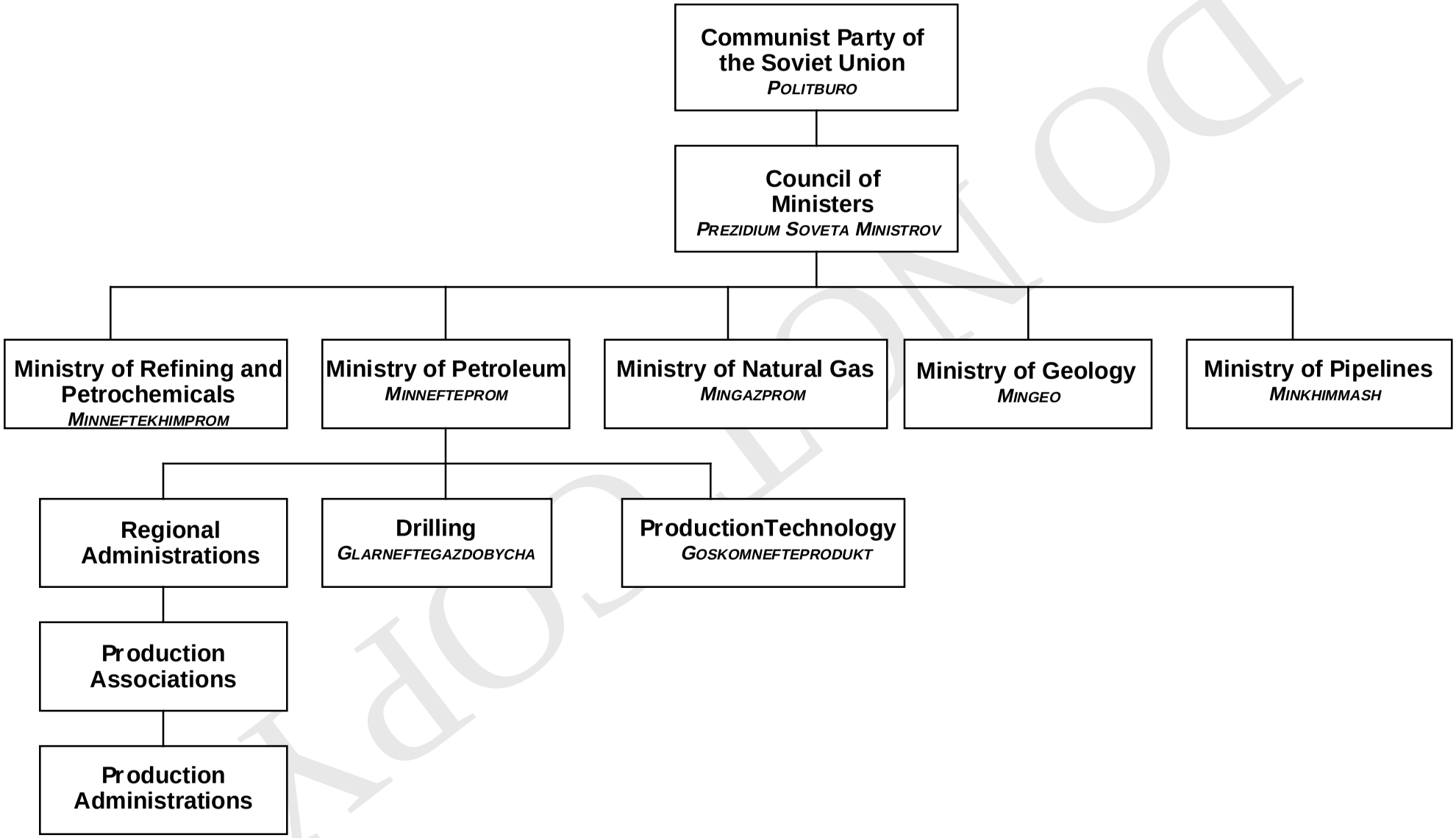
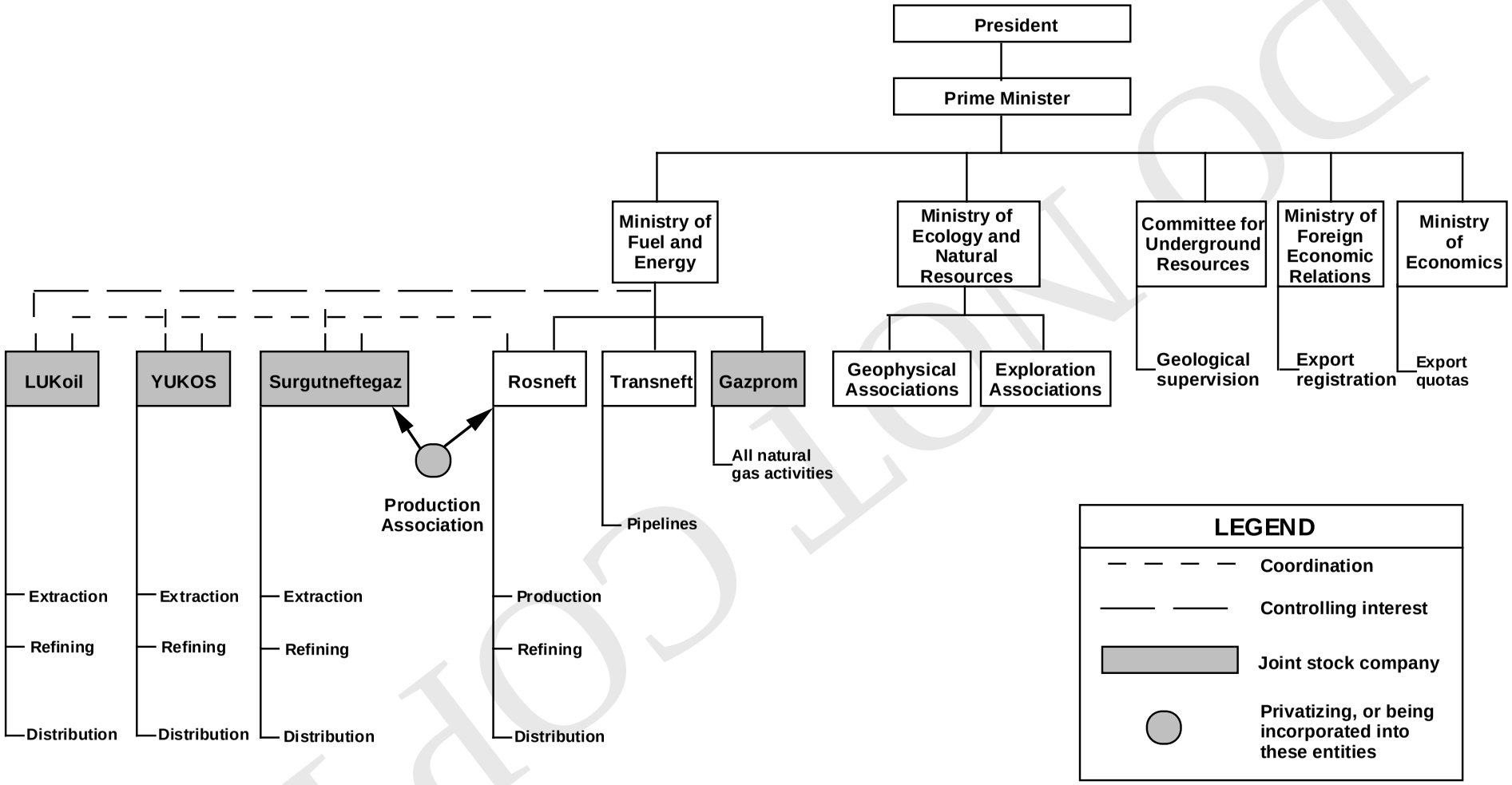


Exhibit 2 Structure of the former Soviet Union's Petroleum and Natural Gas Industries



Source: Commonwealth of Independent States: Petroleum Industry Structure and Organization; and Canadian Energy Research Institute, *Oil in the Former Soviet Union.*

Exhibit 3 Structure of the Russian Petroleum and Natural Gas Industries



Source: Commonwealth of Independent States: Petroleum Industry Structure; Canadian Energy Research Institute, *Oil in the Former Soviet Union;* and Interfax-America, *Petroleum Report*.

Exhibit 4 World Crude Oil Production and Consumption, 1970-1992 (millions of barrels per day)

	1970	1975	1980	1985	1986	1987	1988	1989	1990	1991	1992
World Production	45.7	53.3	59.3	53.3	55.5	55.7	57.8	59.0	59.7	59.4	59.5
World Consumption	47.4	56.0	62.6	60.1	61.8	63.2	65.0	66.1	66.3	66.7	66.9

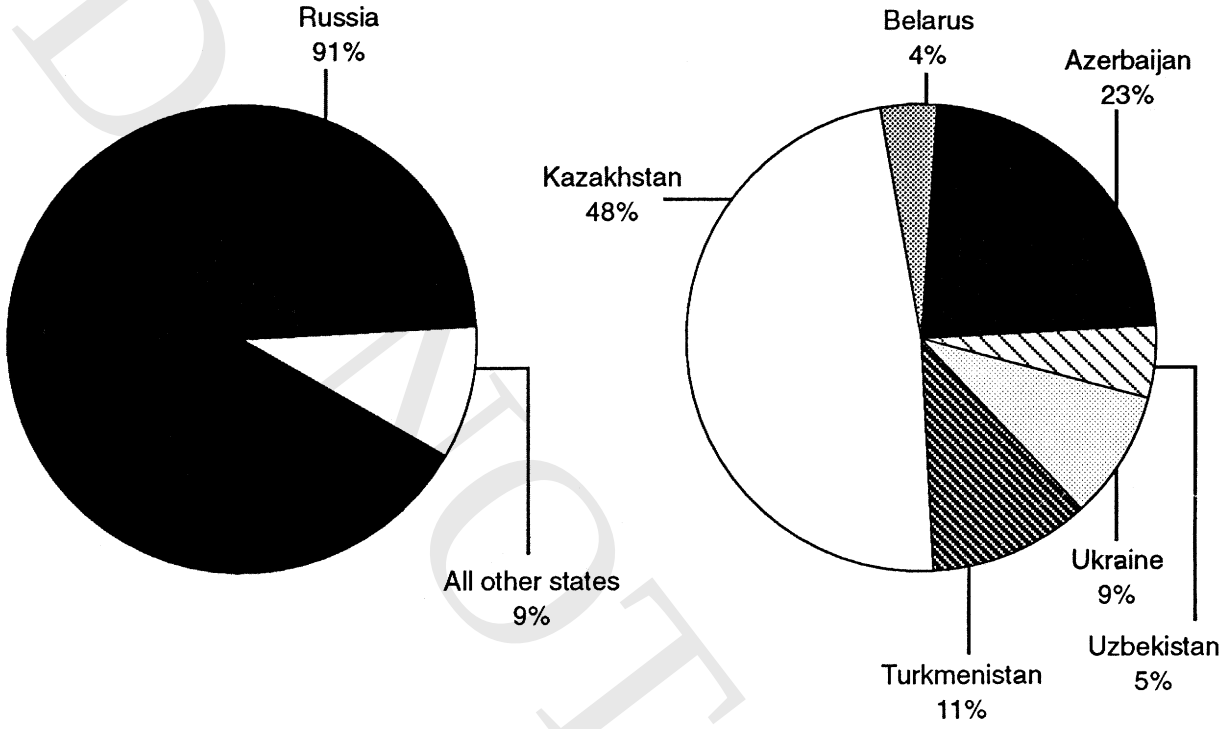
Source: Cambridge Energy Research Associates and Arthur Andersen & Co., World Oil Trends 1994, pp. 10, 24.

Exhibit 5 Average Prices of Crude Oil, 1970-1992 (US$ per barrel)

	Mideast Light		Brent	WII	U.S. Average
	Official	Spot	Spot	Spot	Wellhead
1970	1.35	1.21	NA	NA	3.18
1971	1.75	1.69	NA	NA	3.39
1972	1.90	1.82	NA	NA	3.39
1973	2.64	2.81	NA	NA	3.89
1974	9.56	10.98	NA	NA	6.87
1975	10.46	10.43	NA	NA	7.67
1976	11.51	11.63	NA	NA	8.19
1977	12.40	12.57	NA	NA	8.57
1978	12.70	12.91	NA	NA	9.00
1979	17.84	29.19	NA	NA	12.61
1980	29.38	36.01	NA	NA	21.61
1981	33.20	34.17	NA	NA	31.77
1982	33.77	31.76	NA	NA	28.52
1983	29.23	28.67	NA	NA	26.19
1984	28.75	28.10	NA	NA	25.88
1985	28.08	27.45	27.33	27.92	24.08
1986	28.00	13.33	14.56	15.14	12.60
1987	17.60	17.33	18.34	19.16	15.42
1988	17.52	13.40	14.94	16.01	12.57
1989	17.52	16.21	18.22	19.61	16.28
1990	17.52	20.71	23.39	24.30	19.98
1991	17.52	17.45	20.07	21.55	16.53
1992	17.52	17.86	19.28	20.52	16.00

Source: Cambridge Energy Research Associates and Arthur Andersen & Co., World Oil Trends 1994, p. 48.

Exhibit 6 Share of Crude Petroleum Production in the former Soviet Union, 1991



Russia and all other newly independent states

All other newly independent states (not including Russia)

Source: U.S. Department of Energy, Policy Office

Exhibit 7 Comparison of Crude Petroleum Production in the United States, former Soviet Union, and World (1982–92) (1,000 barrels per day)

Year	United States	Former Soviet Union	World
1982	8,649	11,912	53,481
1983	8,688	11,972	53,255
1984	8,879	11,861	54,488
1985	8,971	11,585	53,981
1986	8,680	11,895	56,227
1987	8,349	11,985	56,601
1988	8,140	11,978	58,662
1989	7,613	11,625	59,773
1990	7,355	10,880	60,471
1991	7,417	9,887	60,221
1992	7,153	8,354	60,141

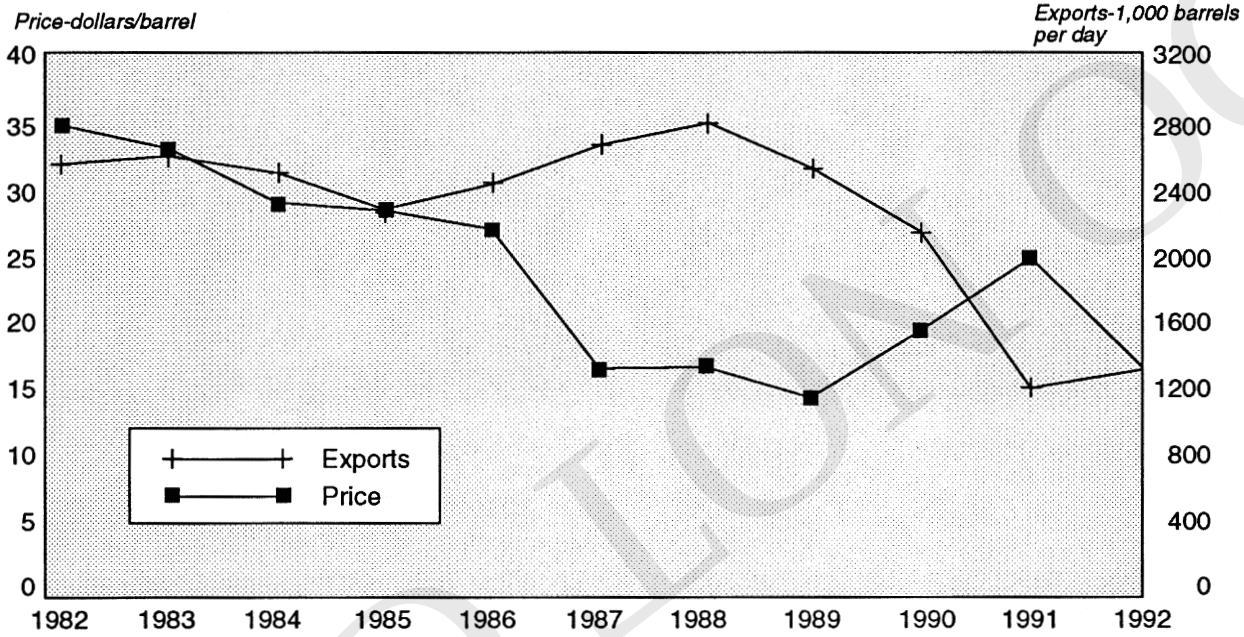
Source: U.S. Department of Energy, Policy Office.

Exhibit 8 Former Soviet Union Imports and Exports of Crude Petroleum and Natural Gas, 1982-92 (1,000 barrels per day)

	Crude Petroleum		Natural Gas	
Year	Imports	Exports	Imports	Exports
1982	100	2,500	80	2,240
1983	140	2,600	80	2,185
1984	264	2,509	80	2,312
1985	262	2,275	105	2,510
1986	240	2,450	105	2,778
1987	291	1,684	78	2,973
1988	396	2,826	78	3,140
1989	167	2,554	36	3,618
1990	271	2,170	54	3,935
1991	0	1,215	NA	3,677
1992	0	1,390	NA	3,500

Source: Official statistics of the U.S. Department of Energy, Interfax *Petroleum Report*, and *Petroleum Intelligence Weekly*.

Exhibit 9 Relationship of the former Soviet Union's Crude Petroleum Exports to Aggregate World Petroleum Prices, 1982-1992



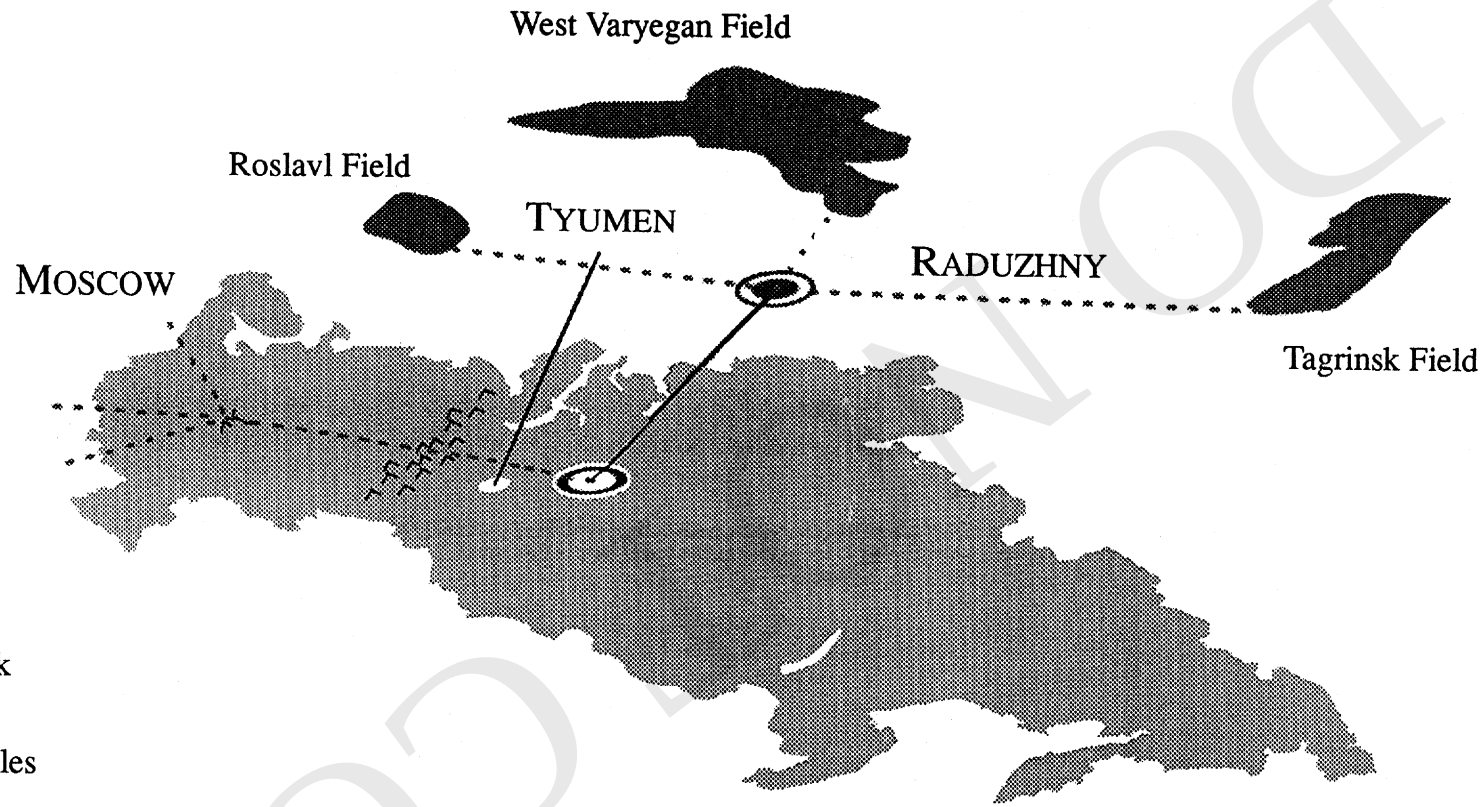
Source: U.S. Department of Energy

Exhibit 10 Development Cost Profile for Western Siberia, 1992

	10M Barrels	60M Barrels	350M Barrels	1,000M Barrels
Gross Cost (US$ millions)				
Drilling	34	67	146	232
Facilities	48	110	401	868
Pipeline	45	50	56	66
Operations	63	221	851	2,121
Tariffs	11	70	408	1,165
TOTAL	198	517	1,862	4,453
Per Barrel Cost (US$)				
Drilling	3.55	1.05	0.39	0.22
Facilities	4.77	1.73	1.08	0.82
Pipeline	4.69	0.78	0.15	0.06
Operations	6.54	3.49	2.30	2.00
Tariff	1.10	1.10	1.10	1.10
TOTAL	20.66	8.15	5.03	4.21

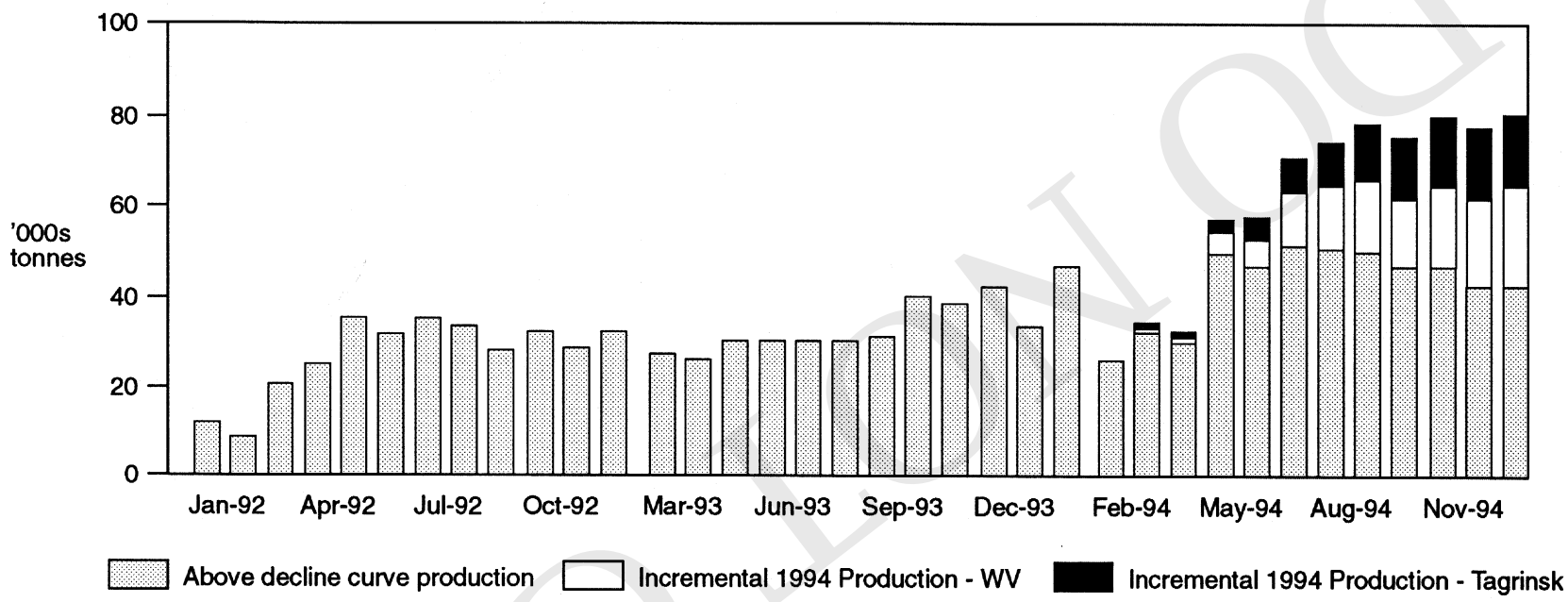
Source: Spears and Associates.

Exhibit 11 Location of White Night Fields



Source: Brian Lavers, "Western Investment in the Russian Oil Industry," Paper presented at the Oil and Gas Economics Finance and Management Conference (London), June 8-9, 1994.

Exhibit 12 White Nights Production



The graph shows the effect of the change in the decline curve effective from April 1994
Actual figures up to the end April 1994: estimates for May-December 1994 (in tonnes 000s)

Source: Brian Lavers, "Western Investment in the Russian Oil Industry," Paper presented at the Oil and Gas Economics Finance and Management Conference (London), June 8-9, 1994.

Exhibit 13 White Nights Joint Enterprise Unit Cashflow, 1994

Urals Blend (Revenue per barrel)	**$14.00**	**100.0%**
Taxes:		
Export tax	$ 4.74	33.9%
Excise tax	1.44	10.3
Mineral usage tax	1.12	8.0
Resource renewal tax	0.60	4.3
Road use tax	0.06	0.4
VAT on pipeline fees	0.58	4.1
Social and accommodation tax	0.21	1.5
Property and land tax (est.)	0.20	1.4
Payroll-related taxes (est.)	0.16	1.2
Excess payroll tax (est.)	0.09	0.7
Total taxes	$ 9.19	65.7%
Pipeline costs (est.)	$ 2.50	17.9
Sales commission (est.)	0.09	0.7
Net remaining revenue for *all* operating and capital costs	**$ 2.31**	**16.5%**

Source: Brian Lavers, "Western Investment in the Russian Oil Industry," paper presented at Oil and Gas Economics Finance and Management Conference (London), June 8-9, 1994.

Exhibit 14 Financial Highlights, 1991-1994 (US$ millions)

	1991	1992	1993	1994
Mobil Corporation				
Revenues from sales and services	62,359	63,564	63,474	66,757
Crude oil, products & operating supplies and expenses	35,735	36,639	35,622	36,665
Exploration expense	779	507	405	516
SG&A expenses	4,944	5,324	5,483	5,453
Interest and related income (expense)	155	(280)	177	165
Net income (loss)	1,920	862	2,084	1,079
Total assets	42,187	40,561	40,733	41,542
Current liabilities	13,602	12,629	12,351	13,418
Total liabilities	24,653	24,021	23,496	24,396
E.I. du Pont and Company (Conoco)				
Revenues	38,695	37,799	37,098	39,333
Cost of goods sold	22,528	21,856	21,396	21,977
Exploration expense	602	416	361	357
Research & development expense	1,298	1,277	1,132	1,047
SG&A expenses	3,576	3,553	3,081	2,888
Interest and related income (expense)	76	(90)	149	367
Net income (loss)	1,403	(3,927)	555	2,727
Total assets	36,559	38,870	37,053	36,892
Current liabilities	7,935	10,226	9,439	7,565
Total liabilities	19,655	26,928	25,636	23,873
Salomon Inc				
Revenues	9,175	8,183	8,799	6,278
Interest expense	5,638	4,324	4,600	4,892
Total non-interest expenses	2,618	2,803	2,734	2,217
Net income (loss)	507	550	827	(399)
Total assets	97,402	159,459	184,835	172,732
Short-term borrowings	40,393	88,417	97,890	78,579
Total liabilities	93,387	155,151	179,589	168,240

Source: Company annual reports.