

OIL AND GAS OUTLOOK IN INDIAN COUNTRY

Current and Future Status of Oil and Gas Development

In 2012 alone (most recent ONRR data available, Fig. 1), energy and mineral resources generated over \$701 million in royalty revenue paid to Indian mineral owners. Income from energy and minerals is by far the largest source of revenue generated from Trust lands. In the last three years, DEMD working with BIA realty staff has assisted Tribes in the negotiation of 48 IMDA leases for oil and gas, totaling approximately 2,750,000 acres and about \$45 million in bonuses (upfront payments). These leases have the potential to additionally produce over \$20 billion in revenue to the Indian mineral owner over the life of the lease through royalties and working interests. Table 2 shows the significant impact of energy and mineral development on reservation economies.

In 2013, DEMD estimates Indian Royalty to be approximately \$900 million (the red line in Fig. 1), and within two years, estimates royalty income will increase to over \$1 billion.

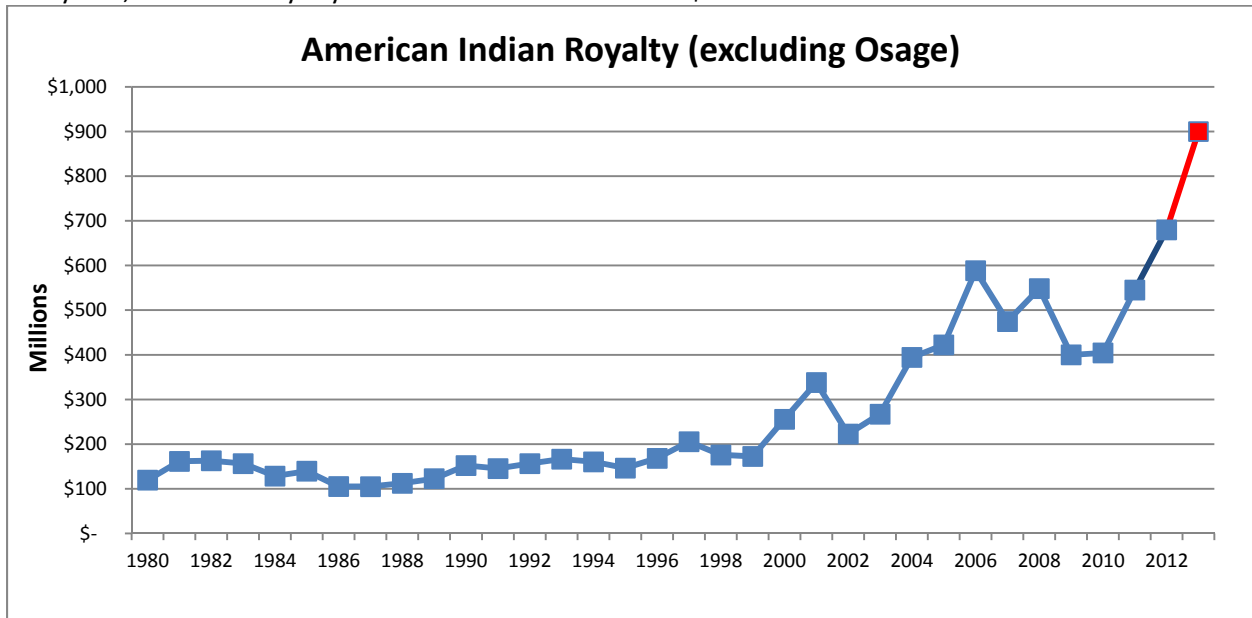


Figure 1 Indian Royalty Income project through 2013 (Source, ONRR). In 2012 alone (most recent ONRR data available), energy and mineral resources generated over \$680 million in royalty revenue paid to Indian mineral owners. Nationwide Indian average of 16.88% of the gross oil revenues, far in excess of the nationwide federal national average of 11.29% of the gross revenue (Source: Office of Natural Resources Revenue (ONRR) website www.onrr.gov/ONRRWebStats).

Oil and Gas Leasing

BIA Realty and DEMD staff offers a unique, hands-on approach to assisting Tribes and Individual Indian Mineral Owners in leasing their resources under the Indian Mineral Development Act (IMDA) of 1982 (Tribes) and the Indian Mineral Leasing Act of 1938 (Tribes and Individual Indian Mineral Owners). The IMDA allows Tribes to lease their resources utilizing a creative agreement that best fits the needs of the Tribe and a potential industry partner. Tribes have greater flexibility to craft advantageous agreements than did the standard BIA lease agreement authorized under the Indian Mineral Leasing Act of 1938.

DEMD and BIA Realty staff first provide assistance to Tribes and Indian mineral owners in proactively marketing energy and mineral resources. This can include sponsoring a tribal representative's attendance

and serving as technical representatives for Tribes at industrial trade shows, industry forums where Tribes can interact directly with prospective industry partners, and providing tribally authorized technical presentations detailing the geology, geophysics, engineering and resource potential of tribal lands to potential partners. BIA and DEMD staff then analyzes the economic potential of a proposed energy or mineral transaction. Then BIA realty staff works to assure that work commitments are met in accordance with agreed-upon timelines. In contrast, BLM leases of onshore federal acreage lack such work commitments. IMDA agreements have the additional advantage of allowing Tribes to increase royalty rates as negotiated milestones are achieved – a feature absent in BLM leases of onshore Federal acreage.

Unlike BLM’s treatment of onshore federal leases, BIA and DEMD assume a hands-on, proactive approach in working with Tribes to help them in the development of their resources. By keeping Indian Mineral Owners well informed, BIA and DEMD are able to adjust transaction terms such as royalty rates, lease bonuses, and term of lease, to ensure that both the Indian Mineral Owner and their potential partner operate from the same base of information. This kind of technical assistance during negotiations between Indian Mineral Owners and potential partners has resulted in achieving a nationwide average Indian oil royalty rate of 16.88 percent (Figure 4), far in excess of the nationwide federal oil royalty rate of 11.29 percent. Perhaps even more importantly, this assistance in negotiations and the inclusion of rigorous work commitments as part of these negotiated agreements results in Indian Lands being developed and not simply leased. In addition, Indian oil and gas leases are usually for a term of five years whereas BLM administered leases are almost always for a term of ten years. This results in aggressive development of Indian leases. The following Table clearly demonstrates the efficacy of this approach. Approximately 94% of Indian leases are productive while only 48% of BLM administered Federal Onshore leases are productive.

Table 1: Total Producing and Non-Producing Leases (as of October 28, 2010)¹

	Energy and Mineral Producing leases	Energy and Mineral Non-Producing leases
American Indian	4,335	285
Federal Onshore	24,202	26,114

¹Data from Office of Natural Resources Revenue (ONRR) website www.onrr.gov/ONRRWebStats/Home.aspx

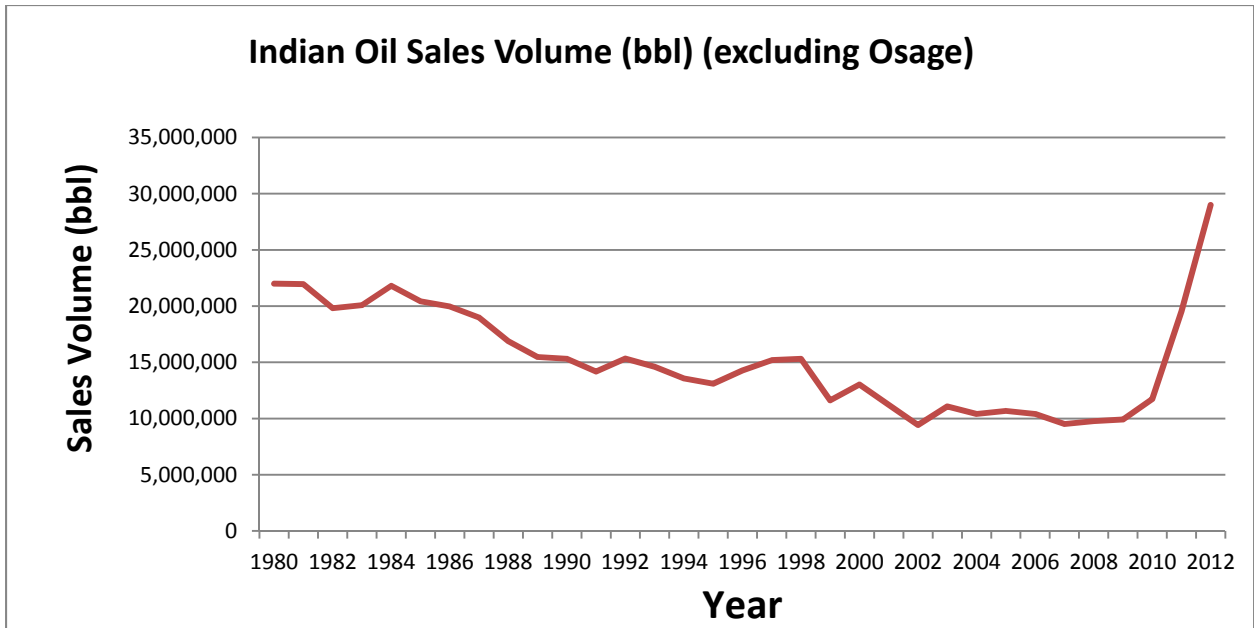


FIGURE 2. Indian oil sales volume (bbl) through 2012. (Source: Office of Natural Resources Revenue (ONRR) website)

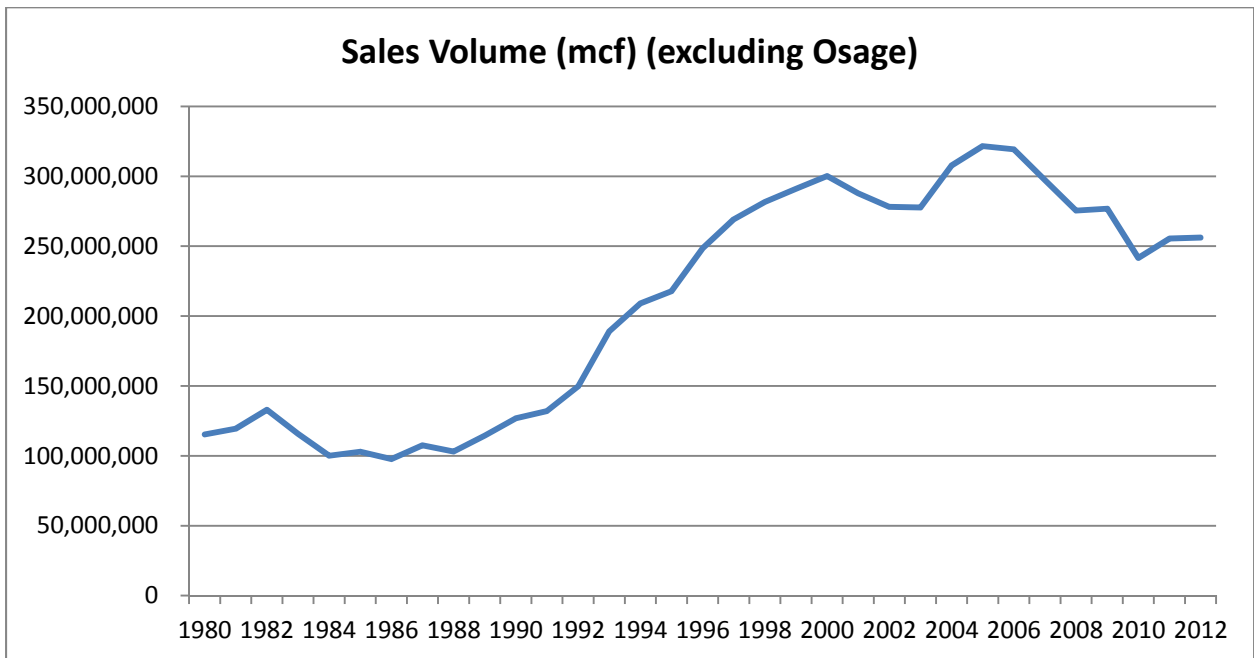


FIGURE 3. Indian natural gas sales volume (mcf) through 2012. (Source: Office of Natural Resources Revenue (ONRR) website).

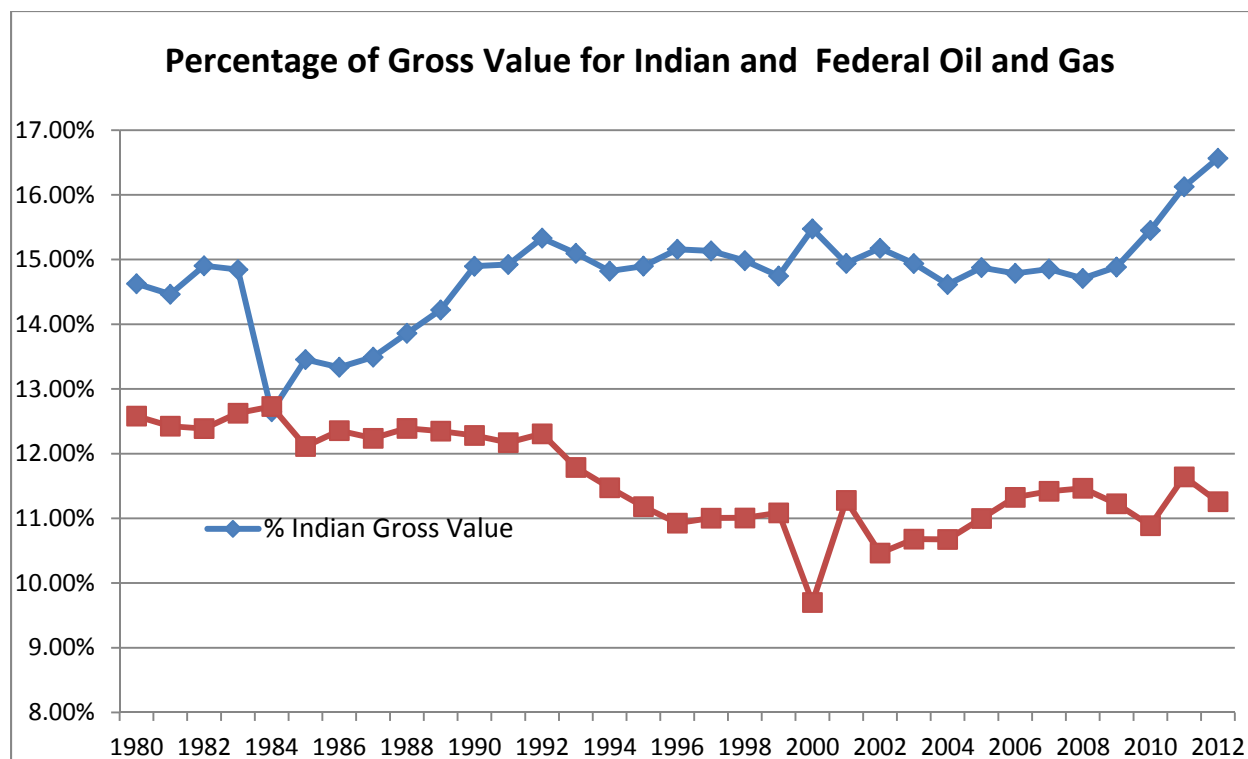


FIGURE 4. Comparing Indian royalty income for oil and gas as a percentage of sales volume versus Federal royalty income for oil and gas as a percentage of sales volume. (Source: Office of Natural Resources Revenue (ONRR) website).

Impact of Shale-Oil and Shale-Gas Plays

Over just the last four years, the development of shale oil and shale gas in the United States has been very rapid, and advances in technology continues to improve the economic returns of producing oil and gas in the U.S. New horizontal drilling applications have accelerated US domestic production of oil and natural gas. Since 2008, the output of oil and natural gas has increased dramatically from tight shale formations, truly representing a game-changer for conventional energy development and which has the potential for being a driver for economic growth and job creation on Indian Reservations.

Other observations about shale-oil and shale gas development and the impact to Indian Country:

- The production of oil and gas on Indian lands has historically provided significant royalty income to Tribes and individual Indians, but many conventional fields are in decline with ensuing loss of revenue to Indian economics.
- The economic impact and benefit for Indian Tribes are potentially very large because many Indian reservations are located in known shale play areas, and contain large amounts of undeveloped or underdeveloped areas which are a major consideration by industry wanting to lease lands.
- Because of the enormous success with shale gas in the country, the price of natural gas has fallen by more than a factor of two since 2008, which will impact those Tribes with shale gas potential on their reservations. However the lower price of gas is benefiting consumers in the lower cost of home heating and electricity, and also the electric power generating industry who are switching from coal to natural gas. Eventually this higher demand will create higher prices and new exploration activity for natural gas by industry. One unanticipated scenario is that natural gas may become so abundant that it be possible to export as liquefied natural gas, creating new markets for natural gas produced from Indian lands.

- Presently the big impact is the turnaround in oil production in the U.S., which has risen 25% since 2008. The largest increase in oil supply is coming from tight shale rock formations, and is being produced by the same horizontal drilling technology used to produce shale gas. The Three Affiliated Tribes in North Dakota area are currently experiencing a ‘boom’ in the production of oil from the Bakken Formation. During this past year (2012), North Dakota overtook California and then Alaska as the nation’s second largest oil producing state.
- This new energy economy which is driven primarily by shale-oil and shale-gas must be recognized by Indian Tribes as a significant event to plan for, and ask such questions as how it may impact their lands and environment, how they would participate, what are the risks and downsides, and what it means for their own economies. The Bureau of Indian Affairs, through their DEMD office, should also be prepared to offer technical and economic advice as this revival in conventional energy development sweeps across the U.S. A large mostly undeveloped land base and exploration data will give Tribes a unique opportunity to participate in shale energy development activities and the subsequent economic benefits to Tribal economies.

Figure 5 shows a map of the U.S. with Indian Reservations and both the established and emerging oil and gas shale plays that exists on these reservations.

Emerging Oil & Gas Shale Plays (Dark Grey); Shale Basins (Tan)

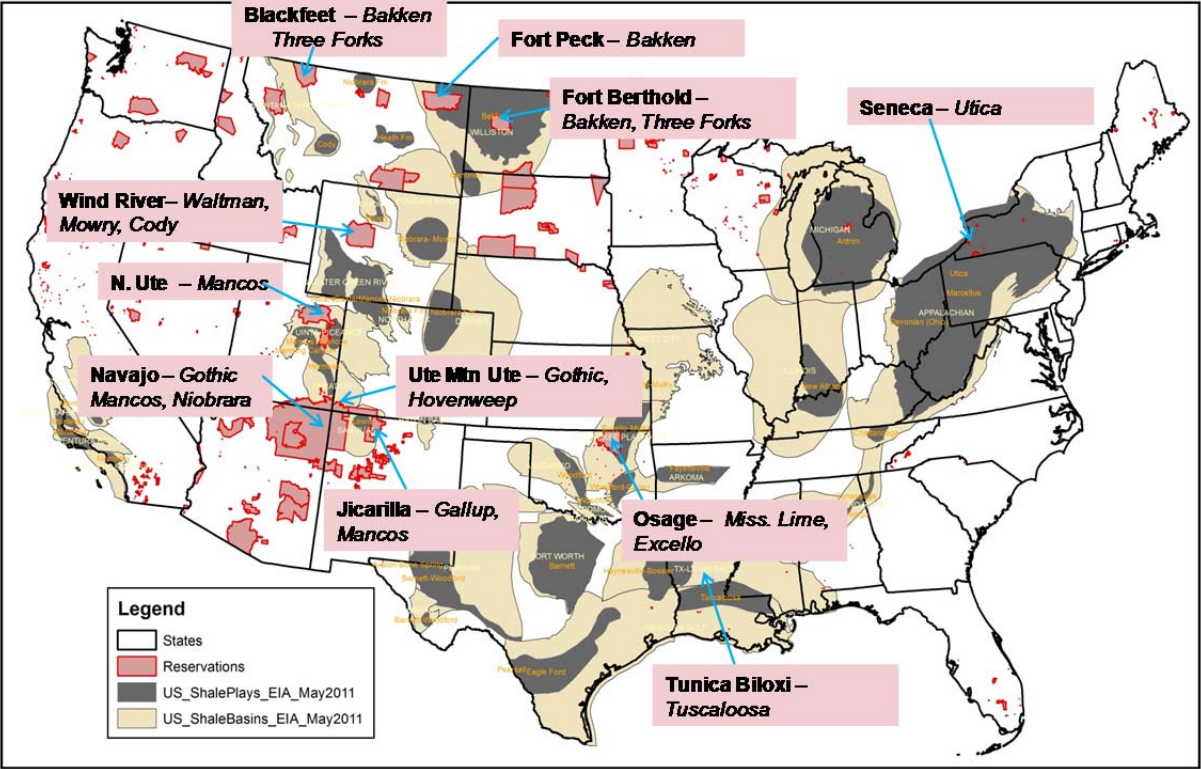


FIGURE 5. Shale oil and gas plays on Indian Reservations.

Economic Impact of Energy and Mineral on Indian Lands

The following charts provide additional information about the salutary impact of energy and mineral development on reservation economies:

Table 2: Economic Contributions on Indian Lands

Commodity	Value (\$ billions)	% of Total Value	Estimated Economic Impact (\$ billions)	% of Total Economic Impact	Estimated Jobs Impact (jobs)	% of Total Estimated Jobs Impact
Oil, Gas, Coal	3.31	80.9	9.63	79.7	96,080	76.4
Minerals	.3	7.3	.86	7.1	15,434	12.3
Subtotal	3.61	88.2	10.49	86.8	111,514	88.7
Irrigation	.39		.95		8,791	
Timber	.04		.56		4,069	
Grazing	.04		.08		1,370	
Total	4.09		12.08		125,744	

Table 2 : : Table from *The Department of the Interior's Economic Contributions – July 9, 2012* Chapter 2 – Bureau-Level Economic Contributions

Increased Level of Support to Tribes and Individual Indian Mineral Owners

The main issues facing Indian Tribes and BIA agency staff are how to keep up with the demand for leasing, permitting and drilling. A taste of things to come has already occurred in development of the prolific Bakken shale oil play at the Fort Berthold Indian Reservation in North Dakota. There was a severe backlog of leases and permits being issued which forestalled the generation of income to the Indian mineral owners. BIA agency and DEMD staff have worked to eliminating this backlog by providing an experienced engineer and by hiring five additional staff to supplement BIA realty staff.

By working together BIA and DEMD has been able to physically place a team of technical staff at the reservation to provide on-site services. Staff functions included realty specialists, environmental specialists and petroleum engineers. Additional personnel (mostly contractor staff) have been hired by DEMD and are supervised by a DEMD senior petroleum engineer. GIS and data management support has also be provided by DEMD through the implementation of the National Indian Oil and Gas Management System (NIOGEMS) at Tribal offices, BIA Agency, BLM Field Office, and the Office of Natural Resources Revenue (ONRR) to ensure proper communication and coordination occurs between the various Departmental Agencies, Three Affiliated Tribes, and Individual Indian Mineral Owners. The overall goals of this effort were to:

- Oversee and expedite the processes within the Department of the Interior related to oil and gas development on Indian land.
- Access a wide range of technical and management expertise within the Department.
- Bridge management lines of authority to accomplish the office mission through the office of the Assistant Secretary-Indian Affairs.

Table 3 Ft. Berthold Tribal and Allotted Oil and Gas Royalty (Source: ONRR)

Year	Tribal	Allotted	Total Trust Minerals
2008	\$ 691,744	\$ 1,264,431	\$ 1,956,175
2009	\$ 2,166,406	\$ 5,656,827	\$ 7,823,232
2010	\$ 8,900,873	\$ 28,792,102	\$ 37,692,976
2011	\$ 27,707,715	\$ 106,665,404	\$ 134,373,119
2012 (through Aug. 2012)	\$ 34,669,185	\$ 148,839,207	\$ 183,508,392
Totals	\$74,135,922	\$291,217,971	\$365,353,893

Table 4 Bakken Development Permitting Activity on the Ft. Berthold Reservation (Source: BIA)

Year	Environmental Onsites	Submitted APD	Approved APD	Pending APD	Spuds	1st Production
2008	81	43	28	15	18	12
2009	223	93	52	56	48	38
2010	225	181	110	127	93	65
2011	519	282	171	238	162	126
2012 (through Aug. 2012)	326	106	51	293	149	104
Totals	1,374	705	412	729	470	345

- The permitting activity for “Applications for Permit to Drill” (APD), Rights-Of-Way (ROW) and required environmental onsite have almost double each year. These permits are required to begin drilling a well (Spud) and completing for production (1st Production).
- The BIA Fort Berthold Agency has the majority of the workload caused by the ever increasing number wells required to develop the Bakken/Three Forks resource.
- Bakken/Three Forks resource is projected to require over 2,000 wells at full development; approximately 20 percent of the wells are currently drilled and/or completed for production.

The level of drilling activity continues to increase from 150 wells drilled through the end of 2010 to 200 additional wells planned for 2011. That represents a doubling of work load that is expected to continue through 2013, with development rates leveling off to 100 wells per year over the next 5 years. It is expected that 1000 wells will be drilled to initially develop the Bakken Formation and an additional 1000 wells to complete full development of the Bakken and Three Forks Formations over the next 10 to 20 years.

A similar scenario is beginning to occur on several other reservations that could also potentially create severe backlogs of leases and permits being issued. These reservations are Uintah and Ouray Reservation (Northern Ute Tribe) in Utah, Navajo allottees in New Mexico, Osage Tribe, Oklahoma, Blackfeet Tribe, Montana, and Jicarilla Apache Tribe in New Mexico. BIA and DEMD are acting quickly to prevent future delays in drilling of wells which in turn would have stalled significant income flowing to the Indian mineral owner.