QEP Resources, Inc. is an independent energy company focused on the exploration, production, gathering, processing and marketing of natural gas, natural gas liquids and crude oil in the continental United States. Our corporate heritage, which spans nearly a century, reflects a long-term commitment to creating value for our shareholders, exceptional opportunities for our employees and economic benefits for the communities in which we operate. QEP operates three wholly-owned subsidiaries: QEP Energy, QEP Field Services and QEP Marketing. Headquartered in Denver, QEP employs more than 900 people in eight states and is an S&P 500 member company.

Commitment To Environmental Stewardship

QEP respects the environment and the communities where we operate. Our adherence to state-of-the-art well construction methods and regulations, together with ongoing water and land conservation initiatives, help to ensure the health, safety and general wellbeing of our families, friends and neighbors. During the past five years, QEP has been recognized by the Bureau of Land Management on several occasions for its efforts as a responsible steward of air resources and for its efforts to reduce the long-term impact of land development.

Case Study: “QEP Energy’s Independence Pad: Safe and Responsible Development In Action”

Executive Summary

QEP Energy’s Independence Pad, the first-ever ten well pad approved and permitted by the North Dakota Industrial Commission (NDIC) and located on the Fort Berthold Indian Reservation, is a multi-well Bakken/Three Forks drilling location consisting of five Bakken formation horizontal wells and five Three Forks formation horizontal wells. Each well is drilled approximately 10,000 feet vertically, followed by a lateral leg of approximately 10,000 feet. The pad consists of two separate five well pods. The surface hole locations on each pod are spaced on 28’ centers. The design of the pad and pod layouts allows for mitigating, minimizing, and/or eliminating both direct and indirect environmental impacts to the surrounding area.

The Challenge

Due to topographic limitations in an environmentally and culturally-sensitive area and proximity to Lake Sakakawea, QEP required an innovative solution that would allow the company to capture acreage while maximizing the anticipated well density for the leasehold and minimizing surface disturbance.
Navigating Regulatory Waters

To bring this project from concept to reality, presentations were made to the NDIC requesting the approval of a four contiguous section spacing unit depicted in the attached document. Approval for the unconventional 2560ac spacing unit was granted by the NDIC. As the NDIC was hearing the case to determine proper spacing, acquisition of the Permissions to Survey from the associated Allottees holding the surface rights where the proposed well pad and access roads were proposed was underway. The Permissions to Survey are submitted to the Bureau of Indian Affairs (BIA) for review and approval of the official BIA Permission to Survey application. Once the Permission to Survey was received from the BIA, the location was surveyed. Because the surface location is within the boundaries of the Fort Berthold Indian Reservation, an environmental on-site analysis, conducted by specialists from the Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), NDIC, Tribal Historic Preservation Office (THPO), third party archeologists, biologists, botanists, and surveyors was completed to ensure all Tribal, State, and Federal regulations and guidelines were followed and impacts mitigated. After the environmental on-site was completed, the location was re-surveyed based on recommended changes at the environmental on-site. A second on-site consisting of the BIA and BLM was then completed to ensure that the recommended changes had been both implemented and documented.

An individual well site Environmental Assessment was prepared and reviewed by the BIA. The utilization of Best Management Practices, including primary, secondary, and tertiary containment and avoidance practices (as they pertain to archeology and maintaining drainage integrity) were key components in the receipt of a timely “Finding of No Significant Impact” (FONSI) from the BIA for the development of this project.

Although the project had been conceptually approved in December 2010, the BIA required the acquisition of Grants of Rights of Way be signed, in simple majority (50% +1), from the Allottees for the allotted tracts crossed by the access road and well pad prior to the issuance of a Right-of-Way. The Right-of-Way was a key component to the granting of a federally approved Application to Drill (APD), as issued by the BLM. In conjunction with the federally approved APDs, permit approvals from the NDIC must also be granted prior to the construction of the well pad and associated access road.

Arriving at a Solution

The limited surface access options due to the proximity to Lake Sakakawea were the driving factors as they pertained to the development plan for this acreage. The resulting pad location required special consideration and design for the pad, facilities and surrounding lands.

The mitigation of environmental impacts resulting from resource development was a key objective of this project. The utilization of a multi-well pad allowed for development of the acreage, and also enabled QEP to minimize the extent of surface impacts.

The consolidation of multiple well heads on a single surface location eliminated the disturbance of an additional 35 surface acres (as measured by a single well location vs. individual well locations). Avoidance of the natural drainages maintains the drainage integrity and potential/existing wildlife habitats. The immediate impact of development is also lessened by the consolidation of production facilities; in the end, our estimated production footprint for all ten wells and related production facilities is approximately 3.5 acres.
Additional environmental considerations included the utilization of a secondary containment barrier in the form of berming around the exterior boundary of the well pad to provide an additional level of protection. Tertiary containment near the head of drainages and avoiding the disturbance of major drainages that lead to Lake Sakakawea add an additional environmental protection measure to minimize and potentially eliminate any negative impacts to Lake Sakakawea. The utilization of a closed-loop drilling mud system and lining the cuttings pit, combined with the encapsulation of the drilling cuttings and cuttings integrity testing prior to disposal of the drill cuttings, provided additional protections from potential ground water impacts.

**A Positive Outcome**

Through the development of the *Independence Pad*, QEP was able to lessen truck traffic in the area, resulting in the reduction of related dust levels, lower vehicle emissions and reduced impact on local transportation infrastructure. The potential impact to wildlife was minimized and the integrity of the surrounding native prairie was maintained, while allowing for responsible development of the local lands. Finally, out of consideration for Lake Sakakawea, our production facilities were consolidated and operations were located in a manner that allowed us to maintain viewshed integrity.

To date, permits have been obtained for all ten wells; the location and facilities have been constructed; and the first five-well pod has been successfully drilled and is awaiting completion. QEP is utilizing this multi-well long lateral concept when appropriate for additional acreage development on its assets surrounding Lake Sakakawea. This model allows QEP to capture leased acreage under the Lake, all while maintaining the natural beauty and integrity of the surrounding landscape that exists on Fort Berthold Indian Reservation.

**Key Facts: QEP Energy’s Independence Pad**

- Multi-well Pad: 5 Horizontal Bakken Wells and 5 Horizontal Three Forks Wells
- 10 - 2 mile Laterals Drilled from a Single Surface Location
- Fort Berthold Indian Reservation, North Dakota
- Independence Point: SESE of Section 31: T150N-R91W

**Company Contacts**

Vinnie Rigatti  
Matt Thompson