

Environmental and Engineering Service Solutions for the Marcellus Shale and Natural Gas Industries



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Oil and Gas/Marcellus Shale Play Focused Services



Skelly and Loy, Inc. has an extensive history of providing engineering and environmental consulting services to the mining, quarrying, electric, and gas producing industries. The services historically provided to these sectors closely mirror those needed today by companies involved in exploring for, extracting, and transporting gas from the Marcellus Shale. Recognizing our office locations in Harrisburg, Pittsburgh, and State College (Port Matilda), Pennsylvania, Morgantown, West Virginia, and Hagerstown, Maryland, as well as an ideal mix of engineering and environmental science disciplines, we represent unique and valuable resources to the gas and oil industry in Pennsylvania and the surrounding states. Skelly and Loy has a multi-disciplinary Marcellus Shale team, ready and eager to assist the industry.

Based on our engineering and environmental consulting experience in the industry, we have developed a simplified graphic representation of the gas production life-cycle with key support services that exploration, production, gathering, and distribution/transmission companies likely would need. This graphic is presented on page 4 of this brochure. Brief descriptions of our services are described below and can be provided to you in an expeditious and cost-effective manner.

Permit Analysis, Agency Coordination and PA DEP/USACE Permit

Application Preparation - Skelly and Loy has an excellent working relationship with state and federal agencies throughout the Marcellus Shale region of Pennsylvania. This open communication allows for Skelly and Loy to expedite agency determinations and permit decisions. We give you an "insider" during the permitting process. We routinely prepare PA DEP and USACE general permits and Individual permits for linear (utility line, roadways, etc.) and site development (well pad, construction sites) projects that require encroachment through wetlands and streams. Because of our experience, we are able to deliver a complete permit package that exceeds the reviewer's expectations.

Wetland and Stream Delineations - Skelly and Loy has unparalleled experience in wetland and watercourse delineation studies. Specifically, we have extensive experience with site development (i.e., well pad) and linear corridor (i.e., pipeline) projects, including pads and corridors across Potter, Tioga, Bradford, and Luzerne Counties. Based on our understanding of the industry's need for a timely response, we have a staff of biologists who can "jump on a project" and complete the delineation in an expeditious and cost-effective manner. Typically, our field teams can cover two miles a day of pipeline corridor. To that end, our delineation services include the field-flagged boundaries, required documentation, and GPS surveying of the delineations for inclusion with the project mapping or client's GIS database.

Threatened and Endangered (T&E) Species Coordination and Surveys - Our project history includes extensive experience with T&E species, including the numerous species of concern across the Marcellus Shale Region: the Indiana Bat, Timber Rattlesnake, Small-Footed Myotis, Allegheny Woodrat, Northern Flying Squirrel, and protected plant species. Our experience with T&E species conflicts allows us to coordinate the appropriate levels of effort needed to address the habitat assessment, species survey, and regulatory agency requirements in order to obtain clearance for a project.



Archaeological and Historic Resources - Archaeological and historic resources are considered as part of the state and federal permitting and approval process. Skelly and Loy provides full-service archaeology and historic surveys including Phase I and Phase II surveys and data recovery as well as determinations of eligibility and effect and SHPO coordination.

E&S Control Plan and NPDES Application Preparation - Skelly and Loy has extensive experience with E&S pollution control and post- construction stormwater management plans. Our project engineers and geologists are certified to prepare and seal ESC GP-1 plans. Skelly and Loy has developed methods to prepare plans for pad sites and pipeline projects in a cost-effective manner. Skelly and Loy can also provide detailed planning needed for NPDES construction and post-construction stormwater management applications.

Water Quality Management and Aquatic Assessment - Skelly and Loy employs a diverse staff of engineers and scientists who assess, manage, and resolve water quality concerns. Our assessment capabilities include daily and long- term monitoring and trend analysis of chemical constituents and biological integrity (benthos and fish). Our management services include the design, maintenance, and operation of wastewater treatment facilities and acid mine drainage remediation. Our assessment and management capabilities provide our clients with a complete understanding of their water quality issues so that they can meet the project's needs.

Water Supply, Withdrawal, and Permitting - Our team of licensed professional hydrogeologists has extensive experience performing comprehensive water resource assessments and groundwater contamination investigations. Their expertise includes supply well siting and construction, aquifer testing/monitoring, surface water/groundwater availability and resource management, Act 220 Water Withdrawal Registration, pre-/post-drilling baseline water quality surveys, development of surface water and groundwater supplies, water management plans, and SRBC/DRBC and PA DEP permit authorizations to meet surface and groundwater withdrawal and consumptive use requirements.

Environmental Compliance - Our compliance professionals are experienced with the needs and regulatory requirements associated with E&S and water quality compliance. We understand that expediency and quality are paramount and that delays resulting from permit non-compliance can significantly affect a project schedule and the bottom line. We are proactive in our approach to environmental compliance and work with our clients to ensure that project expectations are met.

Noise Compliance and Assessment - Complying with local noise ordinances when drilling in close proximity to noise-sensitive areas can slow progress and increase operational costs. Skelly and Loy, Inc. offers a full service noise assessment team that is well-versed in measuring, predicting, and mitigating industrial noise sources and processes. We use the latest noise monitoring and modeling software in the assessment of existing and proposed noise impacts as well as providing a cost-effective evaluation of noise mitigation techniques.

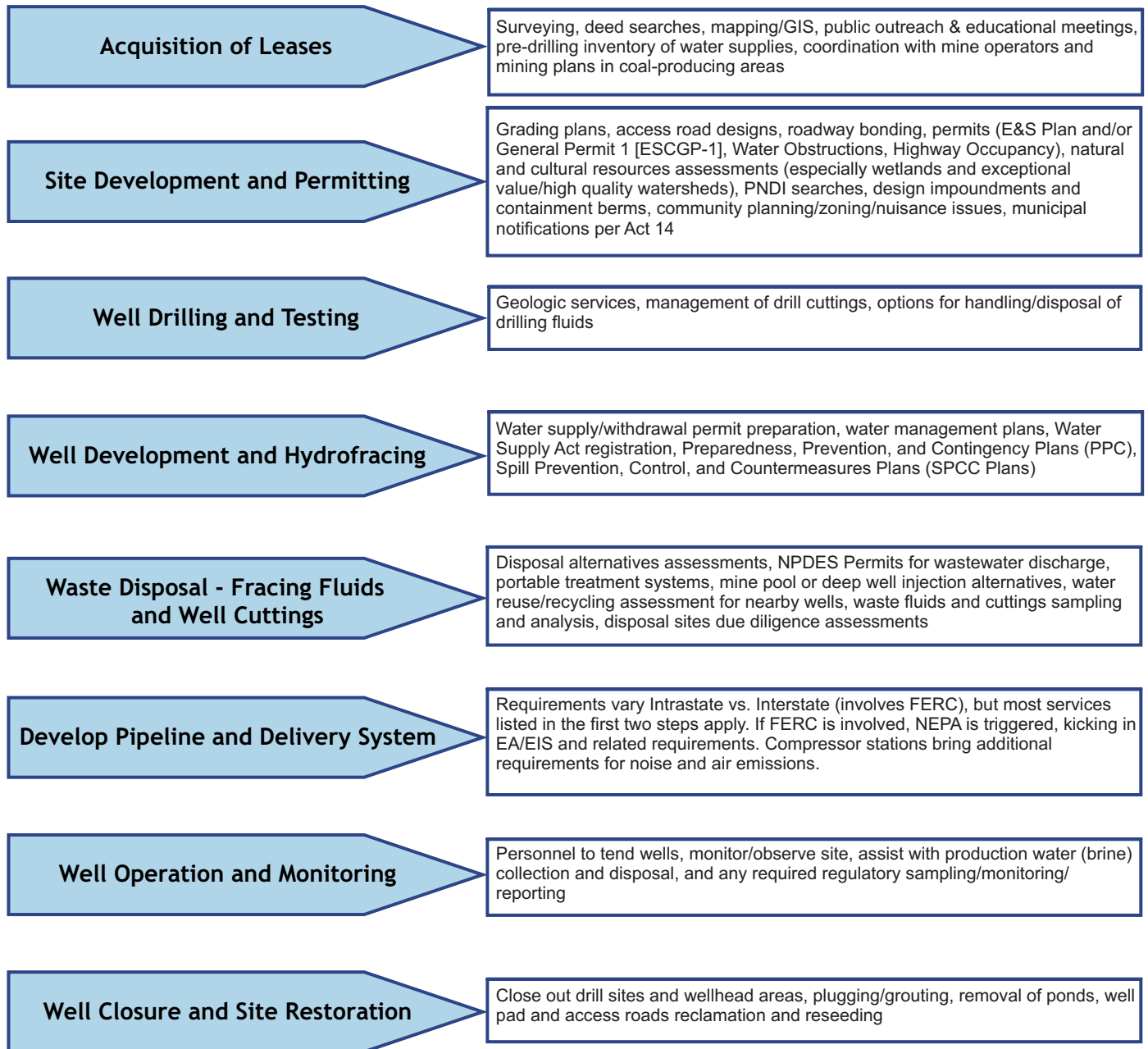
For more information, please contact Paul DeAngelo, Director of Natural Resources Analysis, pdeangelo@skellyloy.com, or Tom Johnston, Assistant Vice President of Environmental Services, tjohnston@skellyloy.com. Both are also reachable at 717-232-0593.





Support Services Throughout the Oil and Gas Production Cycle

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For information on Skelly and Loy's Comprehensive Marcellus Gas Services, contact Robert McClure at 800-892-6532, or 717-232-0593, or rmclure@skellyloy.com.