



# COLORADO REAL ESTATE JOURNAL

THE COMMUNICATION CHANNEL OF THE COMMERCIAL REAL ESTATE COMMUNITY

MARCH 2-MARCH 15, 2005

## Law & Accounting

### Surface developers must plan

*EDITOR'S NOTE: This is the first of a two-part article on surface development with regard to oil and gas production.*

As commercial and residential development fans out along the Front Range, developers increasingly encounter prospective sites where mineral interests have been severed from the surface estate or where mineral interests have been leased. At these sites, abandoned or active oil and gas wells — as well as the potential for future oil and gas development — are risks a surface developer disregards at its peril.

Both current and historical oil and gas development and production have operational and environmental impacts that may adversely affect planned development and could result in liability to a surface developer. While current or historical oil and gas operations may not preclude development, a surface developer is well-advised to perform careful due diligence and plan appropriately.

■ **Potential impacts.** As a general matter, Colorado law provides that mineral interest owners have a right to "reasonable use" of the surface estate to access and develop the mineral interest *without compensation to the surface owner*. This right includes the rights of ingress, egress, exploration, and surface usage as are reasonably necessary to the successful exploitation of the mineral interest.

During typical oil and gas operations, access roads and a drilling pad are constructed in the drilling and well completion phase, and remain for access during well production activities. During drilling, drill cuttings and drilling muds, used to lubricate the drill bit and remove cuttings, are brought to the surface and may contain metals and other contaminants, includ-



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ing mercury, cadmium, arsenic and hydrocarbons. These waste materials typically are placed on site in a reserve pit and then either moved off site for disposal or buried on site. Well completion wastes may include hydrochloric acid, waste cement and metal casings, among others.

During production activities, produced water lifted from underground during oil and gas production may contain contaminants including benzene, naphthalene, toluene, metals and radionuclides. This water typically is reinjected into the ground, but also may be used as a dust suppressant on roads, allowed to percolate or evaporate, or be treated and discharged. Tanks for the temporary storage of oil, natural gas liquids (condensate) or produced water also may be located on site. The sludge that forms on the bottom of these tanks, known as "tank bottoms," requires removal and is likely to contain hydrocarbons and other contaminants that must be disposed of. Production also involves the use of machinery, including pumps, heater-treaters, and motors that produce air emissions and noise, and require fuel. Under Colorado regulations, noise associated with these operations is allowed in residential areas at levels up to 55 decibels during the day and 50 db at night, taking into account ambient noise levels.

Well maintenance activities, which are required at regular

intervals, involve use of strong acids for scale removal, paints and cleaning solvents, and use of corrosion inhibitors and simulation compounds that are flushed through the well. These materials may appear in production water, or spills at the surface. Well maintenance also may require the use of a work-over rig with attendant noise, traffic and emissions.

Spills from leaking tanks, spills during transfer of condensate and chemicals associated with production or maintenance activities, or releases from flow lines are the most common forms of accidental releases. Well blowouts also may occur and, while rare, can result in releases of pollutants as well as significant destruction of equipment and danger to workers.

When a well ceases production, if the well is abandoned, down-hole equipment is removed, the well bore is cleaned of fill, scale and other debris and cement plugs and pressurized fluid are placed in the well bore to prevent the inflow of fluid to the well casing. The well casing is cut below the surface and capped with a steel plate and the ground surface reclaimed. Associated flow lines may be abandoned by simply purging liquid hydrocarbons, cutting the line off at least three feet below the ground surface or the depth of the flow line, whichever is less, and sealing the ends. This abandoned infrastructure may require removal during site preparation and construction and may be the source of undetected releases that require remediation.

■ **Implications for developers.** Well locations, health and safety, and environmental aspects of oil and gas production operations, with some exceptions, are regulated by the Colorado Oil and Gas Conservation Commission.

Well operators are liable for their violations of commission regulations, as well as other applicable federal and state laws. However, these regulatory requirements may not be sufficient to assure that production activities are consistent with surface development or will not result in liability to a developer. Spills and practices associated with historical wells may have predated current regulatory requirements and current regulatory requirements have important weaknesses.

Further, despite the often-cited "petroleum exclusion," many of the wastes associated with oil and gas production fit the definition of "hazardous substances" that can trigger strict joint and several surface owner liability under the federal Comprehensive Environmental Response, Compensation and Liability Act if cleanup is required. Releases to surface water from old pits also have been a source of liability to surface owners. If a surface owner inadvertently exacerbates existing contamination, for example, by spreading wastes from historical operations during rough grading or surface preparation activity, liability under the Resource Conservation and Recovery Act and related state laws will follow. Lastly, purchasers may have claims against a surface developer arising out of failure to provide adequate notice of ongoing operations, failure to incorporate setbacks and other safety-related features into the development plan, or failure to adequately evaluate the environmental suitability of the site for development, among others. While a surface developer is likely to successfully assert claims for damages or contribution against the oil and gas operator in these circumstances, litigation may be the only, and a costly, recourse.▲



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