

November 6, 2008

Mr. Stephen C. Ross
Santa Fe County Attorney
102 Grant Ave.
Santa Fe, NM 87504-0276

Re: Comment letter on proposed oil and gas ordinance

Dear Steve:

The draft oil and gas ordinance is a good start for an ordinance that will adequately protect the fragile and unique resources of the Galisteo Basin. I am thankful that the County is making the effort to assure that the existing values and uses of the Galisteo Basin are not adversely affected by oil and gas activities. However, the draft ordinance is critically flawed in a number of key respects.

The following comments highlight some of the most glaring inadequacies of the current draft ordinance, and are not intended to be an exhaustive list of all modifications that should be made to the draft prior to its adoption by the Board of County Commissioners.

As indicated by these comments, there is a significant amount of work that remains to be done to the draft ordinance. If the ordinance were to be adopted as it is currently drafted, the invaluable resources of the Galisteo Basin could be irreparably harmed by inappropriate and incompatible oil and gas activities. Accordingly, I respectfully submit that there is not yet a draft ordinance that is ready for review by the Board of County Commissioners. Unless the current draft is substantially revised and modified, the County's laudable effort to protect the environment and the County's residents will have been an unfortunate exercise in futility.

A. The mineral estate is no longer the “dominant estate” under the controlling statutory and common law

Undoubtedly, a mineral owner or lessee in a split-estate situation has a right to use the surface estate for purposes of exploiting the minerals. However, it is no longer accurate to state that “the mineral estate is the dominant estate.” Over the past few decades, the notion of mineral “dominance” has been eroded. The beginning of this “erosion” was the growing acceptance of the “accommodation doctrine” into the common law, whereby the rights of the mineral owners/lessees was constrained by bounds of necessity and reasonableness. New Mexico is a state that has adopted the accommodation doctrine and, accordingly, it is not correct to state that the mineral estate is “dominant” in New Mexico.

The relative rights of mineral owners and surface owners were further modified by the New Mexico legislature’s enactment of the Surface Owner’s Protection Act which gives further protections – both procedural and substantive – to surface owners.

In light of the evolution of law in this regard, and New Mexico’s particular embrace of a legal regime that appears to put mineral owners/lessees and surface owners on an equal footing, it is anachronistic, unnecessary, and confusing to refer to the mineral estate as “the dominant estate” in New Mexico. The characterization is incorrect, could lead to unintended results, and should be stricken from the draft

B. The ordinance should designate “no drill zones” in areas that contain unique and fragile ecological resources

The proposed ordinance goes to great lengths to identify those geographic areas are “highly sensitive” in light of the ecological resources that are found in the area. However, the ordinance does not do enough to protect these “highly sensitive” areas.

Perhaps the best example of this failure is the fact that the ordinance appears to allow drilling within the County’s extraordinarily rare and fragile riparian

habitat zones without limitation. The New Mexico Department of Game and Fish has recommended that no drilling should be allowed within a 0.5 mile buffer zone of riparian habitat. The County's ordinance appears to disregard this recommendation altogether for reasons that are entirely undescribed in the ordinance itself. Absolute protection of this scarce and valuable resource achieves two critical objectives. First, protection of a riparian buffer from oil and gas drilling is essential to the conservation of the small remnant pieces of healthy riparian habitat in Santa Fe County. Second, protection of a riparian buffer has the felicitous "side effect" of protecting some of the Galisteo Basin's most important aquifer recharge zones, as riparian habitats coincide geographically with these recharge zones.

Quite literally, the limited riparian habitat zone in the Galisteo Basin is the wellspring of a good portion of the wildlife in southern Santa Fe County, and the conservation of this resource is critical to the continued survival of a healthy wildlife community in this portion of the County. Perennial stretches of the Galisteo River help to support a wide range of avian species, small mammals, and large predators that could not survive if the limited riparian habitat in the Galisteo Basin were adversely affected by impacts associated with oil and gas drilling such as (1) habitat fragmentation, (2) noise, (3) water pollution, (4) reduction of base flows, and (5) air quality impacts. The riparian resource along the Galisteo River in Santa Fe County has heightened importance because it roughly forms the southern boundary of a large Bureau of Land Management tract of land, and thus is a critical component of the wildlife habitat on this public land resource.

Disturbances to the riparian strip could have a devastating consequence on wildlife in the Galisteo Basin, largely because there are not "replacement resources" for wildlife to use if the riparian habitat is rendered unsuitable by drilling activities. That is, if noise impacts or fragmentation impacts convert a portion of the Basin's riparian resources into non-suitable habitat, then the wildlife that has previously depended on that habitat will not be able to find replacement habitat in the Galisteo Basin as the habitat is already extraordinarily limited. This loss of habitat will lead inevitably to a reduction in wildlife populations.

In the Governor's report on drilling in the Galisteo Basin, the New Mexico Department of Game and Fish recommended the 0.5 mile buffer described above.

Nonetheless, the County's draft ordinance makes no specific whatsoever to protect this invaluable wildlife resource. While the 1000 foot setback on watercourses (Section 11.25.1.6) might protect some portions of riparian habitat in some cases, there is certainly no assurance that this 1000 foot setback will conserve all riparian habitat in the Basin.

The County clearly recognizes that it has the authority to reduce the amount of drilling that an operator would be permitted to undertake pursuant to Oil Conservation Division well spacing rules, by as much as 90%. I believe that this is a correct reflection of the federal jurisprudence concerning regulatory takings which, as the ordinance suggests, are very difficult to establish under federal law. However, once having acknowledged the considerable extent of its regulatory authority, the County appears to shrink from the robust exercise of that authority. The proposed ordinance acknowledges that there are some highly sensitive ecological areas in the Basin – most importantly, riparian habitats and aquifer recharge zones – but does not take the final step of protecting these critical areas by establishing “no drill zones” in those areas that are particularly susceptible to damage. This is a flaw in the ordinance that should be corrected.

At the very least, the County should implement the New Mexico Department of Game and Fish's recommendation to implement a 0.5 mile buffer area around all riparian zones in which no oil and gas activities will be allowed. It may be appropriate to give similar treatment to other resources that are rare, valuable, and fragile like the riparian habitat resources. Absolutely no drilling should be allowed in this buffer strip.

C. The ordinance, as drafted, could not be applied to federal land oil and gas drilling

One of the biggest flaws in the proposed ordinance is its failure to address the possibility of oil and gas activity on federal lands in any meaningful way. This is a particularly important issue, as the Bureau of Land Management owns a large tract of land in the northern part of the Galisteo Basin that could be opened to leasing.

After the United States Supreme Court's decision in Granite Rock Mining Co. case, there are two facts regarding County regulatory jurisdiction on federal lands that are now beyond dispute: (1) the County does not have zoning authority on federal lands and cannot enact any "land use type" land that prescribes or prohibits certain uses by zone, and (2) the County does have the authority to enact reasonable environmental regulations that apply on federal lands to protect the health, safety, and welfare of the County and its citizens.

Unfortunately, under the proposed ordinance, the first step in the oil and gas permitting process – the Section 9 zoning process – would be entirely unenforceable as a matter of federal law as an illegal application of a land use law. Despite the fact that many of the component elements of the Section 9 zoning process are actually directed at assuring the preservation of environmental values, the fact that these protective elements are part of a zoning process whereby the oil and gas use is either permitted or prohibited means that none of these elements could ever be enforced on federal lands. Unfortunately, this is an unintended but clearly foreseeable consequence of the proposed ordinance, as currently drafted.

The "two-step process" envisioned by the draft ordinance – the Section 9 zoning process followed by the Section 11 permit process – is a workable process for private land application, but is entirely inconsistent with the limitations that federal law imposes on local governments that wish to exert their full regulatory authority over federal lands. If the proposed ordinance is to have any teeth on federal lands – and it absolutely must given the fact that there is a significant tract of Bureau of Land Management in the Galisteo Basin – then the drafters of the ordinance must expressly tailor the ordinance to deal with the federal lands issue.

The only way to resolve this problem is to add a separate section of the ordinance to specifically deal with the ways that the ordinance will apply on federal lands. Insofar as federal lands are concerned, the County will be obligated to disavow the zoning authority that it exercises in the "zoning overlay process." Accordingly, the various environmental studies and analyses that are now contemplated to be performed in the Section 9 zoning process should be required and developed during the Section 11 permitting process when oil and gas activities on federal lands are at issue.

It is critical that the County give careful consideration as to how the language and the structure of the ordinance can be modified so as to assure that the ordinance has maximum reach and application on all lands – including all federal lands – in the County. I have seen County hard rock mining ordinances that specifically address the jurisdictional conundrum that exists when a local government like a County endeavors to exercise its regulatory authority on federal lands. Unless the oil and gas ordinance addresses this issue honestly and directly, it is likely that the County will have significant difficulties in applying the ordinance on federal lands in the future.

D. The ordinance's provisions concerning protection of flood zones, floodplains and wetlands is confusing and inadequate

In its apparent effort to assure adequate protection of flood zones, floodplains and wetlands is confusing and inadequate. At bottom, the proposed ordinance is unduly cluttered by the inclusion of a multitude of terms concerning this critical resource, without any corresponding explanation of the various relationships between and amongst these terms, and the different levels of protection that apply to each. “Body of water,” “buffer strip,” “drainage way,” “defined channel,” “flood fringe,” “flood hazard area,” “floodplain,” “floodway,” “100-year floodplain,” “intermittent stream,” “major floodplain,” “overland flow,” “perennial stream,” “perennial water body,” “regulatory floodplain,” and “wetland” are all terms that are used in the proposed ordinance. The proliferation of all these terms – many of which appear to be synonymous or which overlap – creates tremendous confusion and will hamper the County in its efforts to protect these important geographical areas.

The proposed ordinance must be revised to create a clear and enforceable mechanism for protecting flood zones, floodplains and wetlands that is not subject to confusion arising from the use of too many terms. Moreover, insofar as the protection of these lands are concerned, the ordinance must clearly reflect the unique climate, topography and geomorphology of the Galisteo Basin. For example, in the Galisteo Basin – where infrequent but periodic flash flood events occur – it is particularly important that all areas defined by the current ordinance as “drainage ways” are protected. These “drainage ways” include all major and minor arroyos – many of which do not have a “defined channel” that is easily

perceptible to the eye – that are susceptible to flooding during a major precipitation event.

As the ordinance is currently drafted, it is subject to an interpretation that that only lands that are specifically mapped by FEMA as being within special flood hazard Zone A are protected by the ordinance. This should be corrected. As noted above, there are many areas in the Galisteo Basin that are susceptible to flooding even though they are not within the special flood hazard Zone A designated by FEMA. These FEMA flood hazard maps simply fail to capture all of the “drainage ways” in the Galisteo Basin and, accordingly, should not be used to define the extent of the protected flood zones, floodplains, and wetlands.

By way of example, portions of the Galisteo Basin experienced a major flood event this September. During that flood event, a number of “drainage ways” were clearly apparent even though they are not within Zone A. These “drainage ways” are shallow and barely perceptible arroyos and/or swales that channel overland flow into streams that were, in some cases, multiple feet deep. The ordinance needs to acknowledge this unique geohydrology, and needs to protect these valuable zones from any of the adverse impacts of oil and gas drilling.

E. The ordinance’s definition of “degradation” is inadequate

The proposed ordinance seeks to protect the invaluable aquatic resources of the Galisteo Basin from “degradation.” However, the ordinance does not achieve this goal because it incorporates an inadequate definition of “degradation.”

As currently defined in the draft ordinance, an oil and gas activity does not “degrade” an aquatic resource unless this activity “renders” that resource “harmful, detrimental, or injurious” to various uses. This definition fails to capture the reality that any activity that has an adverse impact on water quality “degrades” a water body. Instead, the ordinance as currently drafted allows for the degradation of water quality up to the point at which the next incremental oil and gas activity “renders” a water body inadequate for a given purpose. This definition is far too permissive and will unnecessarily allow for a lowering of water quality. All activities that have the possibility of lower water quality should be prohibited by the oil and gas ordinance.

As the ordinance is currently drafted, an oil and gas activity is permissible even if it lowers water quality so long as that activity does not constitute the “straw that breaks the camel’s back” by finally “rendering” the water body “harmful, detrimental, or injurious.” This provision allows for the slow and incremental lowering of water quality in the Galisteo Basin’s precious water bodies until the point at which the water quality in the body is just about to become unsuitable for its use. The ordinance must be modified so as to specifically prohibit and prevent any and all activities that have the possibility of lowering water quality, not just those activities that “degrade” water as that term is currently defined in the ordinance.

F. The well density rules established in Section 9.4.1.1. are confusing and do not adequately protect the Galisteo Basin’s most important ecological resources

At Section 9.4.1.1, the proposed ordinance develops well density rules for various areas of the Galisteo Basin as a function of the “environmental suitability” of those areas. In principle, this provision is very forward thinking, as it recognizes that there is a fundamental incompatibility between oil and gas drilling and the Galisteo Basin’s most environmentally sensitive lands. However, the provision as currently drafted is inadequate in various respects. Most importantly, the ordinance should absolutely require oil and gas operators to conduct their activities, if at all, in the physical areas that present the fewest compatibility issues. Operators should not have the option to drill in areas of exceptional environmental importance. Rather, the ordinance should operate so that only lands of marginal environmental and human significance are open for oil and gas drilling.

First, as noted above the provision entirely fails to acknowledge the fact that there are certain environmental and human resources in the Galisteo Basin that are simply so unique, significant, and fragile that they must be absolutely protected from oil and gas development. While the “setbacks” contemplated in the ordinance provide a very minimum amount of protection to some of these resources, the ordinance must more clearly delineate those areas of exceptional importance in the Galisteo Basin where absolutely no drilling activities – including

diagonal and horizontal drilling – are allowed. Most notably, these areas include riparian zones, critical aquifer recharge areas, and all drainage ways. (There is likely to be a significant overlap in the foregoing three categories of land.)

Second, as currently drafted the ordinance has the unfortunate and unintended effect of inducing oil and gas operators to create “sacrifice zones” where multiple wells are located in the Basin’s most environmentally lands. Experience in the Galisteo Basin shows that oil and gas operators are most interested in locating their wells as close to possible as aquifer recharge zones, drainage ways, and the Galisteo River. Under the ordinance as currently drafted, oil and gas operators are not only allowed to drill in these zones, but they will also be able to co-locate a number of wells on a single well pad in these zones – in effect creating an industrial sacrifice zone. The adverse environmental effect of these intensely developed “drilling islands” in highly sensitive environmental areas could lead to disastrous results.

Third, the mechanism set up by this provision is extremely confusing and uses the term “well site” in a way that makes very little sense. Is a “well site” a drilling pad containing one or more wells? Or is a “well site” the physical location of a single well?

G. Adequate protection must be given to the archaeological and cultural resources of the Galisteo Basin

The Galisteo Basin contains archaeological and cultural resources of exceptional importance. In fact, the area is so rich in these resources that the federal government has recognized the value of the area with the enactment of the Galisteo Basin Archaeological Resources Protection Act. As currently drafted, the ordinance does not give adequate protection to these resources.

Most importantly, the ordinance fails to embrace the principle that full protection of these priceless resources requires protection of their “context” and their “setting.” This principle – which arises from the fact that the value of these resources is closely associated with the physical setting of the resources – is the principle that underlies the National Historic Preservation Act. The ordinance must give the County the flexibility that it needs to assure that it has tools at its

disposal to give archaeological and cultural resources the full measure of protection that they deserve. The County should solicit the advice and assistance of the State Historic Preservation Officer in devising provisions that will provide for adequate protection of this important and unique resource.

H. The noise provisions of the ordinance must be revised

The provisions of the draft ordinance pertaining to noise impacts have been the subject of a specific comment letter by the Acoustic Ecology Institute. This comment letter notes that the noise provisions of the draft ordinance are woefully inadequate. In short, the noise provisions are totally non-responsive to the existing character and nature of the Galisteo Basin as an essentially natural environment characterized by its peace and tranquility. The previous draft of the County's oil and gas ordinance acknowledged this fact, and incorporated a noise provision which provided only for very slight increases in noise over background levels. The current draft ordinance entirely departs from this principle, and instead imposes a cap of 75 decibels on oil and gas activities. This approach to the regulation of noise impacts makes absolutely no sense in the Galisteo Basin.

The draft ordinance must be modified to assure that there is very little – if any – increase in noise over naturally occurring ambient levels as a result of oil and gas activities. Currently, the ordinance utterly fails in this regard.

I. Inadequate setbacks

As many commentators on the draft ordinance have noted, the proposed setbacks from residential structures and domestic water wells are woefully inadequate. Indeed, the proposed setback provisions actually bestow a “windfall” on oil and gas operators because they are far more relaxed than the setback provisions that currently apply to oil and gas activities under the current mining ordinance in Santa Fe County.

Under the current mining ordinance – which expressly and specifically applies to oil and gas activities by its terms – the required setback from a home is 2,640 feet. The proposed oil and gas ordinance proposes to reduce this setback to 750 feet. This “roll back” in the setback is a critical flaw of the proposed

ordinance, and fails to recognize the core incompatibility of residential use and oil and gas operations. These setback provisions must be modified to restore the protections that are currently provided by the setback provisions of the currently applicable mining ordinance.

J. Resource mapping needs to be further developed

The underlying “logic” and “scheme” of the proposed oil and gas ordinance is to provide degrees of protection to physical locations in the Galisteo Basin as a function of their environmental and human significance. While this is a laudable goal, it appears that the resource mapping effort needs considerable additional work.

As the resource maps currently exist, they fail to capture all the important resource areas in the Galisteo Basin. For example, riparian habitats, perennial streams, and aquifer recharge areas are not yet fully mapped. In light of the essential role that these maps will have in the future implementation of the oil and gas ordinance, the County should make all reasonable effort to assure that the existing maps are subject to public inspection, review, and “ground-truthing” before they are finally completed and formalized. In the absence of such “ground-truthing,” there is a likelihood that critical resources in the Galisteo Basin will not receive the protection that they merit.

K. The financial assurances contemplated by the ordinance are inadequate

The proposed ordinance should have far more robust requirements for financial assurances. Most importantly, oil and gas operators should be obligated by the ordinance to post a bond that will assure the County that there are adequate resources available to pay for any and all damages to property and the environment, as well as for costs of remediation and reclamation. These damages are likely to be very large. Indeed, in light of the enactment of the Surface Owner’s Protection Act, oil and gas operators have significant liability for the loss in value to real property associated with their oil and gas activities even in those instances where they exercise reasonable care in their activities. This liability can be as high as the full market value of an affected property.

Mr. Steve Ross
November 6, 2008
Page 12

There seems to be no rational connection between the minimum bond amount and the damages that are foreseeable as a result of drilling. This lack of proportionality should be addressed.

Once again, the draft ordinance is a good start. However, it is a far from adequate draft, and it needs some significant revisions. Please assure that the County's "rush" to finalize the ordinance does not deprive the precious resources of the Galisteo Basin from receiving the protection that they so clearly deserve. There is a clear need for thoughtful modifications to the current draft, and the County should provide for an adequate amount of time to make sure that these critically needed modifications are incorporated into the ordinance. Otherwise, the County's laudable efforts will all have been for naught.

Sincerely,

Steven Sugarman