Rural Conservation Alliance, POB 245, Cerrillos, NM 87010

Board of County Commissioners May 27, 2014
Santa Fe County
POB 276
Santa Fe, NM 87504

Re: CDRC CASE # ZMIN 13-5360 Buena Vista Estates, Inc. and Rockology LLC Application to mine La Bajada Mesa—Reasons for our opposition to this application.

Dear Commissioner Anaya, Commissioner Chavez, Commissioner Holian, Commissioner Mayfield, and Commissioner Stefanics,

The following letter highlights a number of concerns related to the creation of a new mining zone on La Bajada Mesa. This letter is similar to a prior letter submitted to the CDRC but has been updated to reflect new concerns and developments since that hearing.

The Rural Conservation Alliance (RCA) is an unincorporated association of community organizations and individuals dedicated to the preservation and protection of the natural resources and rural character of the Galisteo Basin area of Santa Fe County, New Mexico.

We request that the Board of County Commissioners deny the 2013 Buena Vista /Rockology application to create a new mining zone on a significant New Mexico cultural landscape, for many of the same reasonable and legal rationales that Staff recommended denial of the applicant's two previous applications in 2005 and 2008. In addition to the reasons for denial that Staff recognized in the prior applications, we believe that this application should also be denied based on:

- Inadequate water budgeted for mining operations and dust control
- Lack of evidence of long-term sustained water availability
- An irresponsible use of water that sets inappropriate precedents for the future
- Incompatibility with other land uses
- Negative economic impact for the County
- Degradation of important ecological and wildlife areas
- Threats to the health and welfare of County residents
- Application deficiencies, and inaccurate, incomplete or misleading statements

The following report addresses these issues in detail. We urge the County of Santa Fe to carefully consider these issues and to deny the application to strip mine this precious natural, historic and cultural resource.

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Rationale for Prior Denials Remains Unchanged

County Staff recommends denial, 2005

When a 108 acre site was requested in approximately the same location as the current application, the New Mexican reported that Case Planer Dominic Gonzalez's memorandum advised, "this location is not compatible or suitable for mining" and that the "1,060-acre tract . . . is too close to the county's Cerrillos Hills Historic Park [previous name] and to Buffalo Head Mountain." The article noted that both La Bajada Mesa and Buffalo Mountain are recognized by the New Mexico Heritage Preservation Alliance as being among the state's Most Endangered Places. This memo is evidently missing from the County case file. However, a copy of the draft, dated 9/18/2005, with the language as quoted, is located in the Appendix, pp. 20-27.

County Staff recommends denial, 2008

When an "initial" 50 acre mine zone was requested in exactly the same location as the current application, Staff again recommended denial, stating: "[W]hen considering the criteria set forth in Article XI, Section 1.2.2 the proposed location is not reasonably compatible with the area and is not particularly suitable for mining as required by Article XI, Section 1.2.4." [Emphasis in original] And: "The reclamation needs associated with a project of this magnitude, landscaping needed to buffer the visibility of the project, and water required for long-term dust control requires a sustainable water supply…" "[S]taff does not support the use of trucked in water".

Water Issues

Unsupported Estimates of Water Usage

The applicant has provided no support for their calculation that 2.19 acre feet per year (713,615 gallons) would be sufficient for dust suppression. As Mining Engineer Jim Kuipers has written, "Under moderate duty approximately 20 gpm [gallons per minute] would be consumed per crusher and associated drop points (e.g., conveyor transfer points). Depending on the spray system, material properties, wind, shrouding and other factors this can be as low as 10 gpm and as high as 50 gpm or more." In dry, windy conditions this could be even more, and the mesa top is notoriously windy.

The application's statement of 5 crushers and 4 screeners implies that two systems will be in operation. If we assume that these are used 40 hours per week, then the actual water required is shown in the following table:

	Usage rate	Gal / min	Gal/ year *	Applicant's estimate	Discrepancy in Gal
One system	low	10	1,248,000	713,614	**534,386**
	high	50	6,240,000	same	**5,526,386**
Two systems	low	10	2,496,000	same	**1,782,386**
	high	50	12,480,000	same	**11,766,386**

Gal/year per system = Gal/min x 60 min/hr x 40 hrs/week x 52 weeks/year.

Even under the most conservative estimates (10 gallons per minute, 40 hours per week excellent shrouding, and for one system), falls short of engineer Kuiper's calculations by over a half-million gallons, requiring 75% more water than estimated in the application. Two systems (as implied by the quantity of equipment listed) will use **three times more water than stated in the application**.

In addition, there is no estimate for other ancillary needs for water. For example, dust control of dry, disturbed soil at the mine site, or the water required to establish vegetation to reclaim a wind-scoured and deeply pitted mesa. The applicant's estimates are merely the water requirements for the crushing equipment alone.

Implications of Providing Government-subsidized Treated Water for Industrial Mining Operations

The original application stated that water for mining operations would be provided by the County potable water dispensary on NM 14. The water at this dispensary has been acquired and treated at public expense, and the mining operation has absolutely no need for water meeting drinking standards. Were the County to provide unlimited quantities of drinking water for industrial mining operations, it would establish a poorly-considered precedent. In the future, any industrial applicant could demand a similar accommodation.

The agreement to purchase potable water itself is problematic. The County acknowledges that "…this project is outside of our service area." The "willing and able" letters to provide bulk water services were signed by an Accountant and affirmed by an Engineering Associate. There is no indication that there was any substantive analysis of this request or its implications. The letter is unconditional; There is no acknowledgement of the mine's 25 year timeline, nor limits, such as in times of drought when water shortages could demand that scarce water resources be reserved for higher priority uses such as the household requirements of residents.

To the best of our knowledge, the applicants have not terminated the agreement that would enable them to purchase this potable water from the County. However, since the CDRC hearing, the applicant has also entered into a similar arrangement with the City to purchase treated effluent water. That agreement also lacks any guarantee of supply, lacks any mention of the 25 year operational time frame stipulated in the application, and specifically notes that there will be times when water is not available.

It is no better to squander treated effluent water on unwanted mining operations than it is to waste treated potable water for that purpose. Treated effluent is an increasingly valuable – and increasingly scarce – resource for Santa Fe. This water is currently treated at city expense, then used to irrigate parks and golf courses, water livestock, and support construction activities, as required by the city's water conservation ordinances. While these uses help to offset demand for potable water, they already strain the available supply of treated effluent.

The city's Reclaimed Wastewater Resource Plan (April 2013) highlights the challenge. "Reclaimed wastewater (RW) is a vital and valuable water resource that helps the City of Santa Fe meet its current water supply needs; it can also play a critical role in meeting future potable

water supply demand." However, the report goes on to say, "The combined monthly demand…is 40% more than the RW available. Hence, **RW demand is greater than the available supply under current average conditions, which will only worsen under drier hotter drought and projected climate change-impacted conditions**." Further, the City of Santa Fe Wastewater Management Division (WWMD) "does not currently have a protocol or a list of priorities by which the RW users receive RW under shortage scenarios during critical summer months."

The implications of this are staggering. If this application were permitted to proceed, it would mean that Santa Fe home builders would be competing with an industrial mining operation to secure the treated effluent that city ordinance requires them to use. If mine operators simply got to the standpipe first, they would be permitted to drain the available supply and leave other users empty-handed. Clearly, an open-ended agreement to provide reclaimed wastewater for this operation is hardly a solution to the problem at hand.

Further, the Requirements of the County Code are clear and the applicants have not met those requirements. Article XI, Section 1.7, Reviews for Mining Uses, requires that the "applicant shall submit evidence that the applicant has obtained an adequate water supply **as evidenced by appropriate permits issued by the State Engineer's Office/Interstate State Stream Commission of the State of New Mexico.**" The applicants have not done this. Instead, they have provided evidence of non-guaranteed supplies of City- and County-subsidized, treated water for their commercial mining operations. **The code does not allow for this alternative provision, nor would it be in the best interest of the citizens of Santa Fe**.

Application Deficiencies

Location Standards for Article XI, Section 1.2 Have Not Been Met

Article XI, Section 1.2 requires the applicant to demonstrate evidence that the proposal meets four criteria. The application adequately addresses only the first of these, 1.2.1, and even on that criterion questions remain. Article XI requires that all four criteria be met.

1.2.1 Evidence of significant mineral resources.

The application presents statements about the presence of basalt that would be crushed into aggregate. The methodology only evaluated to a depth of 20 feet, while the applicants plan to mine to a depth of 60 feet.

In addition, the applicant claims, without substantiation, that the "quality of the aggregate pits in the Santa Fe area generally does not meet the requirements for these types of construction projects" (p.1 of application). Nor do they offer any evidence that the basalt they propose to mine is itself suited to meet those requirements. In fact, the application states that the specific gravity the basalt they would be mining (2.64) to be less dense than typical ranges for basalt (2.8-3.0)[1].

1.2.2 Mining use is reasonably compatible with existing uses

Mining use of this land is diametrically opposed to and incompatible with historical, cultural and recreational uses. Among those are the historical and cultural significance of the site and the area's status as a gateway to both Santa Fe and to the Galisteo Basin parklands. Published comments by two historians characterize the mesa this way:

> "La Bajada Mesa in northern New Mexico contains cultural, historical, environmental, and scenic features of considerable significance, all worthy of permanent preservation." *--Marc Simmons, Ph.D. (U.N.M., ret.), July 4, 2012.*
>
> "There is no more important geographical landmark of our state, and none with more historical significance." *--William Baxter, Sept. 4, 2005.*

In 2003, the New Mexico Heritage Preservation Alliance ranked La Bajada Mesa as one of its Most Endangered Places, a list which has included such landmarks as Chaco Canyon and El Morro National Monument.

The Camino Real de Tierra Adentro National Historic Trail is part of the historic Spanish colonial route that linked Mexico City to Santa Fe and beyond. La Bajada Mesa gives context to this Historic Trail. One of the best preserved remnants of this federally-designated National Historic Trail is located on land directly adjacent to the proposed mine site. Analysis shows that a SE branch of this historic trail, the Juana Lopez segment, passes directly within view of the proposed 50 acre pit.(Appendix, Figure 2)

[1] http://www.edumine.com/xtoolkit/tables/sgtables.htm

> "A portion of the newly federal-designated Camino Real de Tierra Adentro National Historic Trail either passes directly over land within the mining project or over adjacent lands. The escarpment itself has a long history associated with early travel, and the massive earth removal, as proposed, threatens to seriously compromise not only the viewscape from Interstate 25, but also the cultural and natural integrity of the La Bajada feature." *--Historian, Marc Simmons, Ph.D, Nov. 12, 2002*

Despite the applicant's attempt to paint a picture of an area rampant with mining, the proposed mining zone is *not* located in an established mining zone but is adjacent to the historic Cerrillos Mining District, a NM State Cultural Property. The historic 1880s "Cerrillos Mining District" (CMD) was placed on the State Register of Cultural Properties in 1973. It is NOT a mining zone and has no legal status as such. See *"Historic CMD, A New Mexico 'Cultural Property'--not a mine zone"* at http://www.raintreecounty.com/CMD.html

Mining in this location is incompatible with the historical, cultural and recreational uses of both the Mesa itself and of the adjoining areas. As such, the application can and should be denied under Article XI, 1.2.2. This was part of the rationale for denial in 2008 and it remains unchanged today.

1.2.3 History of significant mining in the area

There is no significant history of mining on this area of La Bajada. Permitting this application would entail the creation of a completely new mining zone in an area that lacks a history of mining. While legally possible under The Land Development Code, the applicants have no protected right to demand such a zoning change, and such a zone is, as stated previously, incompatible with both surrounding land uses and with virtually all strategic visions produced by the County in its long-term planning.

1.2.4 Particularly suited for mining uses compared to other areas

This area is particularly ***not*** suited for mining, as discussed above under 1.2.2. Further, basalt is the most common mineral on the planet[2] and La Bajada Mesa is simply the southern-most tip of a massive basalt deposit that stretches for miles (Appendix, Figure 5).

Moreover, there are many other areas far more suitable for mining basalt-based aggregate. In particular, the Caja Del Rio mine (currently operated by Delhur Industries) already produces basalt gravel within the County. That quarry uses piped (not truck-hauled) effluent water, is well-situated near the county landfill, and its mining cavities can be filled with county refuse. According to its manager, (See A. Murray letter, 1/15/2014) this quarry contains approximately 3.5 million cubic yards of basalt or a projected ten-year supply.

There simply is no need for additional production of gravel. Figures from the New Mexico Department of Energy, Minerals Natural Resources show that Santa Fe County alone produced an oversupply of more than 107,000 tons of gravel and base course over the past five years. It is worth noting that these over-production figures do not include the additional production and stockpiles at the Caja de Rio quarry.

[2] Particle Toxicology, Donaldson & Borm, eds., CRC Press, Boca Raton, 2006, p. 23

These figures contradict Buena Vista's unsupported claim that a shortage of aggregate sources in the area necessitates aggregate being "hauled in [to the Santa Fe area] from outlying sources to meet market demand". If materials are being hauled in from elsewhere, it is likely a price consideration rather than one of availability.

Slow construction across all sectors since 2008 has decreased demand for aggregate and related materials, and demand is likely to remain depressed for several more years. Industry estimates often still use figures from before 2008, over-stating demand. In addition, mobile on-site crushing and recycling of old road surfacing for use as new aggregate is becoming an increasingly widespread and economically viable practice, especially as it reduces the volume of demolition rubble – a concern for Santa Fe County like all other landfill operators. (See recycledaggregateproducts.com for a nearby example.) Such concrete recycling further reduces demand for new-mined aggregate, and is likely to continue to do so in the foreseeable future. Even if a need for basalt gravel were to arise in the future, there far less problematic areas throughout the County to locate such a mine, as evidenced by the geologic map in Appendix Figure 5.

Application Lacks a Visibility Study

The application, at this writing, lacks a credible study of the visual impact of the mining operations, including equipment, piles of material, dust, and lights. Applicants' claims that they put banners on the top of 20-foot poles hardly reflect the impact of piles of gravel or large mining equipment. Our analysis shows that these items as well as dust plumes will be readily visible along most of I-25 headed toward Santa Fe, contrary to the Applicants' claims. They will be fully visible to ground level for travelers headed toward Albuquerque.

Visibility is of critical importance because of its impacts on Santa Fe's existing economic bases of tourism, the arts, real estate, film-making, and on air quality regularly listed as among the nation's highest. Dust has impacts on visibility and health, night and day.

Visibility from Waldo Canyon Road, the Turquoise Trail National Scenic Byway, and locations to the south of the mesa must be assessed along with views from I-25, the Railrunner, and the SE branch of the Camino Real de Tierra Adentro. Each of these, except Waldo Canyon Road and the Camino Real, is a major gateway for any of the 5 million or more Albuquerque airline passengers annually who visit Santa Fe, as well as motorists not arriving by air.[3] Waldo Canyon Road is designated to be the gateway to the acclaimed Cerrillos Hills State Park and the Galisteo Parklands.

Application Lacks a Blasting Impact Study

The application lacks any site-specific study on blasting but simply includes a brochure from the blasting subcontractor. There is no consideration or analysis of site-specific impacts of noise upon neighboring uses or wildlife, for whom this area is an important migration corridor. The Sustainable Growth Management Plan (SGMP) displays "Conceptual Major Wildlife Corridors" provided by NM Game & Fish Dept. that show the area of Applicant's site surrounded by the

[3] See http://nmindustrypartners.org/wp-content/uploads/2011/09/NMTD-Quarterly-Report-January-2012.pdf

corridors.[4]. In addition, the upper Rio Grande watershed area including the Galisteo Basin and La Bajada is designated by Wildlands Network as one of the twenty most important wildlife linkages on the North American continent. (Appendix, Figure 1) This impact study should also include consideration of the detrimental effects that noise pollution and dust would have on tourism and park visitation.

Reclamation Plan is Insubstantial

The reclamation plan refers only to 4-6 inches of topsoil to be put aside in stockpiles, much of which will have been lost over the years to wind. As the archeological survey notes, "in some places the soils are eroding away, revealing cobbly basalt intrusions through the thin surface soils". Elsewhere in this report it is noted that "the location is exposed to scouring winds blowing across La Bajada Mesa."(Appendix, Figure 6)

The application states that "Finished stockpile material will be located in an area that is protected as much as possible from the prevailing winds." This is entirely unrealistic and inadequate. There simply is no such protected place where stockpiles could be protected from the scouring winds that blow from every direction across the exposed mesa. The plans to use retention blankets on the seeded areas does not apply to stockpiles. Even if the pile(s) were eventually placed in the pit, the wind would be drawn through the pit carrying the topsoil dust with them.

The amount of topsoil needed for reclamation is not addressed. There is no assessment of what amount might be sufficient for reseeding. But in any estimation, the small amount of topsoil put aside seems woefully insufficient to the task at hand and draws into question the probable success of reclaiming a 60' deep mine site.

Best practices in the landscape construction industry[5] discourage soil stockpiling for more than one month; piles must be no deeper than four feet, covered, and kept moist. Soil is a living material, and the microbes that give it the ability to support vegetation and retain water and nutrients die if these guidelines are not followed. The application does not take any of these issues into account. It is highly unlikely that the applicant would follow these guidelines, nor could do so without additional water and other investments. As such, stockpiling is offered as a gesture, but would fail to protect the site. In fact, it would increase dust problems when incorrectly attempted.

Erosion Is Not Adequately Addressed

The question of erosion also needs critical consideration. The application says on p.15 that a "borrow ditch will be cut on each side of the road to manage storm water." With only 4 to 6 inches depth to basalt surface, borrow ditches would either be inadequate for the volume of runoff, or would have to be blasted from rock. Inadequate stormwater management would create serious problems on and off the mine site, potentially including siltation increases in the Galisteo Creek and Rio Grande. Erosion and Sedimentation control is required by Federal law (NPDES) for every site over 1 acre in size.

[4] 2010 Santa Fe County Growth Management Plan, p. 51
[5] Thompson & Sorvig, Sustainable Landscape Construction, 2nd Edition, 2007, Island Press; p 88.

Further, the proposed mine site sits within the Galisteo watershed and is flanked by two drainages to the Galisteo Creek, below. Since the Galisteo is a "Waters of the United States," industrial mining activity within the watershed directly above the creek may be of concern to the Army Corps of Engineers, yet that agency has not been consulted.

Application Lacks a Dust Mitigation Plan

Fugitive dust is a particular issue in the proposed area but no mitigation plan has been presented.

Dust from basalt crushing is associated with lung disease. One study found "basalt pneumoconiosis," a lung disease similar to those caused by asbestos or silica, in 27% of basalt mine crusher workers.[6]

Increased airborne silica dust is also a concern. According to OSHA, "crystalline silica has been classified as a human lung carcinogen. Additionally, breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. The respirable silica dust enters the lungs and causes the formation of scar tissue, thus reducing the lungs' ability to take in oxygen. There is no cure for silicosis. Since silicosis affects lung function, it makes one more susceptible to lung infections like tuberculosis."

Further, the potential traffic hazards of dust storms created or exacerbated by 50 acres of disturbed soil in proximity to Interstate 25 have not been evaluated. The hazards of dust storms are not a theoretical concern. As recently as May 22, 2014, six people died in collisions due to a severe dust storm on Interstate 10[7].

Dust production in this dry, windy, exposed location is a public health hazard and safety hazard. The County has an obligation to require substantial dust mitigation measures that will protect the health of its residents.

Economics

Questionable Economic Benefits

Under Economic Benefits, the application assumes it will sell 250,000 tons of material annually, and generate $122,500 in gross receipts tax. Yet later, on p.11 of the application, it states, "886 thousand cubic yards will be exported from the site and sold on the open market." Since only retail sales at the mine would be taxable, the county would not recognize the benefits originally stated. Further, under a later section in this letter entitled Operation Plan/Time Frame, we will show that the application's production figures themselves do not add up, further diminishing the County's prospects of realizing any significant economic benefit from the proposed mine.

Within today's aggregate industry, "local" can easily encompass several counties. When NMDOT needed base course for a Turquoise Trail reconstruction project (Madrid to Lone Butte), it came from outside of Santa Fe County. That was because Lafarge North America

[6] Particle Toxicology, Donaldson & Borm, eds., CRC Press, Boca Raton, 2006, p. 23

[7] Reported 5/22/14, Santa Fe New Mexican, http://www.santafenewmexican.com/news/local_news/police-dead-in-new-mexico-interstate-crash/article_bc345270-831a-56b5-8cbc-19b3819e0769.html

underbid others, including the Waldo Quarry, located 2 miles ESE of the applicant's proposed site. Evidently the Lafarge source was local enough for NMDOT. The applicant's implication that "local" sources would reduce costs for County Public Works and for contractors is unfounded, since out-of-county and even out-of-state suppliers, whose costs include more transport, are regularly able to underbid local sources.

Other mines on Buena Vista's list reinforce the point that another aggregate mine in this location is not needed, as do the excess production figures noted earlier.

Since the applicant has not clearly established the need, or economic demand for another quarry, the application's "Economic Benefits" (p. 2) become questionable. Another mine in an oversupplied market would simply undercut the business of existing mines and, as a result, contribute little economic benefit to the State and County. The same applies to jobs, with those lost at existing operations canceling out the already small number of estimated jobs created by a new mine in an oversupplied market.

Negative Impact on Neighboring, Sustainable Economic Activities

Siting a mine in as prominent a location as La Bajada Mesa threatens the local tourist industry and the Cerrillos Hills State Park. The 2006 "Cerrillos Hills/Galisteo Basin State Parks Feasibility Study" indicates that "the best access [to the Cerrillos Hills State Park] would be from the I-25 corridor", i.e. via Waldo Canyon Road. This new and growing sustainable parkland resource needs to be protected and nourished, not burdened with a strip mine on its gateway access road.

In addition, the arts economy, film-making, and property value and tax base all derive from a quality environment. Real estate with clear air and vistas are essential parts of the Santa Fe economy which would be diminished by a large mining operation on this major gateway.

Recreation impacts are also important to our economy. Visitors to NM national parks and monuments spend millions of dollars, both in the parks and surrounding communities[8] and this revenue supports a thousand jobs in the state. Recognition of the value of Cerrillos Hills State Park is growing on a national scale. The park was recently listed in The Guardian, US as one of New Mexico's top 10 national and state parks. [9]

Since the mining application on La Bajada in 2005, the County Park has become an acclaimed State Park. This makes it all the more important to reaffirm Staff's recommendation on earlier applications and to deny this current application.

La Bajada Mesa itself contributes to the landscape that attracts millions annually to this state and specifically to Santa Fe. Strip mining would permanently end that contribution and any future sustainable development in the mesa area.

[8] Reported 2/28/2012, Associated Press
[9] http://www.theguardian.com/travel/2014/jan/23/new-mexico-top-10-national-parks

Questionable Estimate of Jobs

The application claims their operation will generate 7 full-time jobs. Yet a comparable gravel operation near Cerrillos employed only 3 persons full time with 2 more part time. BV/Rockology's estimate of seven jobs appears to assume boom times. No assurance has been made that these are new jobs, nor that hiring preference would be given to County residents. Even seven jobs are a poor trade-off when weighed against the long term damage that a poorly sited mining operation would do to present and future sustainable economic benefits.

Potential Expansion of Mining

The current application is the third such proposal for a strip mine on the top of La Bajada Mesa. The proposed site is "surrounded by land owned by the co-applicant for the project." Buena Vista claims 1,358 acres. This land is part of a 5,421 acre parcel currently up for sale by CBRE, marketed as including "5,200 +/- acres of rich aggregate deposits for possible mining."[10] (Appendix, Figure 8)

Thus, if mining were to be permitted now, future expansion requests would be likely under such a precedent. Note that in the 2005 application, these same owners were clear that what was then a ~108 acre site was an "initial site." [11]

Granting this mining application would make surrounding land unattractive for less intensive and more sustainable uses, such as agriculture or residences. Moreover, the existence of this mine would make it easier to extend mining operations to the surrounding acres, since a key consideration in the Code is whether there is nearby mining. These factors almost guarantee that this 50 acre site would eventually be expanded to include strip mining on a much greater scale, likely similar to an initially proposed two-mile long swath on the Mesa top. The County cannot allow this to happen.

The landowners purchased the property with the current residential/agricultural zoning and they have no protected rights to demand rezoning for extraction.

National and Regional Significance

SGMP Recognizes the Need to Protect La Bajada

The Sustainable Growth Management Plan envisions less intensive use for La Bajada Mesa and the surrounding area. Under planned SGMP the mesa top would be even more protected (160 acre agricultural/ranch) than it is today (40 acre residential/agricultural.) Clearly, the County itself recognizes the importance of minimizing developmental impacts to this important gateway. The County is under no obligation to now rezone this land for mining and permit the applicants to subvert the County's own Sustainable Growth Management Plans.

[10] http://www.cbre.us/services/industrial/AssetLibrary/LandServices_NM_LaBajada.pdf

[11] Buildology, 2005, 3.1 Time Frame, CDRC CASE # MIS 05-5230 Buena Vista Mineral Extraction, p. 4

Nationally Significant with Extensive Natural, Cultural, and Recreational Resources

The application describes the surrounding land as "vacant." Yet, as cited earlier under the heading *Location Standards for Article XI Have Not Been Met, 1.2.2,* the area has profound cultural and historical significance, as further shown by these resources:

- New Mexico Heritage Preservation Alliance, Most Endangered Places in New Mexico, 2003 listing of La Bajada Mesa and Escarpment http://www.nmheritage.org/wp/wp-content/uploads/2011/04/2003-Most-Endangered.pdf
- La Bajada 'Official Scenic Historical Marker' http://www.raintreecounty.com/LaBmarkr.html

Gateway to the City of Santa Fe and to the Galisteo Basin Parklands

The Mesa is located at the Southern "gateway" to Santa Fe and the Galisteo Basin State parklands. "The Galisteo Basin is a nationally significant area with extensive natural, cultural, and recreational resources." [12]

The "Potential Gateway Corridor" designated by the SGMP[13] completely encompasses the proposed mine site and all of the Mesa that is currently for sale by the applicant. Recognition of this area as a Gateway rather than a mining zone is testimony to the wisdom of Santa Fe County, its Staff, elected officials and residents.

SGMP Conceptual Major Wildlife Corridors Nearby

The SGMP displays Conceptual Major Wildlife Corridors showing the area of Applicant's site surrounded by such corridors. Wildlife Network lists the Upper Rio Grande Watershed (including La Bajada) as one of the twenty priority wildlife corridors in all of North America.(Appendix, Figure 1) Other resources confirm the importance of this specific part of the mesa to be crucial to local ecology and wildlife, as shown in Appendix Figure 3 and Figure 4.

Sustainable Cultural Resource

La Bajada Mesa is a NM landscape that sustains artists, photographers, film makers and travelers. It is a frequent subject for artists and photographers alike. Movies (including "No Country for Old Men," Appendix, Figure 7) are filmed here. The Mesa embodies the spirit of New Mexico like no other place can.

> "La Bajada Hill . . . is still one of those approaches, those arrivals, that seems mythical, impossibly grand . . . a place that could change not only one's external life but also one's inner, spiritual life . . . 'You will never be the same again.' "
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> -- *Henry Shukman, The New York Times, February 4, 2010.*

[12] State Parks Feasibility Study 2006 "Potential Gateway Corridor" in the SGMP.
[13] SGMP Map 5-2 "Scenic and Historic Routes", p. 99

Environmental and Social Welfare Considerations

Air Quality Issues

Below is a partial list of the potential cumulative impacts from the development of a typical sand and gravel mine.

- Dust and diesel fumes generated on the haul road to and from the mine.
- Fugitive dust blowing from the uncovered or partially covered dump trucks.
- Fugitive dust from poorly monitored crushers, out-of-compliance operations, and piles of saleable gravel and waste materials.
- Increased traffic (highways) . . . with a concomitant increase in air pollution from more vehicles (highways and rural roads) and more disturbed land (building construction).
- Increased air pollution from some sand and gravel mines *after* they are abandoned and until natural re-vegetation stabilizes the surface soil.

"Each of the impacts listed above produces real-world effects that are difficult to measure."
--*Steve Blodgett, M.S.*

The Cerrillos Hills State Park and villages of Cerrillos and Madrid are downwind from this proposed site with La Cienega just to the north. As has been previously stated, both airborne basalt and silica are capable of causing disability or death. The County has an obligation to do everything in its power to protect the health and welfare of its residents. One way to do that is to deny this application for another unneeded mine that will only exacerbate the air quality issues and endanger residents.

Traffic Impacts

Increased heavy truck traffic, both for crushed rock and for water haulage, will increase wear on County, State, and Federal roads in the area. This will result in costs for upgrading and maintenance of these roads. Under the new SGMP, any developer would be required to pay impact fees to cover these costs before receiving any permit. The current applicant would not pay these costs, meaning that they would be born, involuntarily, by county taxpayers.

Similarly, increased heavy truck traffic increases the risks of accidents, and specifically of passenger vehicle collisions with heavy trucks, which are usually deadly. As noted previously, the increased possibility of severe dust storms on nearby I-25 also poses a very real threat of accidents.

Light Pollution

The application proposes to mitigate night lighting impacts on County Road 57 by angling the lights southward. However, this exacerbates the problem for those residents south of the mine site, and potentially for travelers on I-25.

Further, the County's dark sky ordinance allow exceptions for safety and security – exceptions which the applicants clearly plan to use, stating that "lighting will be used at the tool and administrative trailers to provide the necessary security to avoid vandalism at the site."

Visibility and Viewshed

What the application calls "vacant“ land is a profound panoramic open space with the proposed mine zone visible from portions of I-25, the I-25 frontage road, Waldo Canyon Rd (CR 57), the Turquoise Trail National Scenic Byway, and many roads and homes to the south.

The potential visibility impacts would be apparent upon what has been long recognized as the gateway area to Santa Fe. This area is also the scenic gateway to the Galisteo basin via Waldo Canyon Road that leads to the Cerrillos Hills State Park lands and on to the Ortiz Mountain Educational Preserve.

La Bajada Mesa is the major feature at the Western entrance to the Galisteo Basin. The vistas of the Mesa from the Park, especially from Buffalo Mountain and other areas in and above the Park, sight directly upon the Mesa.

Steve Blodgett, M.S., a mining engineer and author of "Environmental Impacts of Aggregate and Stone Mining in New Mexico" writes about the Cumulative and Associated Environmental Impacts of such mining as proposed in this mesa vicinity.[14]

After having walked over the Mesa, in a letter to Ross Lockridge (Aug. 15, 2005), Mr. Blodgett wrote, “Even though the crusher will be out of sight in the bottom of one of the cells once the mine is developed, there will always be a dust plume emerging from this property, especially during the spring winds.” Adding, “Again, you won't have to see the actual mine to know it's there because there will be a dust plume marking its location.”

In addition to the ever-enlarging pit itself would be all the structures mentioned on p. 10 of the application, including several trailers, screening and several pieces of crushing equipment with belt conveyor systems, water and fuel tanks, several dozers, pole-mounted lights, porta toilets, storage piles and the trucks.

The application says that the “crusher will be located in the excavated cell with limited visibility from public roadways, once the cell is excavated.” But then there is the visible pit itself and the stockpiles. What do they plan to locate in front of the stockpiles in order to minimize visibility from I-25 and the frontage road, Waldo Canyon Road, and the rural population to the south?

In their 2008 application, the crusher was to be located “behind the finished stockpiled materials, in order to minimize visibility...." Stock piles by nature are in a state of flux as they are first added to and then loaded onto trucks and transported from the site. Both the pit and the stockpiles would be themselves visible components from the roadways and both would be visible dust sources in the panorama.

There is an unconvincing attempt to spin the visibility issue by emphasizing the "distance from I-25 and CR57" as minimizing the visibility from the roadways, but the distances from these roads are modest, and sight lines are generally unimpeded. Visibility always implies a viewing angle, not merely distance, and depends on the specific topography between the viewpoint and the mine

[14] See http://www.raintreecounty.com/Blodgett.html#anchor923126.

or equipment. There are standard methods, developed by the US Park Service and others and widely used both as manual and electronic processes. It is clear that this standard type of analysis was ignored in preparing the application.

However, outside analysis shows that even the surface of the mine site would be clearly visible from sections of the historic Camino Real de Tierra Adentro (Appendix, Figure 2.) The impact to views from important corridors, such as I-25, the Turquoise Trail National Scenic Byway and Waldo Canyon Road, has not been evaluated by this kind of robust, professional analysis.

Considering the importance of this area to New Mexicans, both as entrance to Santa Fe and via CR57 to the Park lands, the views from all directions should have been assessed along with the visual impacts of dust and the impacts to the night sky.

Issues of Trust

False Claims in Previous Applications

We wish to point out a matter of questionable trust. There are several claims, in both the prior and current applications, that are so questionable and so unsupported that they call into question whether these applications were submitted in good faith. Trust is important to be assured that representations of important plans will be followed-through and commitments will be honored (e.g., investing to keep the dust under control).

The application claims that the basaltic material is needed because the "quality of the aggregate pits in the Santa Fe area generally does not meet the requirements for these types [roads, bridges, etc.] of construction projects." Yet no evidence has been submitted to support that claim. In fact, the application states that the specific gravity of the basalt in question is over 10% lower than a the standard range for basalt.

In 2008, Rockology similarly proclaimed a need "to provide for railroad ballast...for Railrunner...and for subsequent removal of similar material." However, in March of 2008 we learned from "County spokesman Stephen Ulibarri . . . that county staff has no evidence that the materials mined on the mesa would be used in the train project."[15] Later it was revealed that the materials claimed by Rockology as needed for the Railrunner had already been acquired by NMDOT from another source, at Pena Blanca. Their claim of need for their material was simply untrue. The claim of "need" for basaltic material implies that it is *absent* in the Santa Fe area. But the applicant omits mention of the on-going basalt operation at Caja del Rio in this instance, only to later reference Delhur when touting the experience of their blasting contractor.

The substantial source of basalt at Caja del Rio clearly demonstrates that a need for additional extraction materials, local or otherwise, is not established. Further, their omission of this significant competitor must call into question the completeness of any other assertions made by the applicants.

[15] New Mexican, P. Haywood, 3/23/08

The omission of Delhur Industries is reminiscent of a similar omission in their 2008 application. Espanola Mercantile, a major competitor, was curiously omitted from both the "Vicinity Map" and from the Cover Sheet images in that application. Rockology's representation of Espanola Mercantile on the Cover Sheet, was mis-located and displayed as a relatively small square on flat land away from the Cerrillos Hills where EM's Waldo Mine is located.

In each of these cases, the applicant's documentation is misleading. Is other information missing or misstated?

Missing, Misleading and Erroneous Information in Current Application

Crushers

The current application states that the " air quality plan will comply with the requirements for the permit issued by the New Mexico Environment Dept. for the crusher that was previously located at another location."

However,. the permit noted is for one crusher, whereas the project lists several others: 2 primary jaw crushers with feeders, a vertical shaft impact crusher, and 2 cone crushers.

Hauling Considerations

Applicants claim the proposed mine would shorten the distances in hauling as compared with currently available sources of aggregate. Their rationale identifies a limited number of quarries in operation with simple unsubstantiated claims of aggregate scarcity. Yet their proposal would demand considerable water truck traffic even if the amount of water needed is underestimated.

If saving haul truck distances is to be a consideration in the siting of this proposed mining zone, surely the *water* haul truck miles, daily, yearly, must be added in to any analysis. Aggregate vs. water hauling distances must be honestly counterbalanced in this comparative location assessment.

Operation Plan / Time Frame

Another unsubstantiated claim is the "25 years" time frame of the mining operation on this 50 acre tract. In 2008 Rockology had planned to strip the same 50 acres of basalt in 12 years, not 25. For a further note of comparison, in 2002 J.R. Hale proposed to strip 500 acres in 50 years, equating to 50 acres in 10 years. In Buildology's application of 2005, the years thought required for stripping 108 acres, was estimated as "15 - 20".

Once again, the applicant's math does not seem to add up. Under Economic Benefits, sales are estimated at 250,000 tons. Under Volumetric Calculations, we learn that 886,000 cubic yards of finished material will be produced for sale over 25 years of operation. According to the Caja del Rio quarry manager, a cubic yard of basalt gravel weighs 1.4 tons.

886,000 cubic yards x 1.4 tons per cubic yard = 1,240,200 tons of material available for sale.

1,240,200 tons of material for sale ÷ 250,000 tons sold per year = 4.96 years of available material, NOT 25 years. If the applicants do, in fact, plan to be in operation for 25 years, the acreage under excavation would need to be five time larger than currently requested.

Further, the application states that "a total of 3.36 million cubic yards of materials will be excavated over a 25 year time frame." Yet the "estimated amount of material to be processed through the crusher is 1.26 million cubic yards." They fail to account for more than 2 million cubic yards of excavated material which, if piled with 45 degree slopes, would be a whopping 132 ft high mountain of rock somewhere.

Lastly, they estimate that 1.26 million cubic yards of material will be processed through the crusher, yet only 886,000 cubic yards of material will be available for sale. Since processed basalt such as gravel includes air pockets, it is less dense than the original material and should result in more volume (cubic yards), not less. But if 1.26 million cubic yards goes in and only 886,000 cubic yards comes out, that means 374,000 cubic yards of material are unaccounted for. The most reasonable (if environmentally disturbing) assumption is that this is the amount of dust produced by the operation – dust for which insufficient water has been budgeted to control, and dust that exposes the citizens of Santa Fe County to the carcinogenic hazards previously documented.

What we can deduce is that with modern mining techniques, the acreage has the potential to expand very quickly and the applicant is downplaying a foot-in-the-door approach. Experience would suggest that if a mine of any size were permitted, future expansions could be expected, along with the precedent-setting use of County water on the adjacent land

Traffic Impacts

Adding additional industrial traffic onto Waldo Canyon Rd (CR57) from both gravel haul trucks and water tankers to that of the Waldo Quarry traffic is not in the public welfare and would further impact the intersection and merging lanes onto I-25.

Further, there is no mention of the number of tanker truck trips that hauled water would add to the site traffic.

Conclusion

We ask our Commissioners to recognize that a mining zone on La Bajada Mesa – an area known and loved by thousands of residents and visitors and serving as the southern gateway to the City of Santa Fe, the Galisteo Basin and the Cerrillos park lands—is contrary to **Article XI, Section 1.2** and would be an irreversible mistake. Moreover, this application is completely inconsistent with the concepts and details built into the new Sustainable Growth Management Plan, a comprehensive plan worked on extensively over the years by County Staff and citizens' groups. While this application attempts to get in under the wire before the new SLDC is fully adopted, the Commissioners certainly can be guided by new SGMP provisions in those aspects of the application that are not included in specific language of the old code.

The Commissioners have the ability and the obligation to deny proposals that are not in the best interests of the County and its citizens. This proposal is clearly deficient in many ways. Please vote to deny this application. It cannot be modified into compliance, and is not in the public interest.

Sincerely,

Ross Lockridge, Ann Murray, Kim Sorvig, Don Van Doren and Diane Senior for the RCA

Cc.

Encl.

Appendix:

2005 Draft County Staff Memorandum Recommending Denial of Mining Application

[on the following seven pages]

MEMORANDUM

DATE: August 18, 2005

TO: County Development Review Committee

FROM: Dominic T. Gonzales, Development Review Specialist II
Lawrence Gonzales

VIA: Vicki Lucero, Zoning Review Division Director
Charlie D. Gonzales, Permits and Inspections Division Director
Dolores I. Vigil, Land Use Administrator

FILE REF: CDRC CASE # MIS 05-5230 Buena Vista Mine

ISSUE:

Buildology, Inc. (Steve Hooper), applicant, James Siebert, agent, requests approval for the creation of a mine zone to allow the extraction of aggregates for construction materials, to be used in ready-mix concrete, asphalt, landscaping, and base course, on 108.5 acres, as set forth in Article XI of the Land Development Code.

The property is located east of Interstate 25 & south of Waldo Canyon, North of the Village of Cerrillos, within Section 22,26,27, Township 15North, Range 7 East, (Commission District 3).

SUMMARY:

The applicant is requesting approval to create a mine zone for the extraction of aggregates for construction materials on 108.5-acres within a 1,060-acre tract. Acres?

The applicant estimates that it will take approximately 15 to 20 years to complete the mining process, which will be conducted in three phases. The mining for each cell phase will occur over an approximate five-year period, with each cell phase to be reclaimed and revegetated after the mining of the cell phase is complete.

The applicant states that during the warmer months (April to September) the site will operate from 7:00am to 5:00pm on weekdays, with Saturday operations to be from 7:00am to 12:00pm.

Air Quality Permit?

From October till March the hours of operation will be from 9:00am to 4:00pm, with no weekend hours anticipated.

The applicant states that no permanent structures will be constructed on-site, and that the project will utilize temporary and portable structures, to include a tool trailer, administrative trailer, screening and crushing equipment and associated belt conveyor systems, water and fuel storage tanks, and a weigh scale. The structures will be relocated at next phase once the previous phase has been completed.

Phasing
The proposed mine is designed for a 15-year life expectancy to be completed in three 34.5 to 36.9-acre phases.

Phase I of the mining operations will start on a 34.5-acre cell located at the west of the property. Phase II, a 36.9-acre cell, with be located between Phase I and III, and Phase III will be on a 36.8-acre cell located at the east of the property.

The processing and handling of materials for each of the three phases will be done in three sub-phases; Pit Operations, Plant Processing and Product Loading a Distribution:

Pit Operations
Pit operations will consist of the preparation of each cell with the removal of natural soils (overburden). A track dozer will be used to expose the basaltic rock formations. The overburden will be stock piled outside the excavation cell and will be used as topsoil in the reclamation of the site following the completion of each phase. Rock drilling will follow the removal of the overburden, drilled in accordance with the written and approved blasting plan. The applicant states that blast operations will be conducted in compliance with Santa Fe County and Federal ATF regulations, and blasting will only take place during daytime hours. Blasting materials will not be stored on site.

Plant Processing
A front-end loader will feed the blasted material into a feed hopper, followed by crushing, screening, and stockpiling of finished material. The applicant states that the crusher will be located in the excavated cell, with limited visibility of public view. Unusable material will be returned to the excavation area for use in reclamation.

Product Loading and Distribution
A front-end loader will place the finished aggregate products into the haul trucks. All trucks will be required to be compliant with New Mexico Department of Transportation and New Mexico Public Regulation Commission requirements. The applicant states that all loads will be weighed to ensure that the trucks are within legal weight limits, and properly covered to secure the load.

Existing Development
The property is currently vacant. The co-applicants own the vacant properties surrounding the proposed project.

Public Concerns/Issues
The Land Use Department has received numerous telephone calls in opposition of the proposed project. No letters of support have been received. (Exhibit "I").

Access
Access to the property is from County Road 57 (Waldo Canyon Road). The site will have a single driveway, located to the south of the property.

The proposed haul route for aggregate hauling from the site will be northward for approximately one mile along County Road 57 to the I-25/Waldo Interchange. County Road 57 is currently paved from the I-25/Waldo Interchange to the driveway turn off this project will be utilizing.

The Public Works Department has reviewed this application and recommends that a 40' paved apron at the intersection of the proposed driveway and CR57 be constructed. (Refer to "Exhibit-B " reviewing agency responses)

Water
The applicant proposes to utilize non-potable water from the City of Santa Fe Water Treatment Plant for dust control purposes. Water will be hauled by truck from City of Santa Fe Sewer Treatment Plant located at Airport Road, to the site. The applicant states that the water will be stored in a 10,000-gallon tank located onsite. The applicant also states that truck will shuttle water during off peak hours. Drinking water will be purchased in twenty-gallon containers for daily use. (Exhibit "J").

The County Hydrologist has reviewed this application, and commented that even though the applicant states that the proposed project is to utilize City effluent, no letter of commitment from the City was included with the submittal. The County Hydrologist states that for the applicant to meet the water availability requirements, the applicant must provide documentation from the City committing to supplying water to this project for the time period the expect to run this operation. Also the water budget did not reflect whether any water would be needed in the utilization of the crusher and conveyor sprays.

The Office of the State Engineer deferred its review to the County.

Liquid and Solid Waste
The applicant states that portable toilets will be brought onsite for the sanitary purposes of the employees, and a specified maintenance period will be included in the contract for service of the portable toilets.

The Environment Department is currently reviewing this application.

Common trash, generated by employees, will be collected in a solid waste container and periodically hauled off site by the applicant for disposal at the Buildology Offices located in Albuquerque. The solid waste container shall be screened on all four sides and top.

Terrain Management
The proposed project is relatively flat, with no slopes exceeding 20%. Water retention ponds are being proposed capture storm water run-off from the site, and will be located thought each phase of the project.

A Storm Water Pollution Prevention Plan, as required by the E.P.A will be prepared prior to the issuance of a building permit.

Air Quality
A permit from the New Mexico Environmental Department has been issued for a crusher that was previously located at another location. An updated permit or a Relocation permit from NMED will be required prior to the issuance of a Development Permit.

Fire Protection
The applicant states that the 10,000-gallon water tank will be available on site as fire water supply. All mobile equipment and scale house/office will be equipped with fire extinguishers.

The Fire Marshall is currently reviewing this project.

Archeological
The applicant states that prior to the issuance of a Development Permit that an archeological report will be submitted for the proposed project.

This application has been reviewed by the State Office of Cultural Affairs Historic Preservation Division (Exhibit-"B "). The Historic Preservation Office concurs that an archeological survey is needed.

The New Mexico Heritage and Preservation Alliance recently recognized Buffalo Mountain as one of New Mexico's most endangered places.

Article VI, Section 3.3 (Location of Historic or Cultural Sites, Landmarks and Archaeological Districts) lists the Cerrillos Mining District as a Historic or Cultural Site or Landmark (Exhibit "F").

Location/Performance Standards
Article XI of the Land Development Code requires that locational criteria be met for the creation of a mine zone (Exhibit E). Article XI, Section 1.2 requires the demonstration of the existence of resources, that the mining use be compatible with other uses in the area and that the area is suited for mining uses in comparison with other areas of the County.

The applicant addresses Significant Mineral Resource, Mining Use Compatibility, History of Significant Mining Activity in the Area, and Area Suitable for Mining Uses. (Refer to applicant's Report "Exhibit- "C"). The applicant states that a soils investigation of the site was conducted using an excavator to determine the type and depth of the material.

Basaltic material was found at approximately 20 feet, and the basaltic material was relatively constant for the entire depth.

During the construction of I-25, a mine construction site was located directly east of the subject proposed development, which was used for the purpose of loading aggregate ballast materials to be used for the making of base course and asphalt aggregates for the interstate highway construction. A gypsum mining plant was located on Santo Domingo Pueblo property, located to the south and west of the proposed development. The aggregate ballast material was used for the bedding of the railway located to the south and west of this proposed project.

Article XI, Section 1.6 (Performance Standards) of the Land Development states "no mining use activity will be permitted if it is determined that the use will have a significant adverse affect on health, safety, morals or general welfare of the County or its residents."

Reclamation
The applicant states that reclamation will take place upon the completion of each phase of the operation. The sides of the excavation will be cut at a ratio not to exceed 3:1, which will allow for the revegetation of the disturbed sites. The stock piled overburden will be returned to the site and will be used as the base for reseeding. The applicant also states that where the terrain contours are susceptible to erosion, furrows will be created to prevent soil erosion.

REQUIRED ACTION:

The CDRC should review the attached material and consider the recommendation of staff; take action to approve, deny, approve with conditions or table for further analysis of this request.

RECOMMENDATION:

Staff's position is that this location is not compatible or suitable for mining. The cultural significance of the Los Cerrillos Mining District, and without a Archeological Report to address the potential of any significant archaeological sites, ~~and~~ Buffalo Mountain recently ~~being~~ recognized as one of New Mexico's most endangered places, demonstrates the cultural significance and importance of protecting this area.

Staff is concerned about the potential impacts of this project on adjacent lands in this area. There is a Public Open Space Park and residential developments in close proximity to the proposed mine. Also, Staff has major concerns regarding the applicant's water supply plan. Staff recommends denial on the application based on the reasons stated above.

If the application is approved, staff recommends the following conditions:

1. The applicant shall return to the CDRC and BCC for approvals of future phases, if applicable. The proposed phasing plan for Phases I, II, and III shall be complied with.

2. All water for dust control and irrigation shall be treated effluent unless the applicant amends this application for the use of a well and provides proof of water right and availibility; any such amendments shall be reviewed by the CDRC and BCC.

3. If at any time sufficient treated effluent is not available and an amendment for the use of a well has not been approved, all mining shall cease, If mining operations cease for a period of 6 months, the applicant shall reclaim the disturbed areas or the County file a demand on the letter of credit.

4. Compliance with applicable review comments from the following:
   a) State Engineer
   b) State Environment Department
   c) Soil & Water District
   d) State Department of Transportation
   e) County Hydrologist
   f) Zoning Review Director
   g) County Fire Marshal
   h) County Public Works
   i) State Historic Preservation Office
   j) County Technical Review Division

5. The applicant shall submit for an updated Air Quality permit, and shall be in compliance with the condition of the Air Quality Permit, Relocation Permit and sitting permit.

6. The applicant shall submit a cost estimate and financial surety for completion of required improvements as approved by staff.

7. Compliance with minimum standards for outside lighting, and submit cut sheet prior to the issuance of a Development Permit. All outside lighting shall be shielded.

8. The applicant shall address all staff redlines comments, original redlines shall be returned.

9. All trucks shall have tarps completely covering and securing their loads as they leave the loading area.

10. The Final Plan will be recorded with the County Clerk's Office.

11. The applicant shall submit a financial guarantee for all regarding, revegetation and cost of treated effluent prior to mining of each phase. The financial guarantee will be held until successful revegetation has been accepted by staff, for a minimum of one year, after reseeding.

12. Development Permits for mining and reclamation will be required for each phase. A final closure inspection will be required by the Permits and Inspections Director, upon completion of reclamation of each phase.

13. Each phasing area shall be defined by a licensed Land Surveyor, highly visible (PVC pipe) markers will be set to define the permitted areas. All future mining and operations shall be confined to the working areas permitted in this application.

14. Buildology/ Buena Vista shall grant enforcement/inspection access to the County thought the duration of this operation.

15. A pre-construction conference shall be held with County Staff prior to any field activity and prior to issuance of a development permit.

16. Buildology/ Buena Vista will keep the access road and mine operations area watered to control dust as needed.

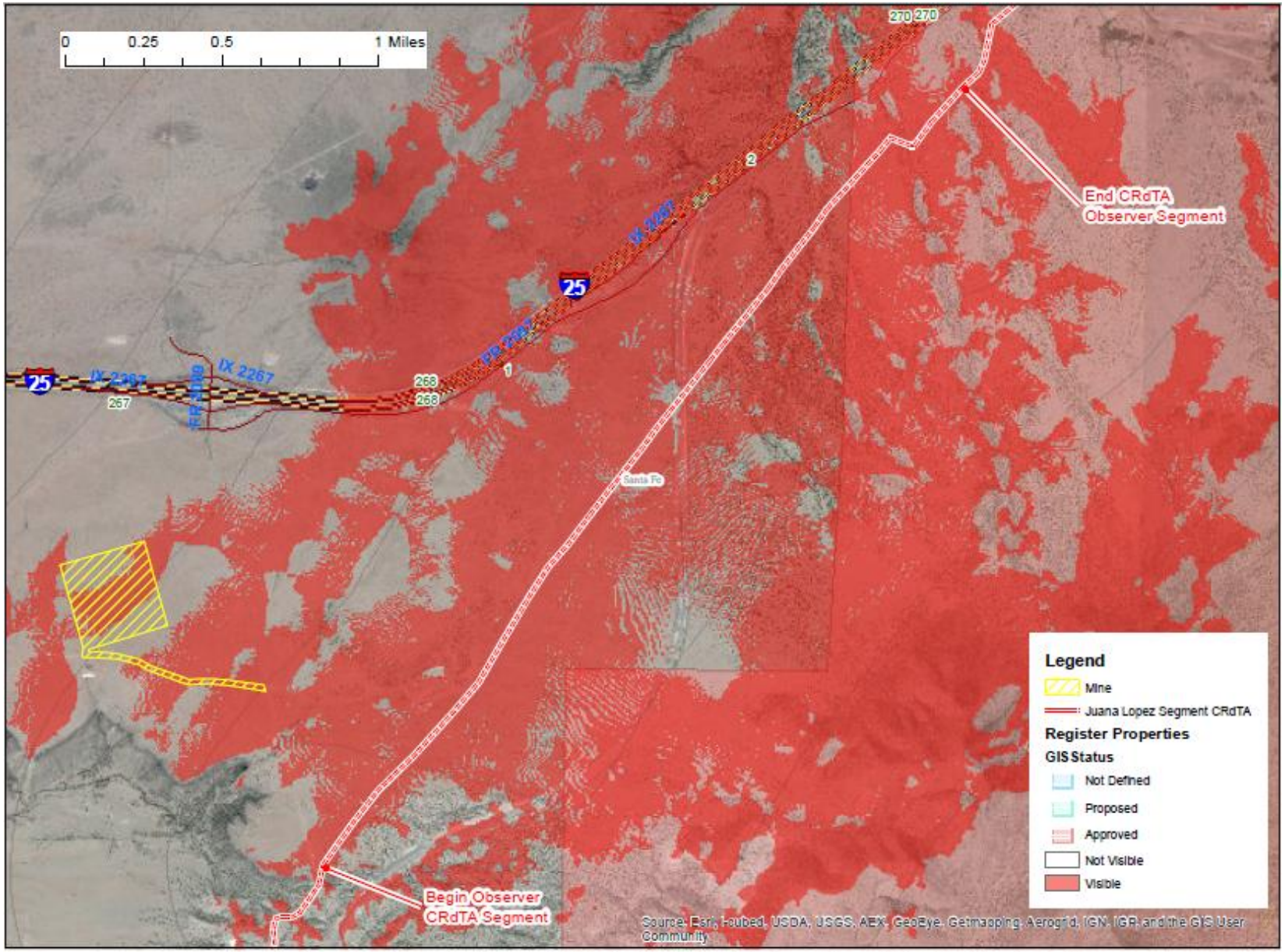
ATTACHMENTS:

Exhibit "A" – Applicant's Letter of Request
Exhibit "B" – Reviewing Agencies Responses
Exhibit "C" - Applicant's Report
Exhibit "D" - Applicant's Plans
Exhibit "E" – Article XI of the Land Development Code
Exhibit "F" – Article VI, Section 3.3 of the Land Development Code
Exhibit "G" –Article VII, Section 3.4.1.c.1.1 and Section 3.4.1.c.1.c of the Code
Exhibit "I" – Public Concerns/Issues
Exhibit "J" - Vicinity Map

Figure 1: Wildlands Network map of Priority Wildlife Corridors

Figure 2: Viewshed Analysis from the Juana Lopez section of the Camino Real de Tierra Adentro

Using a digital elevation model generated from the National Elevation Dataset and a vertical offset of 1.5 meters to represent a hiker a bit over five feet tall



Viewshed from Juana Lopez Road Segment of Camiln Realds Tierra Adentro and Buena Vista & Rockology Mining Site

Figure 3: Habitat Value of the Proposed Mine Site Area

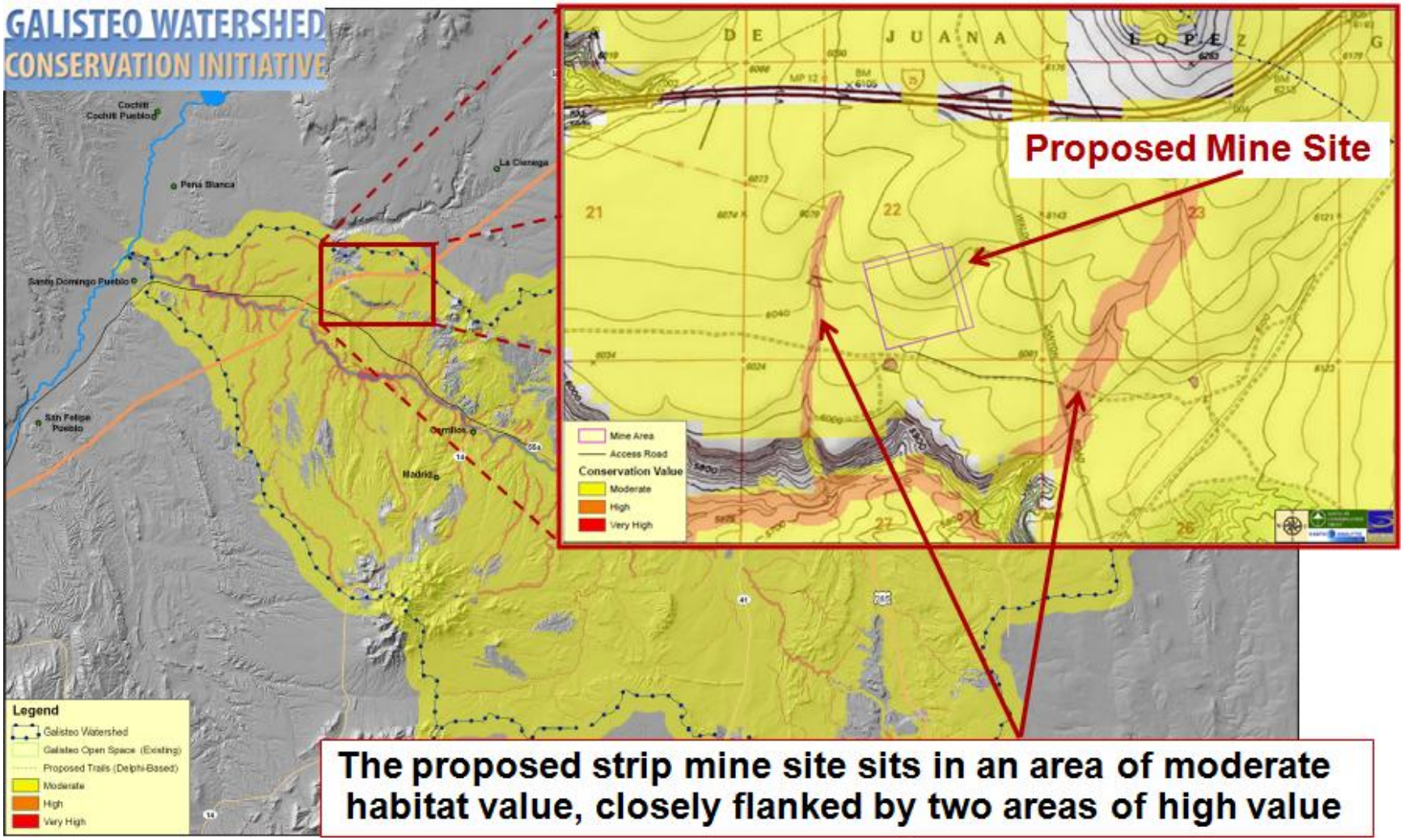


Figure 4: Potential Cougar Corridor Map (Share with Wildlife Final Report)

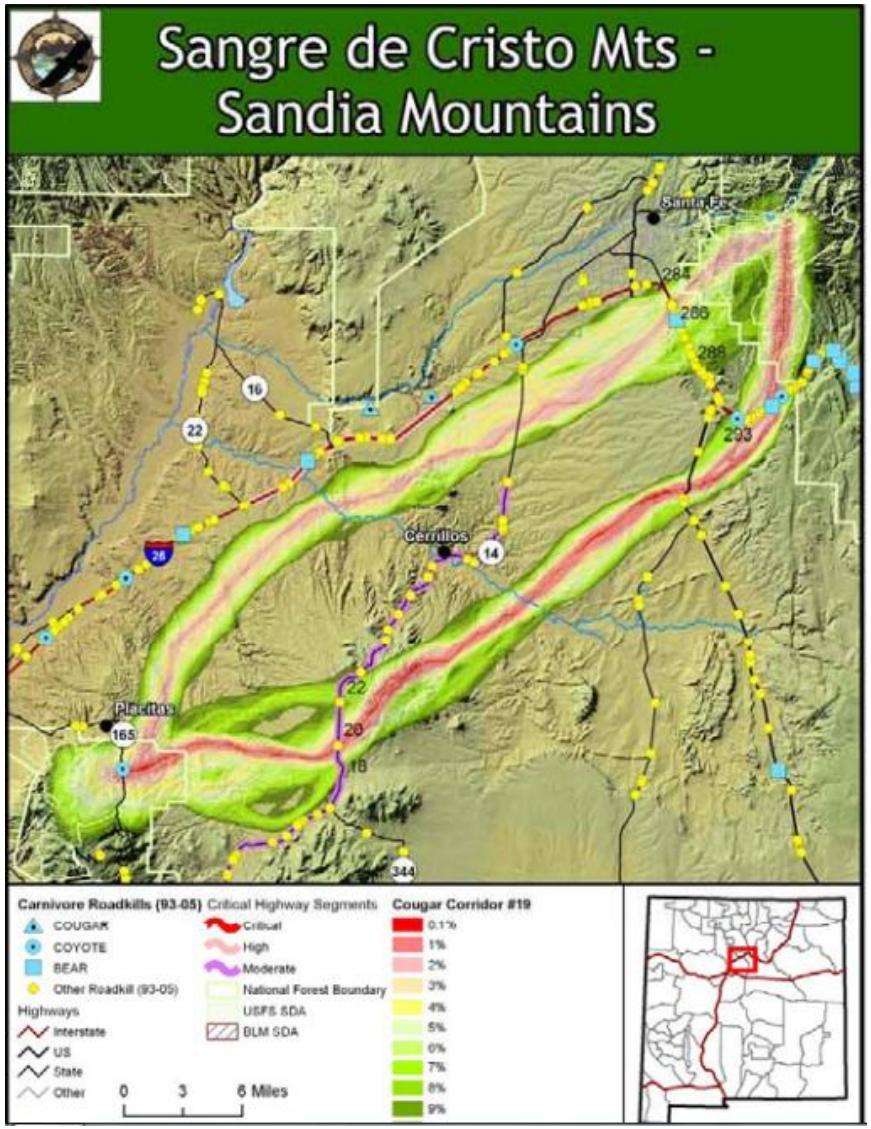


Figure 5: Geologic Map of the Proposed Mine Site Area, showing the escarpment of La Bajada Mesa as the southern-most tip of the Cerros del Rio volcanic field (Tvcr, pink)

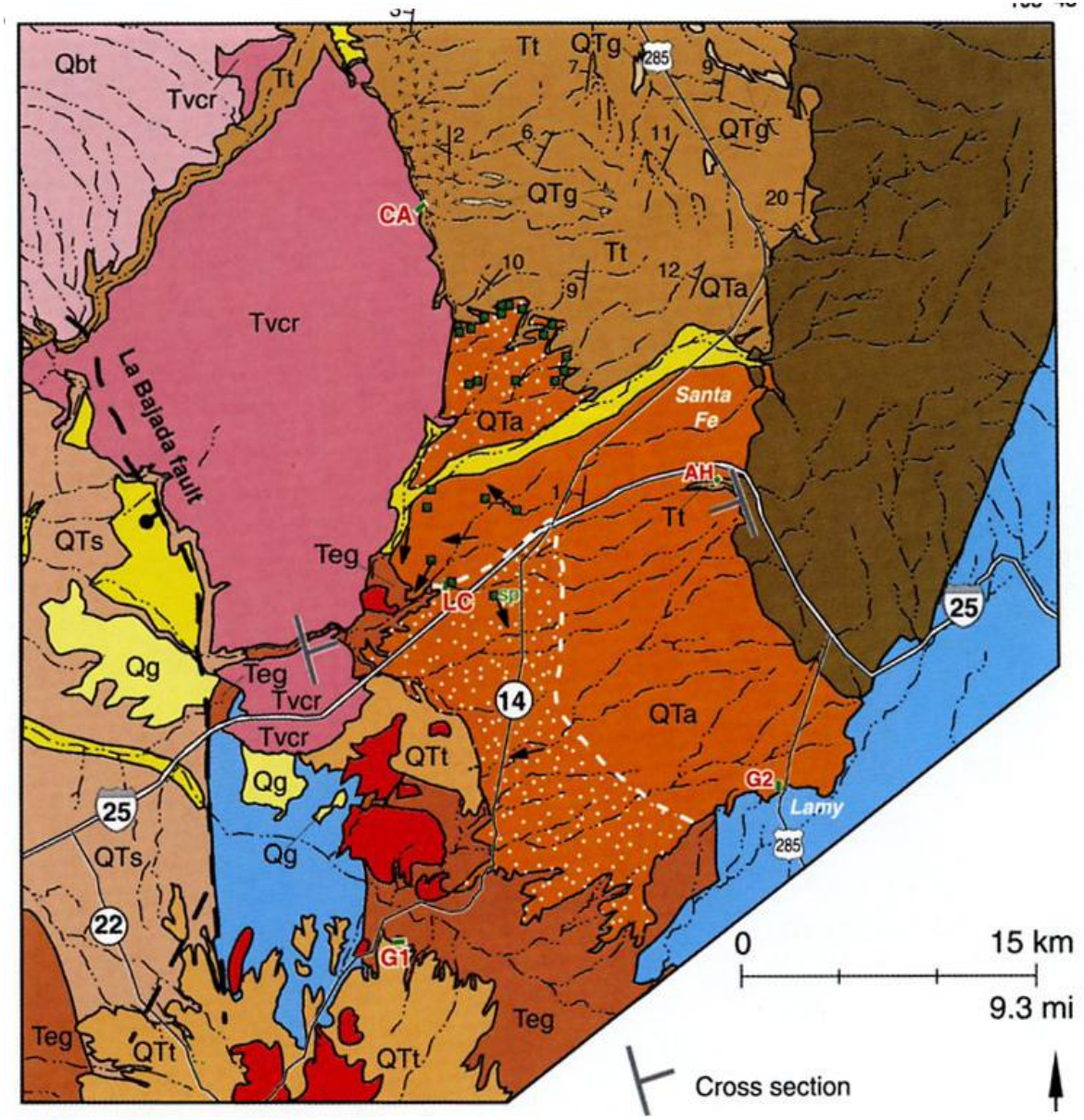


Figure 6: Archaeological Survey Report, 2007

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS No:108047	2a. Lead Agency: Santa Fe Co.	2b. Other Permitting Agency: HPD	3. Lead Report No.:

4. Title of Report: ***A Cultural Resources Inventory in Support of the Proposed Rockolgy Materials Extraction Pit, Santa Fe County, New Mexico***

Author(s) Stephen Townsend

5. Type of Report
X Negative ☐ Positive

6. Investigation Type
☐ Research Design X Survey/Inventory ☐ Test Excavation ☐ Excavation ☐ Collections/Non-Field Study
☐ Overview/Lit Review ☐ Monitoring ☐ Ethnographic study ☐ Site specific visit ☐ Other

7. Description of Undertaking (what does the project entail?): A 50-acre (20.24-hectare) parcel of private land is proposed for development as a materials extraction pit. This material will be used in construction of the Railrunner commuter line between Albuquerque and Santa Fe. A 3095 x 100' access road was also inventoried. This report is written to seek Santa Fe County clearance. However the pit will be used for the NMDOT-sponsored construction project.

8. Dates of Investigation: (from: 27-Oct to: 03-Nov-2007)

9. Report Date: 03-Nov-2007

10. Performing Consultant: Townsend Archaeological Consultants
Principal Investigator: Stephen Townsend
Field Supervisor: Stephen Townsend
Field Personnel Names: Stephen Townsend, Christopher Cudia

11. Performing Agency/Consultant Report No.: 2007-44

12. Applicable Cultural Resource Permit No.: NM-07-088-S

13. Client/Customer (project proponent): James W. Siebert & Assoc.
Contact: James W. Siebert
Address: 915 Mercer Street, Santa Fe, NM 87501
Phone: (505) 983-5588

14. Client/Customer Project No.: AC-GRIP-(FTA-NH)-025-4(132)266)

15. Land Ownership Status ***(Must be indicated on project map):***

Land Owner	Acres Surveyed	Acres in APE
Private	57.11	57.11
TOTALS	57.11	57.11

16 Records Search(es):

Date(s) of ARMS File Review Oct. 21, 2007	Name of Reviewer(s) S. Townsend	
Date(s) of NR/SR File Review Oct. 21, 2007	Name of Reviewer(s) S. Townsend	
Date(s) of Other Agency File Review	Name of Reviewer(s)	Agency

17. Survey Data:

a. Source Graphics X NAD 27 ☐ NAD 83
X USGS 7.5' (1:24,000) topo map ☐ Other topo map, Scale:
X GPS Unit Accuracy ☐<1.0m X 1-10m ☐ 10-100m ☐>100m

b. USGS 7.5' Topographic Map Name / USGS Quad Code

Tetilla Peak	35106-E2

c. County(ies): Santa Fe d. Nearest City or Town: La Cienega e. Legal Description:

Township	Range	Section	¼ ¼ ¼
15N	7E	22	SW ¼, SE ¼; E ½, SE ¼, SW ¼; S ½, NW ¼, SE ¼; SE ¼, NE ¼, SW ¼; SW1/4, SW ¼, SE ¼.
15N	7E	26	NW ¼, NW ¼, NW ¼.
15N	7E	27	NE ¼, NW ¼, NE ¼; N ½, NE ¼, NE ¼.

Projected legal description? Yes [ ], No [X] Unplatted [ ]

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.): The ARMS map server indicates the parcel is within the Mesita de Juana Lopez Grant. However GLO records for section 22 indicate it as a non-fractionalized section located with the La Majada Grant(http://www.glorecords.blm.gov/). The parcel corners as recorded with GPS are SW: 13 E 392408, N 3929974, NW: 13 E 392273, N 3930384, NE: 13 E 392701, N 3930513, SE: 13 E 392829, N 3930110 (CONUS/NAD 27).

18. Survey Field Methods:
Intensity: X 100% coverage ☐ <100% coverage

Survey Interval (m): 15 Crew Size: 2 Fieldwork Dates: 27-Oct-2007

Survey Person Hours: 8 Recording Person Hours: 0 Total Hours: 8

Additional Narrative: Two archaeologists spent 4 hours each walking parallel, compass-controlled transects across the project parcel. The parcel corners were pre-determined by using Terrainpro software. These readings constituted the corners on the ground. Garmin GPS 72 and GPS 76 Map global positioning systems were utilized in conjunction with 7.5' quad maps in the field. All photography was done with a Canon Powershot IE S2 digital camera. The access road was covered with two, parallel transects spaced at 15-meter intervals.

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): The project parcel is located between 6015-6092' amsl. La Bajada Mesa is characterized by exposures of the Caja, Puye and Ancha formations of the Quaternary Santa Fe group. The Tertiary Galisteo formation intrudes through the predominantly Quaternary basalt exposures at locations along, and most spectacularly at the edge of La Bajada escarpment. Soils within the project area are classified as Calabasas loam over the majority of the project area, in association with Tsinat gravelly loam and Churipa very cobbly sandy loam (websoilsurvey.nrcs.usda.gov/). The last mentioned material is exposed on a southeast-facing slope of a shallow, stabilized arroyo. At that location basalt cobbles and gravels protrude through the surface soils. Calabasas loam is typically found at the summits of interfluves on plateaus. Calabasas loam has a genesis as aeolian material derived from volcanic ash and pumice, and alluvium derived loess and basalt (ibid). Tsinat gravelly loam occurs in similar settings and has a similar pedogenesis to Calabasas loam. Churipa very cobbly, sandy loam is alluvium derived from basalt, volcanic ash, and scoria (cinders). Soils of these associations suggest a location with a mean annual precipitation rate of 10-12 inches, a mean annual air temperature of 50-52 degrees F and 150-170 frost-free days annually (ibid). The project area is grassland, and is largely lacking any kind of overstory vegetation. Due to past grazing the project area has a large amount of snakeweed and cane cholla growing in it. Also present is saltbush, suggesting other surface disturbances have taken place. Also present in the project area is some winterfat, rabbitbrush, prickly pear, tumblegrass, bluestem and Indian ricegrass. The project area is essentially a grassland environment (Dick-Peddie 1993).

a. Percent Ground Visibility: 95% b. Condition of Survey Area: The project area appears to have been fairly heavily grazed in the past. The two drainage swales on the property are stabilized and are not eroding. However the lack of significant vegetative cover has led to aeolian deflation, and in some places this is severe enough that soils are eroding away, revealing cobbly basalt intrusions through the thin surface soils. The access road has seen moderate wear. In general it is in good shape, and, while unpaved is not eroding out in any of the locations examined.

21. CULTURAL RESOURCE FINDINGS ☐ **Yes, See Page 3** **X No, Discuss Why:** Actually we were surprised to find no cultural resources in this area. There is no immediately available water, and the location is exposed to scouring winds blowing across La Bajada Mesa.

22. Required Attachments (check all appropriate boxes):
- **X USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn**
- **X Copy of NMCRIS Mapserver Map Check**
- ☐ **LA Site Forms - new sites (*with sketch map & topographic map*)**
- ☐ **LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum*)**
- ☐ **Historic Cultural Property Inventory Forms**
- ☐ **List and Description of isolates, if applicable**
- ☐ **List and Description of Collections, if applicable**

23. Other Attachments:
- ☐ **Photographs and Log**
- ☐ **Other Attachments**

***(Describe)*:**

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist: Stephen Townsend

Signature Stephen Townsend **Date** 11/3/07 **Title (if not PI):**

25. Reviewing Agency:
Reviewer's Name/Date

Accepted ( ) Rejected ( )

Tribal Consultation (if applicable): ☐ **Yes** ☐ **No**

26. SHPO
Reviewer's Name/Date:

HPD Log #:
SHPO File Location:
Date sent to ARMS:

Short Contextual Discussion

As mentioned above there is a conflict over placement of the parcel within the Mesita de Juana Lopez or La Majada land grants. According to the GLO records (http://www.glorecords.blm.gov/) six individuals, Jacinto Pelaez, Maria Pelaez, Benigno Ortiz y Sandoval, Luciano Ortiz, Jose Ignacio Dimas, and Marcelino Baca are jointly indicated as the landowners of the section 22 (see attached). A total of 54,404.1 acres were included within the La Majada Grant, and that grant was approved by the Court of Private Land Claims March 25, 1896. As of October 26, 1908 the US government assigned private ownership to the above-named individuals. By July 1, 1985 the subject parcel was on the auction block, having passed into the hands of Buena Vista Associates, Ltd., who in turn pledged it as collateral on other obligations that were not met. It appears that the interval of 77-years resulted in the grant being cut up into individual parcels, and likely subject to a series of real estate transactions. While not a homestead is possible that portions of La Majada grant, like many properties in New Mexico, were lost to local and federal government during the Depression, when many New Mexico

Figure 7: *No Country for Old Men* promo, looking south across La Bajada Mesa to the Ortiz Mountains

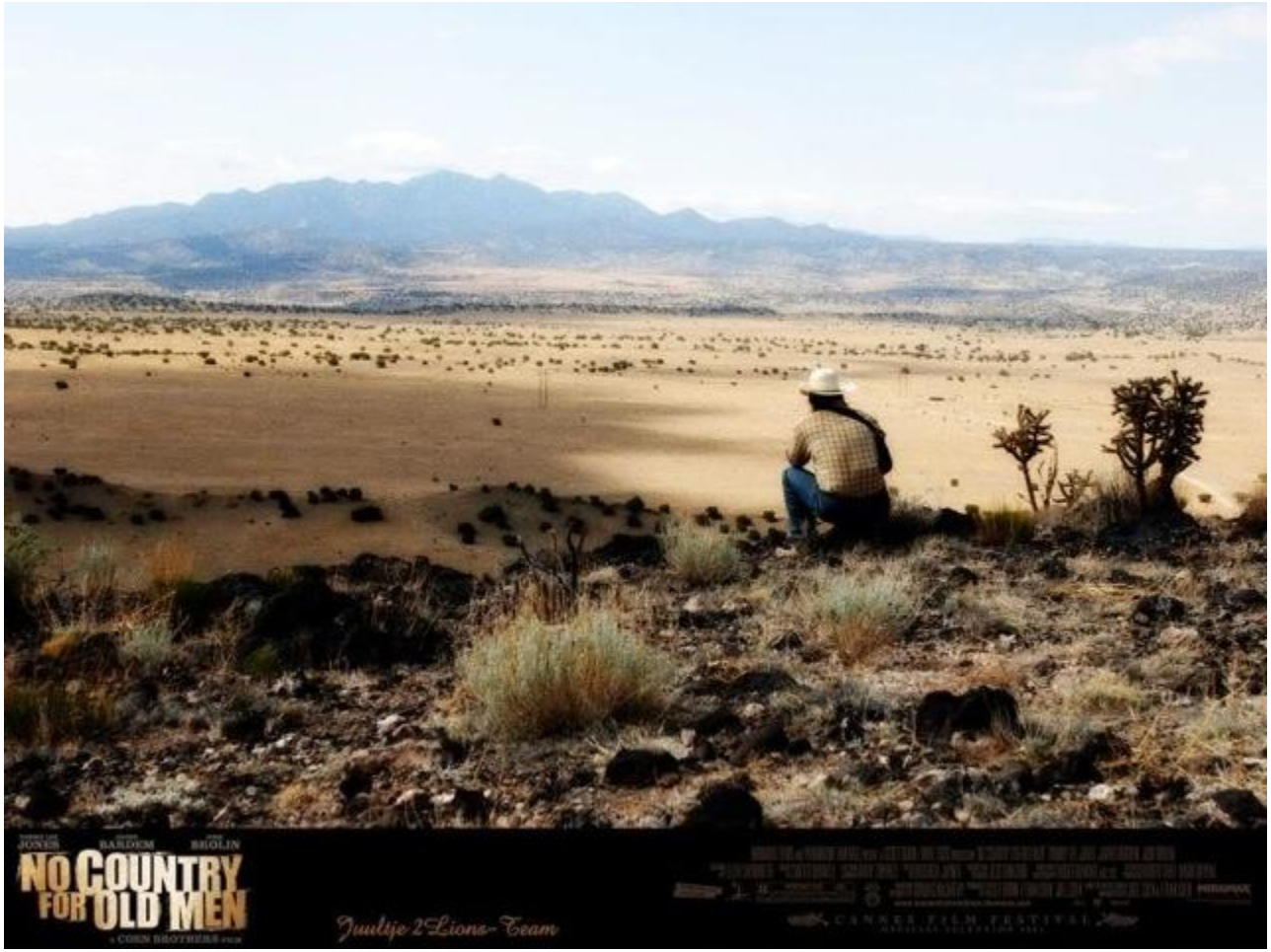


Figure 8: Page 1 of the CBRE marketing package describing the La Bajada Property as "5,200 +/- acres of rich aggregate deposits for possible mining."

Property Overview

CB Richard Ellis Land Services Group has been engaged as the exclusive listing representative for the sale of La Bajada. The property consists of approximately 5,421+/- acres of vacant land of which includes 5,200 +/- acres of rich aggregate deposits for possible mining. (See Buildolgy correspondence).

La Bajada is the largest privately owned parcel of land located on Interstate 25 between Albuquerque and Santa Fe in New Mexico. It features over 10,000 feet of Interstate 25 frontage with two major north and south interchanges into the site. Exit 264 (State Highway 16) located at the northwest corner of the property connects to the Cochiti Indian Reservation and Santo Domingo Pueblo. Exit 267 (County Road 57) is at the northeast corner of the La Bajada property and connects Highway 14 to the Madrid/Cerrillos Mountains. La Bajada is approximately 35 minutes from the Albuquerque International Sunport and 15 minutes from Santa Fe Plaza.

This exceptional property has tremendous development potential, both in terms of a residential master plan and as an aggregate resource. La Bajada is uniquely situated between Albuquerque, New Mexico's largest metro area with a population of over 850,000, and the exclusive Santa Fe market. With an elevation of over 6,100 feet, La Bajada's terrain is rich and has varied scenic views from within the heart of the property, including views of Santa Fe National Forest, Cerrillos Mountains, Jemez Mountains, Sangre de Cristo Mountains, Sandia Mountains and the Ortiz Mountains.

The general area is recognized for its mining and railroad history. Existing mines within the area include Rosario and older mining towns of Waldo, Cerrillos and Madrid all adding to the ambiance of the area. Even today, the main rail line to northern New Mexico and Colorado runs through the heart of the land with plans to have the new Rail Runner spur come directly off the main line within the site. The light rail commuter train is due to be in service in late 2008.

INVESTMENT SUMMARY

Price: $65,052,000 ($12,000/acre)
Site Area: Approx. 5,421+/- Acres.
Property Description: The improvements consist of existing cell towers which are not part of offering, existing main line rail, and 5,200 +/- Acres of Aggregate
Legal Description: Tract A, B, & C La Bajada