

# TESORO DEL ALMA Underground Mining Project

Sierra County, New Mexico

# **Plan Of Operations**

# Submitted to the Bureau of Land Management Las Cruces District Office

1800 Marquess St. Las Cruces, NM 22005

# Tesoro Del Alma, Inc.

6077 Coffee Rd. Ste. 4 PMB 196 Bakersfield, CA 93308-9417 661-600-4045

March 9, 2011

Prepared by: Duran Bokich Enterprises, LLC PO Box 1474, Elephant Butte, New Mexico 87935 575-740-2840 jbokich@dbe-usa.com

### Introduction

This Plan of Operations is submitted to the BLM (US Department of the Interior, Bureau of Land Management), Las Cruces District Office for the Tesoro Del Alma Project, a proposed underground mining operation to further develop and expand existing underground operations conducted by another operator in the 1970's.

The proposed Tesoro Del Alma Underground Mining Project is located on the west flank of the Caballo Mountains, about three (3) miles east of Caballo Reservoir in Sierra County, New Mexico. The project is located in T16S, R4W, Sections 3 and 4 NMPM, at Latitude N32<sup>o</sup> 56' 36", Longitude W107<sup>o</sup> 14' 56". The area is a semi-arid, high Chihuahuan Desert environment, with winter high temperatures averaging in the high 50's to low 60's F, and lows in the mid-20's F. Average annual precipitation is about 10 inches, most of which generally falls during the summer monsoon period ranging from mid-June to the end of September.

The project is owned by Tesoro Del Alma, Inc. (Tesoro) of Bakersfield, California, and is a project to reenter the existing mine shaft that was constructed in the 1970's, known as the Droltre Hole, which was developed and worked by a previous operator.

The Tesoro Del Alma Project will be a low tech mining operation utilizing existing surface facilities, virtually none other than a cleared and somewhat leveled area around the shaft, hand and hand operated power tools in underground operations and mobile equipment on the surface. There are no plans for any surface facilities, stockpiles or other surface disturbance other than some minor earthwork to improve the access road into the site for a short distance and possibly some additional leveling in the area around the shaft and work to improve surface water diversion (run-on), and overall erosion and sediment control.

This Plan of Operations is being submitted consistent with the requirements of 43 CFR 3809. On February 15, 2011, an application for a Minimal Impact New Mining Operation was submitted to the New Department of Energy, Minerals and Natural Resources Department (EMNRD). That application has been determined to be administratively complete by EMNRD, and they have assigned the Permit Application Number of SI033MN to the Tesoro Del Alma Project. The application is now being distributed to other agencies for review and comment. A copy of Permit Application Number SI033MN is included as Appendix C of this Plan of Operations.

# **Operator Information (3809.401 (b)(1))**

Tesoro Del Alma, Inc.

Contact: Nick Fleming, CEO and President

6077 Coffee Rd., Suite 4 PMB 196 Bakersfield, California 93308-9417

Ph: 661-600-4045

Email: <a href="mailto:nfleming@tesoro-del-alma.com">nfleming@tesoro-del-alma.com</a></a>
Federal Taxpayer ID No.: 74-2673942

BLM Mineral Claim Serial Numbers for the Tesoro Del Alma Project are:

Load Claim: TDA6, NMMC 167937, located in Sections 3 & 4, T16S, R4W, NMPM,

Tunnel Site Claim: TESORO 1, BLM Serial Number NMMC 189169

# **Description of Operations (3809.401 (b)(2)**

Maps showing the location of the proposed operations, as well as figures showing existing disturbance, pre and post operations topography, designs and cross sections are included in Appendix A.

Mining will consist initially of removing mined material that was left in mine workings developed in a Pre-Act ("Pre-Act" refers to before promulgation of the New Mexico Mining Act of 1993) shaft known as the Droltre Hole, which was developed and worked sometime in the 1970's. Existing mined material will be loaded with hand tools, shovels, picks, wheelbarrows, etc., into hoisting containers (e.g. buckets), to be hoisted to the surface in a "mancage" utilizing a mobile hoist/crane. In addition, some work may be done with drills, either electric or pneumatic, to take additional materials out of mineral veins. If determined necessary, a product named Dexpan may be employed to assist in loosening rock for mine development. Dexpan is a non-explosive, controlled demolition agent, a powder that generates up to 18,000 psi expansive strength when mixed with common water. Dexpan is used in drilled holes where explosive would have been used, and breaks rock with no explosion or sound. (see www.dexpan.com)

Power for mine lighting will be provided by portable generators located on the surface. Ventilation will be provided by portable fans or a surface compressor and ventilation tubing. Only minor earthwork will be required within the project area to allow safe access for personnel, vehicles and the mobile hoist/crane. The earthwork will consist of minor grading within the existing access road to the project area. This will consist of some minor filling and then regrading of about fifty (50) feet of Pre-Act existing roadway,

utilizing a small bulldozer (CAT D5 or D6 sized), to allow safe access. It is anticipated that this work can be done within the existing road prism; however reclamation of the road after operations may require some disturbance outside of the existing road prism in order to achieve drainage of precipitation off of the road to minimize the potential for erosion.

Additional grading will be done within existing, Pre-Act boundaries of areas that have already been disturbed, including minor work within the area immediately adjacent to the shaft. To minimize potential effects to surface waters in the area of the project, Best Management Practices (BMP's) such as a low, wide and drivable berm will be maintained on the entry to the shaft work area (east side) to divert run-on from entering the site. In addition, should it prove necessary, other BMP's such as waddles, straw bales or silt fence may be installed downgradient of any work areas to minimize potential effects from the project.

At completion of the project, when no additional existing mined material is remaining and additional underground testing determines that ore grade material is no longer available, the shaft will be permanently closed. The first step of closure and reclamation will consist of construction and in-situ ten (10) foot plug of polyurethane foam (PUF), into the shaft. First, a metal platform will be welded into the 36 inch steel pipe at 10 feet below the surface. Then a bulkhead to support the PUF will be constructed at approximately the same level in the annulus of the shaft surrounding the 36 inch pipe. approximately enough mixed PUF solution will be added to result in approximately 30 cubic yards of complete PUF, distributed inside of the pipe and in the annulus surrounding the pipe to the shaft walls. The PUF plug will be installed in lifts, with only enough PUF added to achieve a 12 to 18 inch lift at one time. This lift will be allowed to set and then the next lift will be added. At completion of the construction of the PUF plug, the area between the top of the PUF plug and the inside edge of the steel lid will be filled with concrete. When the concrete has set, the steel lid will be closed and welded in the closed position, and the entire area will be backfilled with surrounding dirt and rock to an elevation that will result in positive drainage to shed precipitation and minimize infiltration. The volume of fill required to achieve this cover and positive drainage is approximately 1,000 cubic yards, which is available from the project area from material that was excavated by previous, Pre-Act operations. This material will be placed in the depression over the sealed shaft using a bulldozer, excavator and front end loader. The fill will be graded to blend into the rock face to the north, and then tie into slopes on the west, south and east. The fill will then be lightly scarified and hand broadcast with the seed mix described in this application. A commercial fertilizer applied at the rate of 100 pounds per acre, and the area will have 2-tons per acre of weed-free straw applied and crimped or tackified in place.

In addition to the work to be done to plug and seal the shaft and reclaim the area around the shaft, Tesoro Del Alma is also committing to having the trench to the west of the shaft, which was constructed by the Sanders Brothers and left unreclaimed, backfilled and reclaimed. The trench area will be backfilled with surrounding dirt and rock that was excavated from the trench, to an elevation that will result in positive drainage to shed precipitation and minimize infiltration. The volume of fill required to backfill this trench and achieve this cover and positive drainage is approximately 7,500 cubic yards, which is available from the project area from material that was excavated by previous, Pre-Act operations. This material will be placed in the depression over the sealed shaft using a bulldozer, excavator and front end loader. The fill will be graded to blend into the rock faces to the east and north, and then tie into slopes on the west and south. The fill will then be lightly scarified and hand broadcast with the seed mix described in this Plan of Operations. A commercial fertilizer will be applied at the rate of 100 pounds per acre. In addition, a weed-free straw mulch will be applied at a rate of 2-tons per acres and secured by crimping or with a tackifying agent. At completion of these actions, the entire project area will be fenced with a three strand barbed wire fence to keep livestock from grazing the area until the revegetation is established. This fencing will be removed after three years.

Stormwater BMPs will be retained for a three year period and then removed if necessary.

Location Maps and figures depicting Pre-Act existing disturbance, Topography and Cross Sections, as well as Post-Reclamation Topography and Cross Sections are provided in Appendix B of this application.

Maps showing the location of the Project Area are provided in Appendix B. Plan views and cross sections of the Project Area as it currently exists are also proved in Appendix B. There are currently no surface mined areas within the project area other than that pre-existing from previous operators, and no additional surface mining activities are planned. No processing facilities, waste or tailings disposal areas are included in project plans, as all materials brought out of the mine will be transported off-site for processing.

Water management will be done primarily by control of surface water with diversion berms to prevent run-on into the Project Area. Stormwater BMP's (Best Management Practices) will be put in place downgradient of operations to minimize the potential for downgradient effects. The Project Area will be regraded and revegetated after operations, including the pre-existing disturbed areas, which will enhance the surface water regime of the area. No groundwater will be encountered or affected by this Project.

The rock in the Project Area, and within the potential ore zone of the project, is intrusive granite. This granite is oxidized in chemical nature with no indications of any sulfide mineralization. In any event, all ore grade rock and mine materials developed in the mine will removed and taken off-site for processing, and any non-ore rock will be left in place underground in a dry and non-reactive environment.

Quality assurance will be achieved through following good mining practice consistent with Mine Safety and Health Administration (MSHA) requirements, as well as requirements and practices of federal and state agencies that have been developed for the protection of environmental resources. There will be no surface facilities, no on-site fuel storage or storage of any other materials on the surface.

Since there will be no on-site fuel, chemical or other materials storage, the spill contingency will only address potential spills of fueling mobile equipment, generators or compressors. Volumes are small, and should a spill occur, it will be contained by berming and adsorbent materials. A Spill Kit will be maintained on one of the mine vehicles and on-site at all times during operations. Soils affected will be excavated and placed in 55-gallon drums and removed to an approved landfill for disposal. Records will be maintained of incidents of spills, estimated volumes and measures to address and dispose of materials.

Operations will be initiated with approval from all regulatory agencies being granted. Operations will be initiated by moving a mobile crane / hoist onto site and lower equipment for lighting, ventilation and underground mining operations into the existing shaft. Personnel will be lowered into the existing mine with this mobile crane / hoist in a mancage. Mining operations will commence by loading of existing mine materials into buckets or other containers and hoisted to the surface. These materials will be taken off-site for storage and then transported to the as yet undetermined processing facility. As mining underground continues and existing mine materials are removed, additional materials will be drilled, broken utilizing Dexpan if necessary, and then removed from the mine in the same manner. The length of time that these activities will continue is unknown at this time, but are expected to continue for up to five (5) years from initiation of operations.

At the completion of mining activities, the shaft will be plugged and closed as described above, and the depression where the shaft is located, as well as the pre-existing trench to the west will be backfilled, graded, seeded, mulched and fenced. These closure and reclamation operations are expected to last approximately three (3) weeks.

**Reclamation Plan (3809.401 (b)(3))** 

There are currently no plans to drill any holes for mineral exploration, so no drill hole plugging or

abandonment is applicable. Should this change in the future and drill holes be considered necessary for

mine expansion, Tesoro will submit an amendment to this Plan of Operations to the BLM at least four (4)

months in advance of those activities.

Grading and shaping of land after the completion of mining operations is discussed previously in this Plan

of Operations. In general, areas that were previously excavated by other operations will be backfilled

utilizing materials that were taken out of the excavations. The location of these excavations and

excavated materials are shown in the Plan Views and Cross Sections included in Appendix B.

Grading and shaping will be done to result in the backfilled materials blending into surrounding

topography, and being graded to provide for positive drainage. Run-on will be diverted from around

backfilled areas, and backfilled areas will be graded to mostly shed precipitation that falls onto those

areas.

Since no topsoil or growth media was salvaged by the previous operators that dug the existing

excavations, there will be no identified topsoil or growth media to replace. However, the species of plants

selected for revegetation are native to the area and are of cultivars that will enhance the potential for

revegetation of the reclaimed areas. In addition, the area will be mulched with a weed-free straw mulch

after seeding, and the area fenced with barbed wire to allow maximum potential for revegetation

establishment.

There are no riparian areas or habitat on or near the Project Area. The area is on the west facing slope of

the Caballo Mountains, and vegetation consists of common xeric species occurring in poor, rocky soils of

the Chihuahuan Desert region. Common vegetative species include Rabbit-brush (Chrysothamnus spp.),

Mesquite (Prosopis juliflora), Ocotillo (Fouquieria splendens), Prickly Pear Cactus (Opuntia spp.), and

Sotol (Dasylirion Wheeleri), Tar-bush (Flourensia cernua), Little-leaf Sumac (Rhus microphila), Blue

grama grass (Bouteloua gracilis) and other desert grasses.

The Project Area is currently overgrazed by livestock and highly disturbed by mining activities from

previous operations. Wildlife habitat is generally poor, with wildlife species occurring on the area being

representative of rocky soil and xeric vegetation of the Chihuahuan Desert region. Likely species

occurring and utilizing the area for other than just a transportation corridor would include the Black-tailed

Jackrabbit (*Lepus californicus*), Desert Cottontail Rabbit (*Sylvilagus auduboni*), Rock Squirrel (*Spermophilus variegates*), Deer Mouse (*Peromyscus maniculatus*), White-throated Woodrat (*Neotoma albigula*) and Coyote (*Canis latrans*).

The species to be used in the reclamation of the Project Area are native to the region, are species known to do well in revegetation efforts, and are all natural components of the habitat of the region and for the wildlife species that utilize the area.

As discussed previously, since there was no topsoil or growth media salvaged by previous operators who created the existing disturbance, no special handling is possible for these materials.

Revegetation will take place by broadcast seeding of the species listed in Table 1.

Plant Name	Scientific Name	Variety	Application Rate (per acre)
Blue grama	Bouteloua gracilis	Alma	5.0
Sideoats grama	Bouteloua curtipendula	Vaughn	3.0
Western wheatgrass	Pascopyrom smithii	Arriba	3.0
Scarlet globemallow	Spharealcea coccinea	N/A	1.0
Fourwing Saltbush	Atriplex canescens	N/A	2.0
		TOTAL	14.0

After seed is broadcast, weed-free straw mulch will be applied to the area at the approximate rate of 2-tons per acre. Straw will be anchored by crimping or by application of a tackifying agent.

No acid, toxic or deleterious materials, other than fuel (gasoline and diesel), lubricants and possibly Dexpan as a non-explosive rock breaking agent, will be used at the project area. As discussed previously, there will be no on-site storage of any of these materials, unless Dexpan is used underground in which case it will be stored underground in a water tight container, and the cover to the shaft closed and locked when personnel are not present.

Any spills will be contained and cleaned up as soon as possible by berming the area to prevent spread of fluids and applying adsorbent materials from the on-site Spill Kit. Soils or other materials that have come in contact with spilled materials will be placed in 55-gallon steel drums, lids secured, labeled with information on the project name, location, date spilled and cleaned up and name of individuals addressing the spill. The drums will then be transported off-site to an approved disposal facility. At the end of operations, all materials will be removed the Project Area from above ground and below ground.

No buildings, structures or support facilities are proposed for the Tesoro Del Alma Project, and therefore no provisions are provided to address removal at the end of operations. Should this change, Tesoro will submit notification and an amendment to this Plan of Operations to the BLM at least four (4) months in advance of placement of any buildings, structures or support facilities, and will not initiate construction until there is written approval by BLM. Should this occur, all such structures would be entirely removed prior to the initiation of reclamation operations of the site.

# **Monitoring Plan (3809.401 (b)(4))**

During the active mining operations, the site will be continually monitored to meet the requirements of this Plan of Operations and all federal and state environmental laws and regulations. Since mining operations will be so small scale, and will not include any infrastructure or facilities, other than those that will be mounted on mobile equipment or trailers, the scope of such monitoring is small. Primarily there will be constant surveillance for spills of fuel or lubricants. As discussed previously, should a spill occur, it will be addressed as soon as possible and contained, removed, cleaned up and disposed of properly. The site will also be visually monitored to detect any erosion, which will be addressed and repaired to avoid a larger and costly repair job. No effects to surface or ground waters, air quality stability, noise levels or wildlife mortality are anticipated.

Monitoring of the success of revegetation efforts will be done first three (3) years after reseeding, and again at year eight (8) and year twelve (12). Results will be provided to the BLM.

### Interim Management Plan (3809.401 (b)(5)

The site will be continually monitored during operations to ensure that there are stabile workings, control of toxic or deleterious materials, the all equipment is in good working condition and is not leaking fuel or lubricants onto the ground, that the area is maintained in a clean and safe condition, that all erosion and stormwater controls and BMP's are in good condition and functioning properly.

Should operations be ceased and the operation closed on a temporary basis all underground mine workings will be stabilized with any ground support or other actions required. In addition, all fuels, lubricants and other chemical products present in the underground mine workings will be removed and taken off-site for proper storage.

The current shaft cover is constructed of steel and has a lockable doorway with a padlock protection device. This cover will be closed and locked during such temporary closure.

All mobile surface support equipment will be removed to the off-site storage facilities. The entire Project Area will be inspected for any trash or other materials and these cleaned up and removed. Erosion protection improvements such as run-on diversions will be inspected and maintained as necessary to ensure proper functioning. Stormwater BMP's will similarly be inspected and maintained to ensure proper functioning.

Currently, the schedule for anticipated closure is not known. Tesoro will notify BLM of expected closure and initiation of closure and reclamation operations as soon as this is determined based on operational results.

Estimate of the cost to fully reclaim the Tesoro Del Alma Project as required by 3809.552 (3809.401 (d)).

A comprehensive Closure and Reclamation Cost Estimate is provided in Appendix B.

# **APPENDIX A**

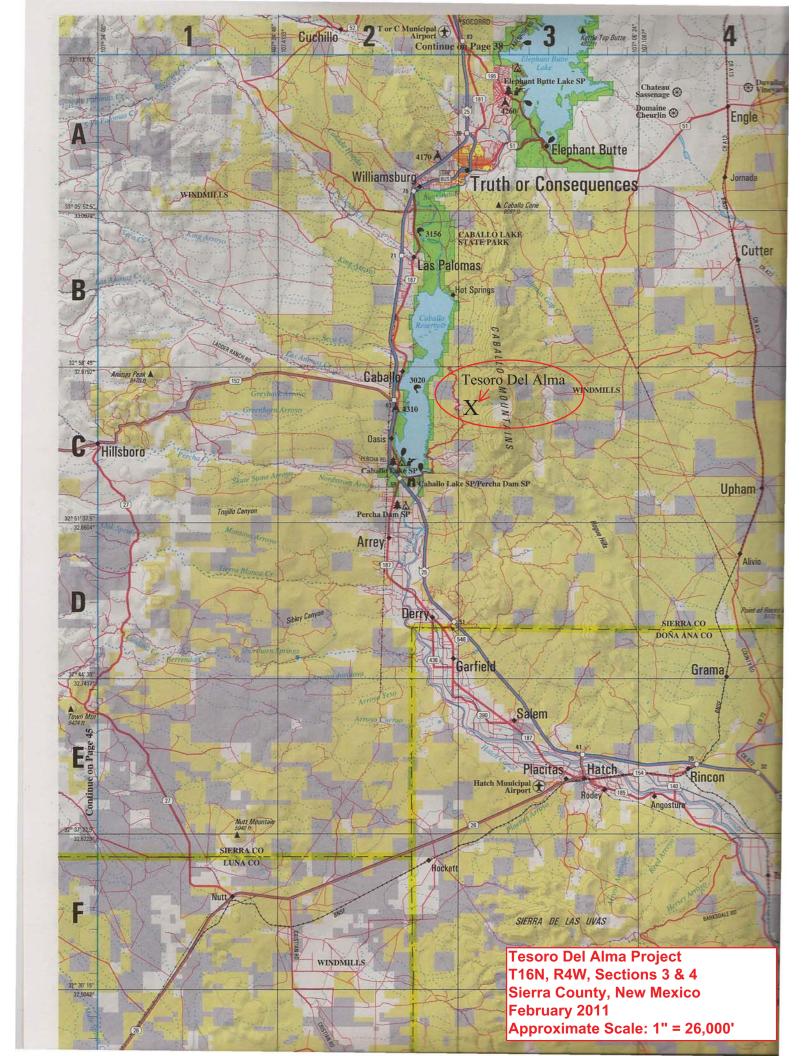
**Tesoro Del Alma Project** 

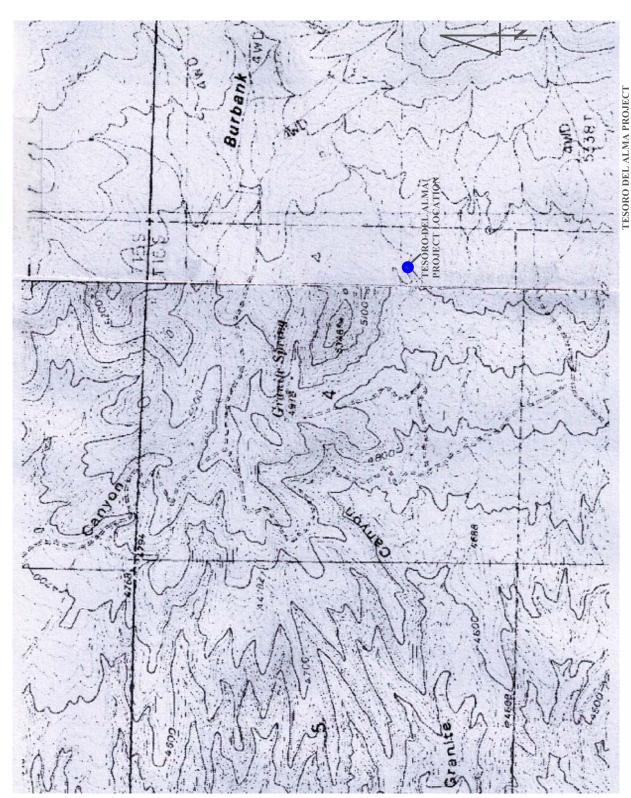
Maps, Figures, Topography and Cross Sections

**Existing Pre-Act Conditions** 

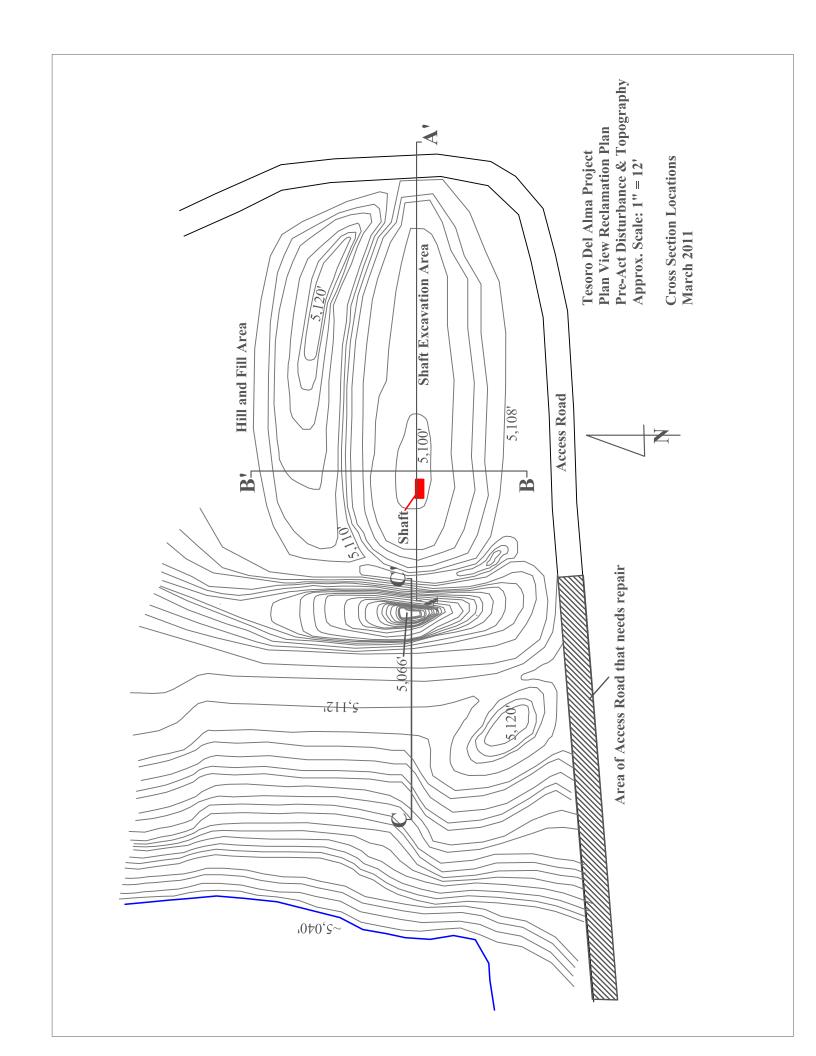
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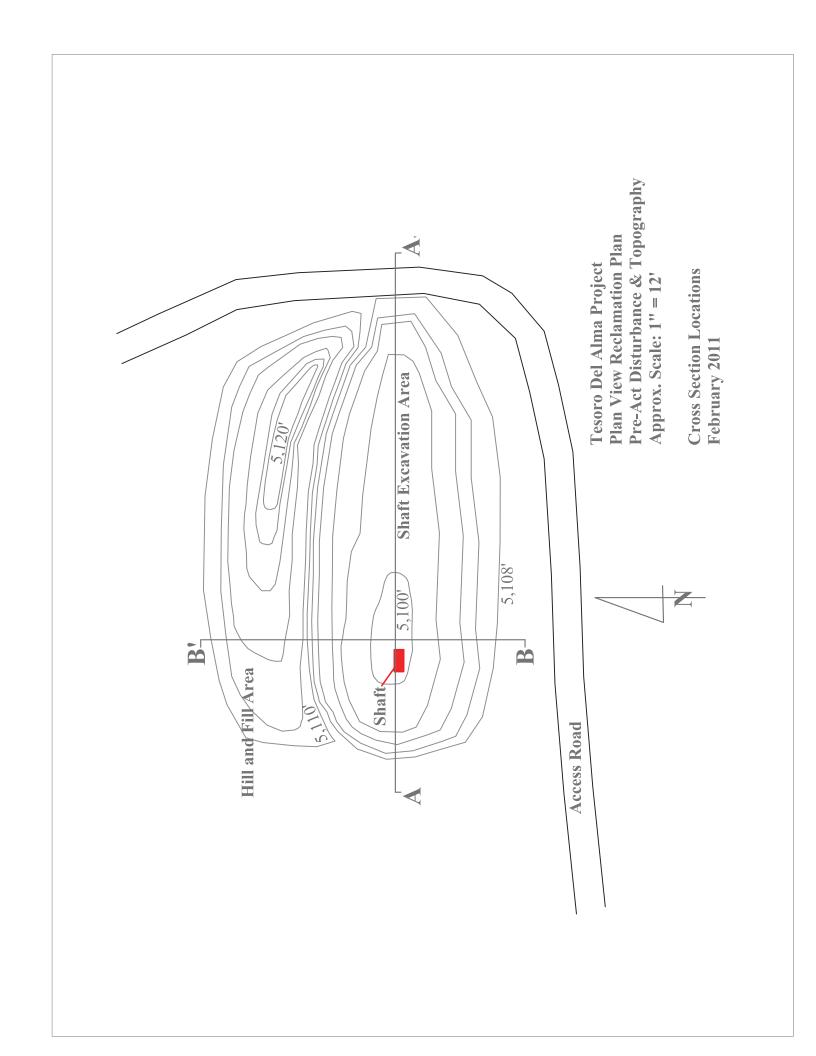
**Post Reclamation Topography and Cross Sections** 

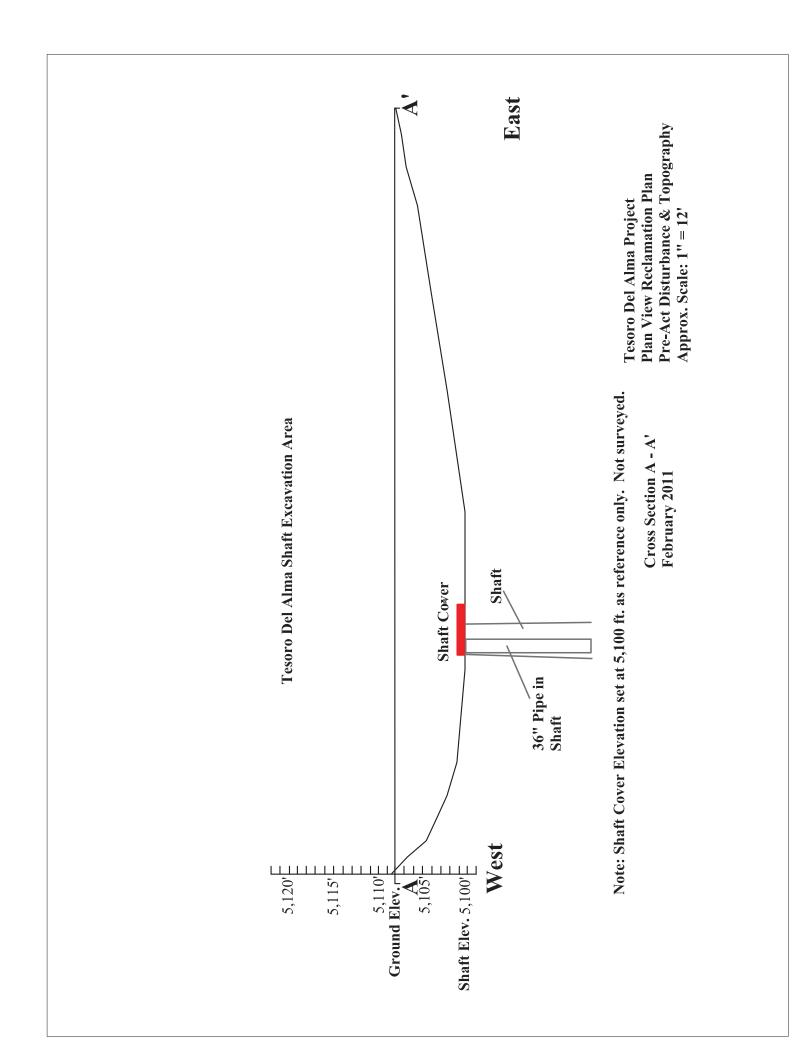


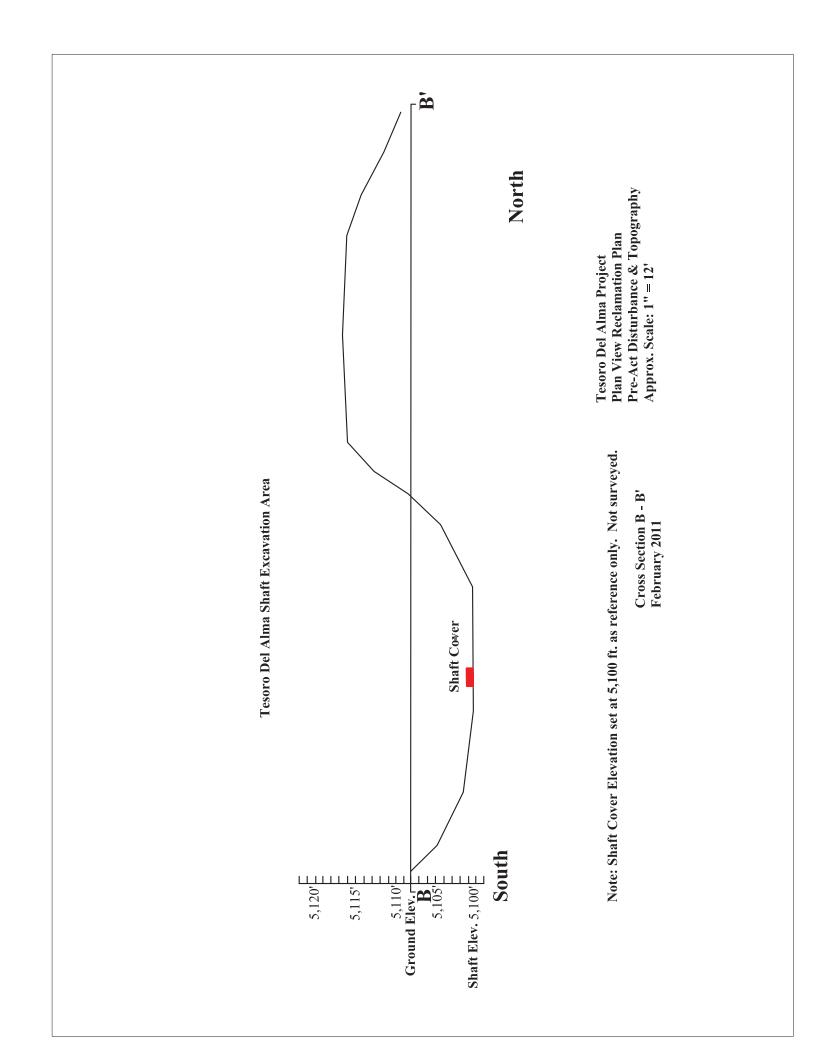


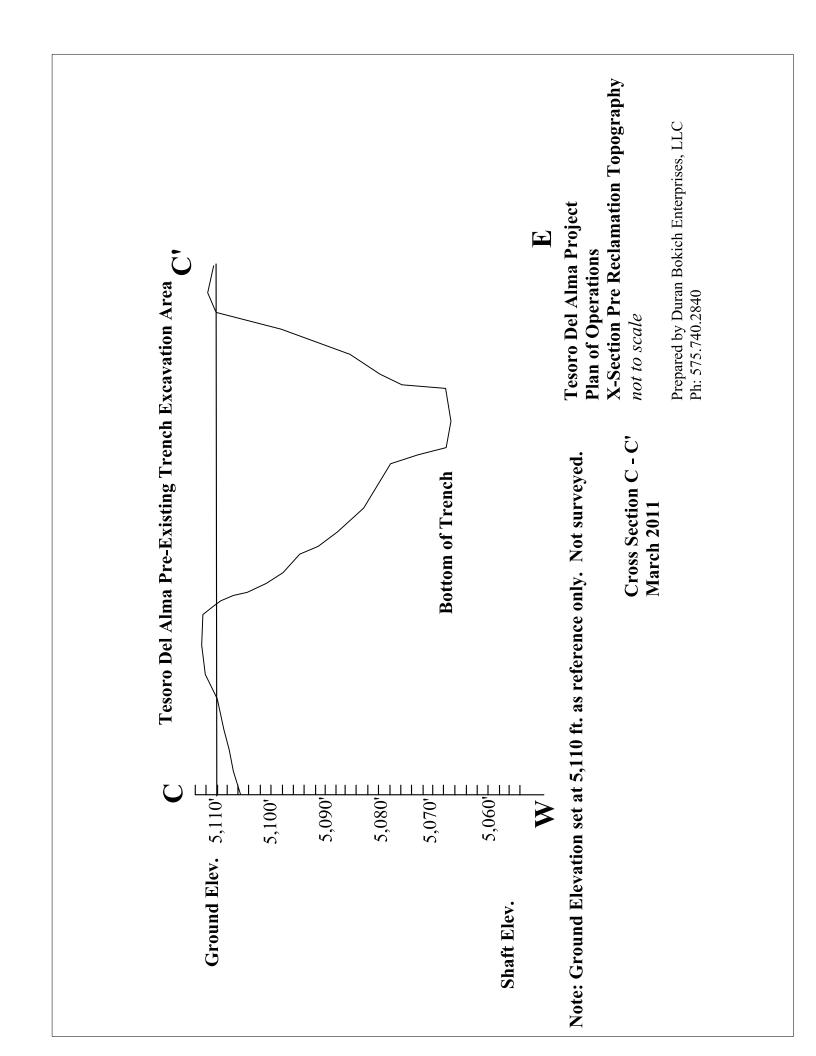
Plan of Operations
US Bureau of Land Management
Project Location and Project Boundary Map
T16S, R4W, Sections 3 & 4, Sierra County, New Mexico

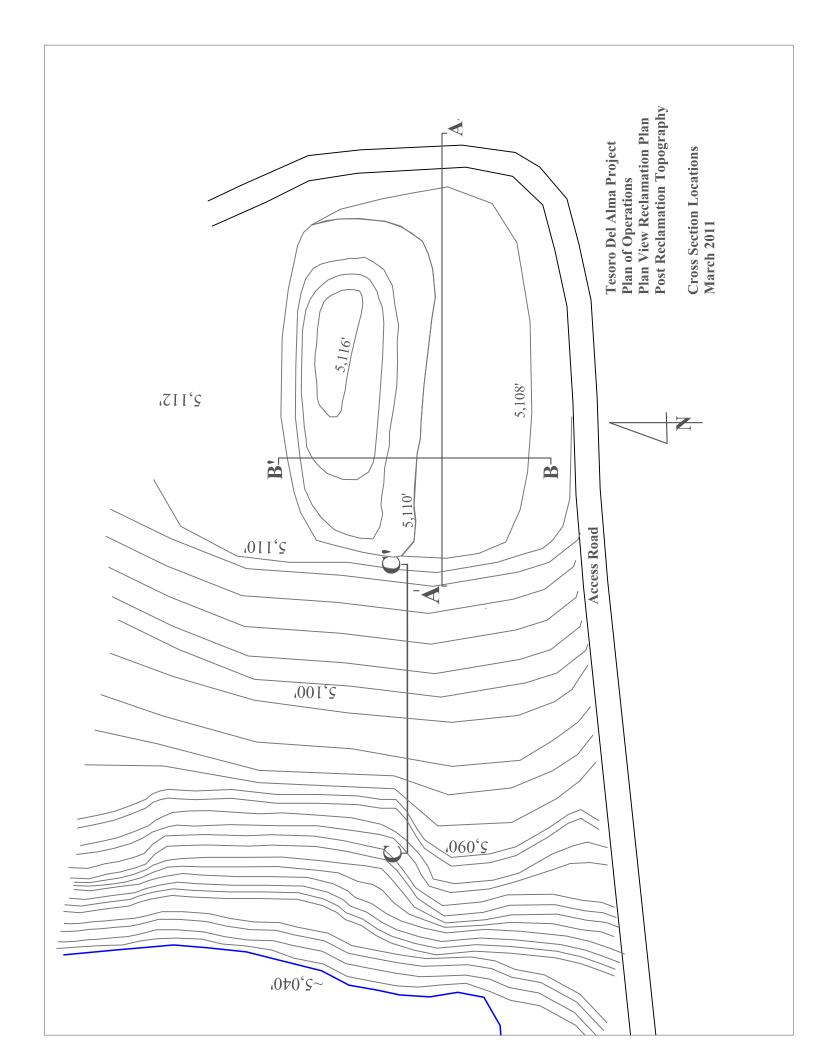


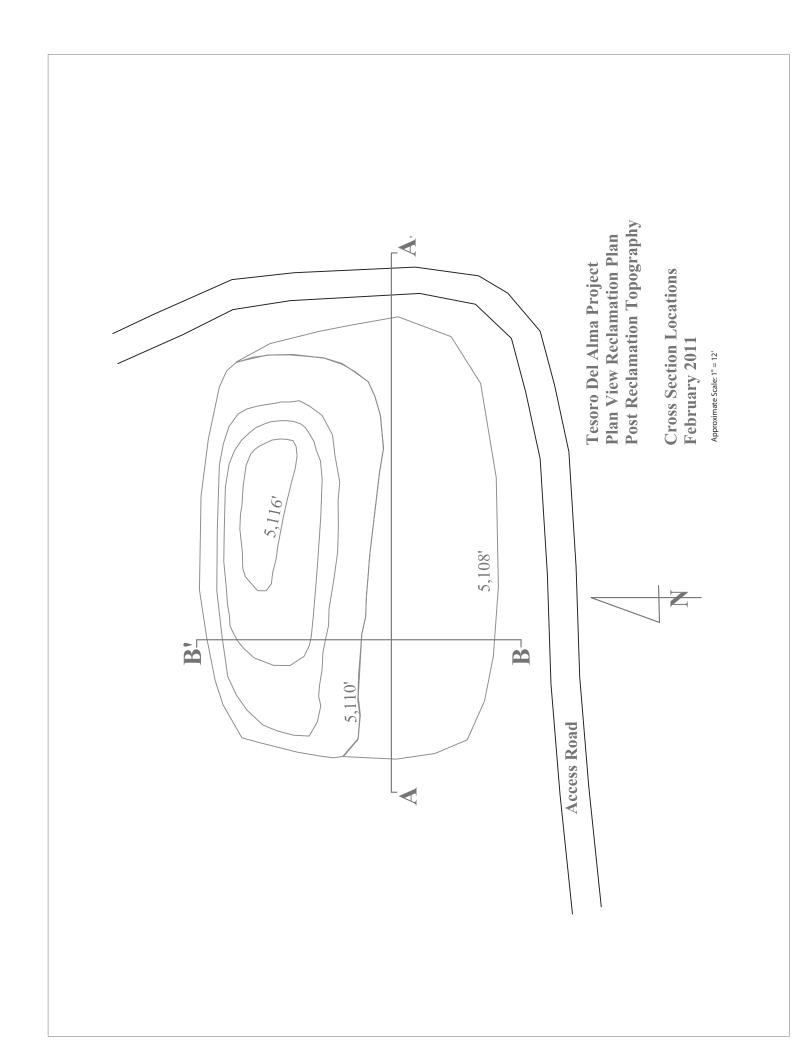


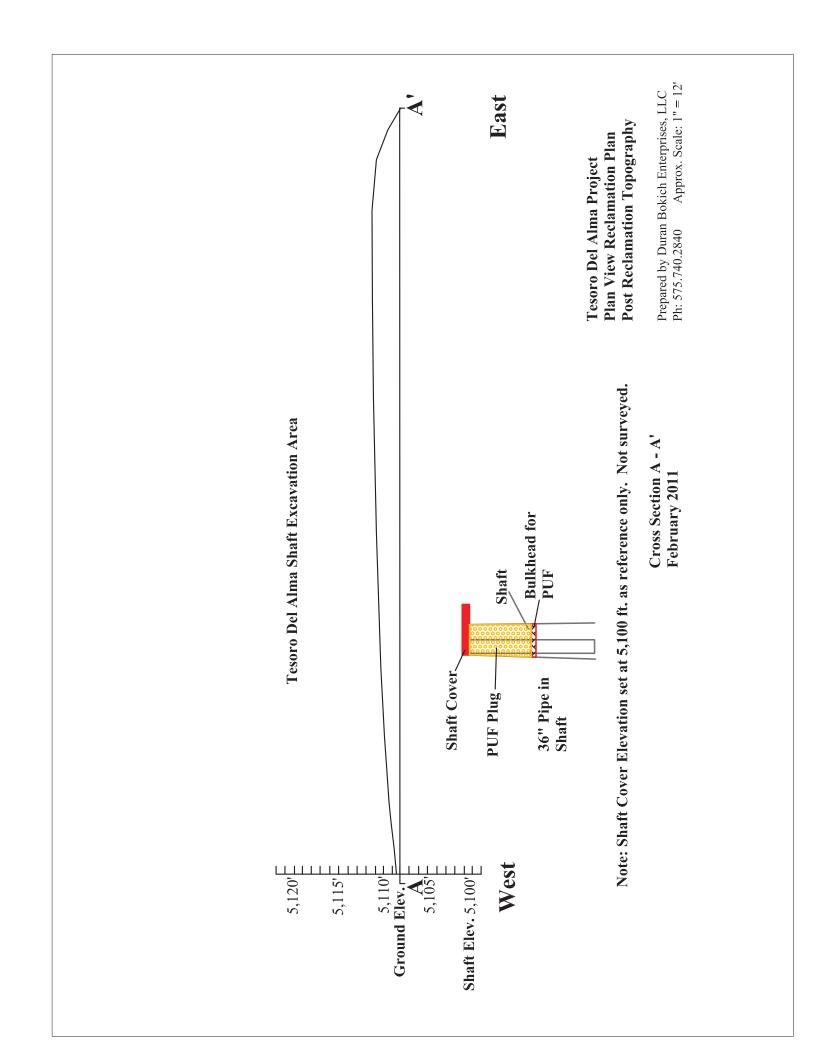


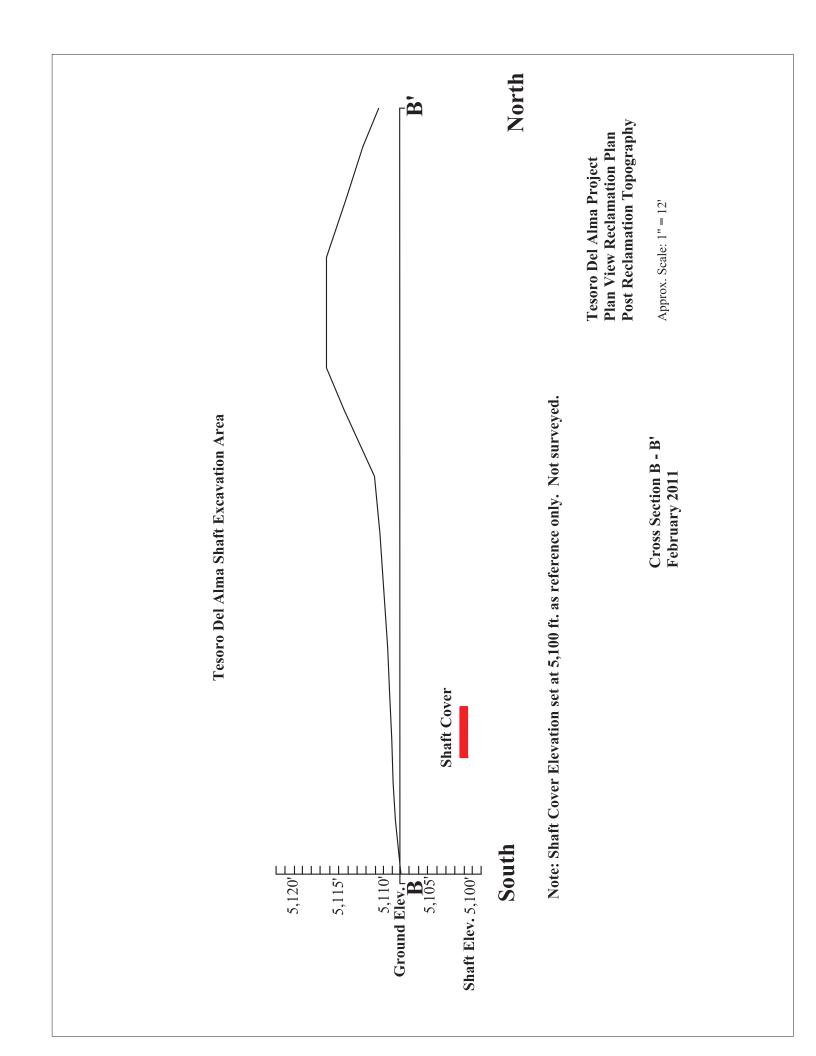












 $\square$ C Tesoro Del Alma Post-Reclamation Trench Excavation Area Topography Pre-Recl Topo Bottom of Trench. Post-Recl Topo 5,060'  $5,090^{-1}$ 5,100' 5,080' 5,070 Ground Elev. 5,110' **>** Shaft Elev.

Note: Ground Elevation set at 5,110 ft. as reference only. Not surveyed.

Tesoro Del Alma Project
Plan View Reclamation Plan
Post Reclamation Topography
Prepared by Duran Bokich Enterprises 11

Cross Section C - C'

**March 2011** 

Prepared by Duran Bokich Enterprises, LLC Ph: 575.740.2840

# **APPENDIX B**

Tesoro Del Alma Project

**Reclamation Cost Estimate** 

# Tesoro Del Alma Project

# **Reclamation Cost Estimate 43 CFR 3809.552 (3809.401 (d))**

The Reclamation Cost Estimate generated to address the closure and reclamation of all disturbances related to the Tesoro Del Alma Project, Sierra County, New Mexico. All surface disturbance related to this project was done by previous operators in the 1970's and later, but prior to Tesoro Del Alma Inc. having any involvement with the project. Tesoro Del Alma Inc. plans operations that will only use mobile equipment on the surface, and will not disturb any additional surface areas that have not already been disturbed by the previously mention prior operators. Some minor earthwork may be conducted to level areas near the shaft and to improved the access road and to construct berms to divert run-on, but these can be accomplished on already disturbed areas.

Tesoro Del Alma Inc. has committed however to backfill and reclaim these existing disturbances at the completion of their mining operations. This will be accomplished by recovering rock and soil materials that originally were sourced from the existing excavations. Not all of the material that was excavated will be utilized for backfilling to an appropriate slope to provide positive drainage of precipitation and continued diversion of run-on to minimize the potential for erosion. Because of this, and with the uses of small equipment and an excavator, it is anticipated that all work can be done, and all backfill materials sourced from areas that have already been disturbed.

The costs utilized in the cost estimate for personnel wages exceed Davis Bacon rates, and State of New Mexico published Wage Scales for this area. Equipment rates are representative of local rental rates for equipment from the Las Cruces and Albuquerque, New Mexico areas, and El Paso, Texas.

# DURAN BOKICH ENTERPRISES, LLC TESORO DEL ALMA PROJECT CLOSURE AND RECLAMATION COST ESTIMATE Reclamation Cost Estimates Summary

Project Area/Facility	Cost
Mobilization	\$4,651.85
Shaft Closure	\$5,636.42
Shaft Area Backfill & Regrade	\$2,324.15
Trench Backfill & Regrade	\$14,779.25
Revegetation	\$1,338.17
Monitoring (Erosion, Revegetation)	\$2,137.97 (TOTAL for recurrence 3 times for period 2011 through 2

2021)

\$30,867.82 TOTAL:

# **APPENDIX C**

# Tesoro Del Alma Project

Permit Application submitted to the New Mexico Energy, Minerals and Natural Resources Department, Mining and Minerals Division, Mining and Reclamation Program

for

A Minimum Impact New Mining Operation

Application Number SI033MN

REV.DATE: 5/18/09

# FOR MMD USE ONLY:

PROJECT NAME		
PERMIT #		
DATE RECEIVED:	/	/
DATE APPROVED:_	/	/
LEAD INSPECTOR:		

# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Director Mining and Minerals Division 1220 South Saint Francis Drive Santa Fe, New Mexico 87505 Telephone: (505) 476-3400

# SUBPART 3 MINIMAL IMPACT NEW MINING OPERATIONS PERMIT APPLICATION

The following information is required under the New Mexico Mining Act (Sections 69-36-1 through 69-36-20, NMSA 1978) and associated rules. The Mining and Minerals Division of the Energy, Minerals and Natural Resources Department is the administrative agency through which this application is to be processed. See §304, Minimal Impact New Mining Operations, of the New Mexico Mining Act Rules for all regulations associated with Minimal Impact Mining operations.

# Permit Application Requirements: (§304.A-C and §601)

J	A minimal impact new mining operation will not be considered a minimal impact mining operation in it exceeds <b>10 acres of disturbed land</b> , except that pre-existing roads and reclaimed areas within the
	permit area will not be counted.  Reclaimed, for this purpose means all financial assurance has been released, except the amount held to reestablish vegetation pursuant to §1204.
J	Permit applications shall be submitted in ample time to have the permit issued before mining operations begin, and operations shall not begin until after the permit is issued.
J	Six copies of the completed application need to be submitted.
J	Confidential information needs to be <b>clearly</b> indicated and submitted separately.

4	Check the "YES" or "NO" box for each of the following characteristics as related to the proposed minimal impact mining operation:		
<b>YES</b>	<u>NO</u>		
	X	Located in or having a direct surface impact on wetlands, springs, perennial or intermittent streams, lakes, rivers, reservoirs or riparian areas.	
	X	Located in designated critical habitat areas as determined in accordance with the federal Endangered Species Act of 1973 or in areas determined by the Department of Game and Fish likely to result in an adverse impact on an endangered species designated in accordance with the Wildlife Conservation Act, Sections 17-2-37 through 17-2-46 NMSA 1978 or by the State Forestry Division for the Endangered Plants Act, section 75-6-1 NMSA 1978.	
	X	Located in an area designated as Federal Wilderness Area, Wilderness Study Area, Area of Critical Environmental Concern, or an area within the National Wild and Scenic River System.	
	X	Located in a known cemetery or other burial ground.	
	X	Located in an area with cultural resources listed on either the National Register of Historic Places or the State Register of Cultural Properties.	
	X	Having or expected to have a direct impact on ground water that has a total dissolved solids concentration of less than $10,000  \text{mg/L}$ , except exploratory drilling intersecting ground water may be performed as a minimal impact operation.	
	X	Expected to use or using cyanide, mercury amalgam, heap leaching or dump leaching in its operations.	
	X	Expected to result in point or non-point source surface or subsurface releases of acid or other toxic substances from the permit area.	
	X	Requiring a variance from any part of these Rules as part of the permit application.	
IMP(	ORTA	NT NOTES!	
1	If you have checked "YES" to any of the above boxes, the mining operation does not qualify as a minimal impact mining operation. Do not continue to fill out the remainder of this form.		
1	If you do meet the above requirements and have checked "NO" to all of the above boxes, continue filling out this application.		

Obtaining a Mining Act permit does not necessarily satisfy the obligation to obtain permits required

by other governmental entities.

- PLEASE FILL IN ALL APPLICABLE INFORMATION AS COMPLETELY AS POSSIBLE.
- PLEASE PRINT OR TYPE ALL INFORMATION.

# **OPERATOR INFORMATION (§304.D.1)**

# **LIST PROJECT NAME:**

NAME OF APPLICANT: Nick V. Fleming, Tesoro Del Alma Inc.

**ADDRESS:** 6077 Coffee Rd. Suite 4 PMB 196

Bakersfield, CA 93308-9417

**PHONE** #: 661-600-4045 FAX #: 661-215-6589 EMAIL: nfleming@tesoro-del-alma.com

NAME OF OWNER (if different from applicant's name and address):

Same as above

**ADDRESS:** Same as above

**PHONE #:** Same as above

# NAME OF ON-SITE CONTACT OR OPERATOR'S REPRESENTATIVE:

Nick V. Fleming, Tesoro Del Alma Inc.

ADDRESS: 6077 Coffee Rd. Suite 4 PMB 196

Bakersfield, CA 93308-9417

**PHONE #:** 661-600-4045 EMAIL: nfleming@tesoro-del-alma.com

FAX #: 661-215-6589

# 2. RIGHT TO ENTER INFORMATION (§304.D.1)

**A.** Describe or provide evidence for the basis of the applicant's right to enter the property to conduct the mining and reclamation:

The claim is located on public lands administered by the US Bureau of Land Management (BLM). Nick V. Fleming, as representative for Tesoro Del Alma has the right to the BLM Registered Load Claim is TDA6, NMMC 167937, Sections 3 & 4, T16S, R4W, NMPM, through mineral load claim location, filing and maintenance fee filings per relevant sections of 43 CFR 3800. In addition a Tunnel Site Claim, TESORO 1, BLM Serial Number (AMC#'s) NMMC 189169 is held by Nick V. Fleming, Tesoro Del Alma, Inc.

B. List the names and addresses of surface and mineral ownership within the proposed permit area:

# 1. Surface Owner(s):

Name	Address	Phone #
United States Government	PO Box 27115	
Administered by:	Santa Fe, New Mexico 8750	2-0115
Dept. of Interior, Bureau		
of Land Management	Phone #: 505-438-4762	
2. <b>Mineral Owner</b> (s):		
Name	Address	Phone #
Nick V. Fleming	6077 Coffee Rd. Suit 4 PMB	196
Tesoro Del Alma Inc.	Bakersfield, CA 93308-9417	
	Phone #: 661-600-4045	

C. List the author(s), title(s), date(s) and report number(s) of any cultural resource survey report(s) submitted to the agency(ies) or landowner(s) listed above:

No properties listed on the National Register of Historical Places or the New Mexico State Register of Cultural Properties are preset within the proposed mining permit area an no cultural resources are known to exist within the permit area.

# 3. MAPS (§304.D.2)

A. Provide a legal description of the site [Township(s), Range(s) and Section(s)]: The permit area is located within the TDA6 Load Mining Claim, Sierra County, NM within the Pittsburg Mining District in portions of Sections 3 and 4 of T16S, R4W, NMPM. In addition a Tunnel Site Claim, TESORO 1, BLM Serial Number (AMC#'s) NMMC 189169 is held by Nick V. Fleming, Tesoro Del Alma, Inc.

- B. Provide a topographic map(s) of at least 1 inch = 2,000 feet (or appropriate for the size of disturbance) showing the areas of land to be disturbed by the proposed mining and reclamation. Identify general area shown on the map(s) by Township, Range and Section(s). If the area to be mined contains the following features, show them on the map(s):
  - 1. **Boundary of the proposed permit area** with the existing and proposed area of disturbance
  - 2. Previously disturbed areas
  - 3. Perennial, intermittent and ephemeral streams; springs; wetlands; riparian areas; lakes and reservoirs
  - 4. Proposed and existing roads and other access routes
  - 5. Residences
  - 6. Support facilities
  - 7. Cemeteries, burial grounds; cultural resources listed or eligible for listing on either the National Register of Historic Places or the State Register of Cultural Properties
  - 8. Pipelines
  - 9. Oil, gas, water and monitoring wells on and within two miles of the permit area
  - 10. Identify the location of shafts, adits, trenches, ponds, pits, quarries, stockpiles, waste dumps etc

Location Maps and figures showing existing Pre-Act disturbance, cross sections and Post Reclamation topography and cross sections are provided in Appendix A.

# 4. ENVIRONMENTAL PERMITS HELD FOR OTHER OPERATIONS (§304.D.3)

Provide a list of other environmental permits held for other mining operations within the United States and any violations issued for non-compliance with those permits.

# **NAMES OR TYPES OF ENVIRONMENTAL PERMITS:**

N/A

No other mining operations are currently, or have ever been held by Tesoro del Alma, nor Nick V. Fleming within the United States, and therefore this section is Not Applicable.

# **LIST PERMIT VIOLATIONS; NUMBER, TYPE AND ISSUING AGENCY:**

N/A

_	MINI	NC DESCRIPTION (\$204 D.4)		
5.	MIINI	NG DESCRIPTION (§304.D.4)		
	A.	Type of mineral or minerals to be mined: Gold, Silver and Platinum Group		
	B.	Metals (PGM) Check (3) the method of proposed mining:		
		Surface or _x Underground		
	C.	Describe the sizes and volumes of the facilities to be used:  Plant Site/Staging Area:		
		How Many 0.5 Acreage		
		Pits or Quarries :       How Many 0 Acreage 0 Volume (cu.yds.)         Stockpiles:       How Many 0 Acreage 0 Volume (cu.yds.)         Waste Dumps:       How Many 0 Acreage 0 Volume (cu.yds.)		
		List the following for <b>New Road(s):</b> No new roads are required or will be constructed.		
		Length (ft.) 0 Width (ft.) 0		
		Length (ft.) Width (ft.)		
	List the following for extension or widening of <b>Existing Road(s):</b> Existing roads are of adequate width to allow planned operations. Some minor maintenance			
		Length (ft.) $50$ Width (ft.) $0$ may be required within the wid		
		Length (ft.) Width (ft.) of existing roadways.		
		Other Disturbances: Type - Leveling and grading of work area around		
		existing, pre-act mine shaft.  How Many 1 Acreage 0.5 Volume (cu.yds.) ~1,000 cu. yds.		

# TOTAL ACREAGE TO BE DISTURBED: <0.5 acres

- D. Describe the type of processing that will be conducted on site:

  Mined material from underground operations will be hoisted to the surface utilizing a mobile hoist/crane, and mine materials will be loaded into a vehicle for transport offsite to a processing facility. No onsite processing will take place other than loading and transporting mine materials. (See attached supplemental information).
- E. Describe the typical equipment to be used for the mining operations:

  Current mining operations will consist primarily of hand tools, both manual and power tools, used underground in the Pre-Act mine workings to remove existing mined material. The mined material will be loaded into buckets underground, hoisted to the surface utilizing a mobile hoist/crane, and loaded into vehicles for transport offsite for processing. (See attached supplemental information).

# 5. **CHEMICAL USE (§304.D.4)**

A. List all chemicals proposed to be used by the mining operation. No chemicals, other than gasoline, diesel fuel, motor oil and other lubricants will be used.

Name:	<u>Use:</u>
gasoline	fuel
diesel fuel	fuel
motor oil	lubrication
general oils and lubricants	lubrication

# 6. GROUND WATER INFORMATION (§304.D.5)

A. Provide an estimate of depth to ground water and the total dissolved solids concentration.

The elevation of the project area is about 5,100 ft. above sea level and the high water level of Caballo lake is about 4,200 ft. Therefor groundwater is expected to be 500 to 900 feet below the project area, and 500 to 800 ft. below project mine workings.

Depth to ground water (ft.) 500 to 900 ft. T.D.S. concentration unknown

- B. Describe the source of groundwater information:
   USGS Quad Maps, Caballo and Apache Peak and NM Office of the State Engineer's
   W.A.T.E.R.S. Database.
- C. Describe any dewatering activities to be conducted during mining operations:

  No dewatering activities are anticipated.

# 7. PERFORMANCE STANDARDS (§304.D.7)

A. Provide a general description of how the mining and reclamation will be designed and operated using the most appropriate technology and best management practices:

See attached supplemental information.

B. Provide a general description of how the mining and reclamation will be designed and operated to assure protection of human health and safety, the environment, wildlife, and domestic animals:

See attached supplemental information.

C.	Provide a general description of how the mining and reclamation will be designed and operated to safeguard the public from unauthorized entry into shafts, adits and tunnels and to prevent falls from highwalls or pit edges:  See attached supplemental information.
D.	Provide a general description of how the mining and reclamation will be designed and operated so the disturbed area will not contribute suspended solids above background levels, or where applicable the Water Quality Control Commission's standards, to intermittent and perennial streams:  See attached supplemental information.
E.	Provide a general description of how the mining and reclamation will be designed and operated to control erosion:  See attached supplemental information.

## 8. RECLAMATION PLAN (§304.D.8)

The operation will be operated and reclaimed to a self-sustaining ecosystem appropriate for the life zone of the surrounding areas following closure unless conflicting with the approved post-mining land use.

A. List adjacent land use other than mining (i.e. grazing):Current land use for adjacent lands is wildlife habitat and livestock grazing.

- B. List the proposed post mining land use (i.e. wildlife):

  The proposed post mining land use is as the pre-mining, wildlife habitat and livestock grazing.
- C. Describe how reclamation activities will avoid adverse impact to cultural resources:

  There are no identified cultural resources within the project area, and the nature of the mining and reclamation activities make it unlikely that any cultural resources will be encountered. Should any cultural resource item be encountered during mining or reclamation operations, the NM Mining and Minerals Division will be notified.
- D. Describe any backfilling and grading operations to be performed after mining: Section 7.A of this application provides a comprehensive description of backfilling and grading operations to be performed as part of reclamation after mining.
- E. Describe what mitigation steps will be taken to reconstruct or protect the hydrologic balance of the site after mining:
  Sections 7.A, 7.B, 7.D and 7.E of this application provide comprehensive descriptions of steps to be taken to reconstruct and protect the hydrologic balance of the site after mining.
- F. Describe how topsoil or topdressing will be salvaged, stockpiled and distributed for the re-establishment of vegetation:
   No new disturbance is anticipated for this project, and the area is in poor condition at present with no material that would be classified as topsoil present. Re-establishment of vegetation will be accomplished using materials regraded from surrounding, Pre-Act disturbance stockpiles and by using native, adaptive species in the seed mix.
- G. Describe what kind of seed bed preparation will take place prior to seeding. What soil amendments will be added? Scarification of the seed bed needs to take place. Will this involve discing or ripping?
   As described in Section 7.A of this application, the seed bed preparation will consist of light scarification after final grading, application of fertilizer and a mixture of native, adaptive plant species, as identified in the following section.
- H. Describe in detail the plant species to be used in the re-establishment of vegetation:

  Plant Name:

  Rate of application (lb/ac)

  See attached supplemental information.

•	•	•

- I. Will the seeds be broadcast or drilled into the seed bed? Broadcast seeded.
- J. Describe the type of mulch material to be applied after seeding and its application rate: No mulch material is proposed for the reclamation of the area. The seed species in the seed mix are native and adaptive to the area and will establish without mulch. Mulch would act as an attractant to livestock grazing the area.
- K. What structures will be on the site and how will they be removed or reclaimed? (Buildings, portals, adits, shafts, bore holes, ponds, etc.):

As discussed previously in Section 7.A, there will be no permanent structures, and the shaft will be plugged with PUF, concrete, a steel welded cover and covered in eight plus (8+) feet of backfill at closure and reclamation.

- L. What roads are part of the mine site and how will they be reclaimed? Please provide an estimate of road square footage and explain if reclamation will involve ripping, scarification, backfilling, recontouring, and retopsoiling, etc.:
   Existing roadways are present through the site, origins of which are not known. It is anticipated that these roadways will be maintained after the Tesoro Del Alma Project and will only be treated as part of the overall Stormwater and erosion control activities.
- M. What will be the time frame for reclamation, (e.g. time of year, during mining, after mining, etc)?

Reclamation activities will be initiated at completion of mining operations, with final seed bed preparation and seeding taking place between mid-May and mid-June of the year when operations are completed. Operations are so small that reclamation cannot begin until mining is complete.

Proposed reclamation dates: Begin: May/ 15 / 2014 End: June/ 30 / 2014

# 9. OTHER REQUIRED PERMITS FOR THIS OPERATION (§304.D.9)

A. Provide a list of other permits required for the operation and the anticipated schedule for receipt of these.

Permit Name & Issuing Agency	Date or anticipated date of receip
Plan of Operations, Bureau of Land Manager	ement April 2011

### 10. FINANCIAL ASSURANCE AND PERMIT FEES (§304.E & F)

- A. Provide a financial assurance estimate based on the cost of reclaiming the site by a third party Include supporting calculations. Operations with less than 2 acres total disturbance are not required to provide financial assurance.

  Total disturbance is anticipated to be about 0.5 acres.
- B. Attach the permit fees as determined pursuant to Subpart 2. The permit application fee for a minimal impact new mine is \$1,000.00.

# 11. CERTIFICATION REQUIREMENT (§304.J.5)

Each application shall be signed **and notarized** by an <u>applicant</u> for the operation with the following certification made:

I certify that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I agree to comply with the requirements of the permit, these Rules, and the Act. Further, I hereby allow the Director to enter the permit area for the purpose of conducting inspections until release of financial assurance.

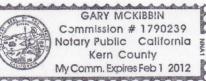
Signature of Applicant:

NICK U FCEMING Name (typed or print):

CED/ Pros Dent Title/Position:

Date: 02/11/2011

Signature of Notary:



siffix

└─ Notary Seal ─┘

### SUBPART 3, MINIMAL IMPACT OPERATIONS PERMIT APPLICATION

Tesoro Del Alma Project, Sierra County, New Mexico

#### **Supplemental information to application**

Section 7. PERFORMANCE STANDARDS (§304.D.7)

A. Provide a general description of how the mining and reclamation will be designed and operated using the most appropriate technology and best management practices:

Mining will consist initially of removing mined material that was left in mine workings developed in a Pre-Act shaft known as the Droltre Hole, which was developed and worked sometime in the 1970's. Existing mined material will be loaded with hand tools, shovels, picks, wheelbarrows, etc., into hoisting containers (e.g. buckets), to be hoisted to the surface in a "mancage" utilizing a mobile hoist/crane. In addition, some work may be done with drills, either electric or pneumatic, to take additional materials out of mineral veins. Power for mine lighting will be provided by portable generators. Ventilation will be provided by portable fans or a surface compressor and ventilation tubing. Only minor earthwork will be required within the project area to allow safe access for personnel, vehicles and the mobile hoist/crane. The earthwork will consist of minor grading within the existing access road to the project area. This will consist of some minor filling and then regrading with a small bulldozer of about fifty (50) feet of Pre-Act, existing roadway, to allow safe access. Additional grading will be done within existing, Pre-Act boundaries of areas that have already been disturbed, including minor work within the area immediately adjacent to the shaft. To minimize potential effects to surface waters in the area of the project, Best Management Practices (BMP's) such as a small berm will be maintained on the entry to the shaft work area (east side) to divert and run on from entering the site. In addition, should it prove necessary, other BMP's such as waddles, straw bales or silt fence may be installed downgradient of any work areas to minimize potential effects from the project.

At completion of the project, when no additional existing mined material is remaining and additional underground testing determines that ore grade material is no longer available, the shaft will be permanently closed. The first step of closure and reclamation will consist of placing a ten (10) foot plug of polyurethane foam (PUF), in the shaft. First, a metal platform will be welded into the 36 inch steel pipe at 10 feet below the surface. Then a bulkhead to support the PUF will be constructed at approximately the same level in the annulus of the shaft surrounding the 36 inch pipe. Then approximately enough mixed PUF solution will be added to result in approximately 30 cubic yards of complete PUF, distributed inside of the pipe and in the annulus surrounding the pipe to the shaft walls. At completion and setting of the PUF plug, the area between the top of the PUF plug and the inside edge of the steel lid will be filled with concrete. When the concrete has set, the steel lid will be closed and welded shut, then the entire area backfilled with surrounding dirt and rock to an elevation that will result in positive drainage to shed precipitation and minimize infiltration. The volume of fill required to achieve this cover and positive drainage is approximately 1,000 cubic yards, which is

available from the project area from material that was excavated by previous, Pre-Act operations. This material will be placed in the depression over the sealed shaft using a bulldozer, excavator and front end loader. The fill will be graded to blend into the rock face to the north, and then tie into slopes on the west, south and east. The fill will then be lightly scarified and hand broadcast with the seed mix described in this application. A commercial fertilizer applied at the rate of 100 pounds per acre. Stormwater BMPs will be retained for a two year period and then removed.

Location Maps and figures depicting Pre-Act existing disturbance, Topography and Cross Sections, as well as Post-Reclamation Topography and Cross Sections are provided in Appendix A of this application.

B. Provide a general description of how the mining and reclamation will be designed and operated to assure protection of human health and safety, the environment, wildlife, and domestic animals:

During mining operations, the steel lid to the shaft will be open only when active operations are taking place by personnel authorized by Tesoro Del Alma, Inc. As discussed in the previous section, mining will consist of existing mined material being loaded with hand tools, shovels, picks, wheelbarrows, etc., into hoisting containers (e.g. buckets), and hoisted to the surface in a "mancage" utilizing a mobile hoist/crane. In addition, other mine materials will be excavated utilizing power equipment such as electric or pneumatic drills, and other methods for mining of materials. These materials will be loaded and transported to the surface in the same fashion as other materials.

Lighting will be provided by power provided by a mobile generator on the surface with wiring into the mine. In addition, an electric fan powered by the generator, or a compressor will be located on the surface to provide mine ventilation through ventilation tubing into the mine.

Only minor earthwork will be required within the project area to allow safe access for personnel, vehicles and the mobile hoist/crane. The earthwork will consist of minor grading within the boundaries of areas that have already been disturbed, including minor work on the access roadway near the project area and within the area immediately adjacent to the shaft. To minimize potential effects to surface waters in the area of the project, BMP's such as a small berm will be maintained on the entry to the shaft work area (east side) to divert and run on from entering the site. In addition, should it prove necessary, other BMP's such as waddles, straw bales or silt fence may be installed downgradient of any work areas to minimize potential effects from the project. When work is completed, on a daily basis, the lid to the shaft will be closed and locked and all surface equipment will be removed from the site until the next working day. A description of the proposed reclamation operations is provided in the previous section. There will be no potential effects from these operations on human health and safety, the environment, wildlife, and domestic animals.

C. Provide a general description of how the mining and reclamation will be designed and operated to safeguard the public from unauthorized entry into shafts, adits and tunnels and to prevent falls from highwalls or pit edges:

Sections 7.A and 7.B of this application describe how mining and reclamation has been designed and will be operated to safeguard the public from unauthorized entry into shafts, adits and tunnels associated with the project. There are no highwalls or pit edges associated with the proposed Tesoro Del Alma Project.

D. Provide a general description of how the mining and reclamation will be designed and operated so the disturbed area will not contribute suspended solids above background levels, or where applicable the Water Quality Control Commission's standards, to intermittent and perennial streams:

As discussed in Section 7.A of this application, to minimize potential effects to surface waters in the area of the project, BMP's such as a small berm will be maintained on the entry to the shaft work area (east side) to divert run-on from entering the site. In addition, should it prove necessary, other BMP's such as waddles, straw bales or silt fence may be installed downgradient of any work areas to minimize potential effects from the project. After reclamation, BMP's will be retained for a period of two years, or for whatever period is required for revegetative establishment, to ensure that there is minimum potential for effects to surface waters of the area.

E. Provide a general description of how the mining and reclamation will be designed and operated to control erosion:

As described in Sections 7.A and 7.D of this application, BMP's will be installed at the initiation of operations, and maintained during operations, reclamation and for a period following reclamation to ensure that there is minimum potential for erosion. Should erosion take place as a result of mining or reclamation operations, the area will be maintained with a backhoe or similar equipment to repair and rebuilt to prevent recurrence.

### 8. RECLAMATION PLAN (§304.D.8)

The operation will be operated and reclaimed to a self-sustaining ecosystem appropriate for the life zone of the surrounding areas following closure unless conflicting with the approved post-mining land use.

H. Describe in detail the plant species to be used in the re-establishment of vegetation:

Plant Name	Scientific Name	Variety	Application Rate (per acre)
Blue grama	Bouteloua gracilis	Alma	5.0
Sideoats grama	Bouteloua curtipendula	Vaughn	3.0
Western wheatgrass	Pascopyrom smithii	Arriba	3.0
Scarlet globemallow	Spharealcea coccinea	N/A	1.0
Fourwing Saltbush	Atriplex canescens	N/A	2.0

### **APPENDIX A**

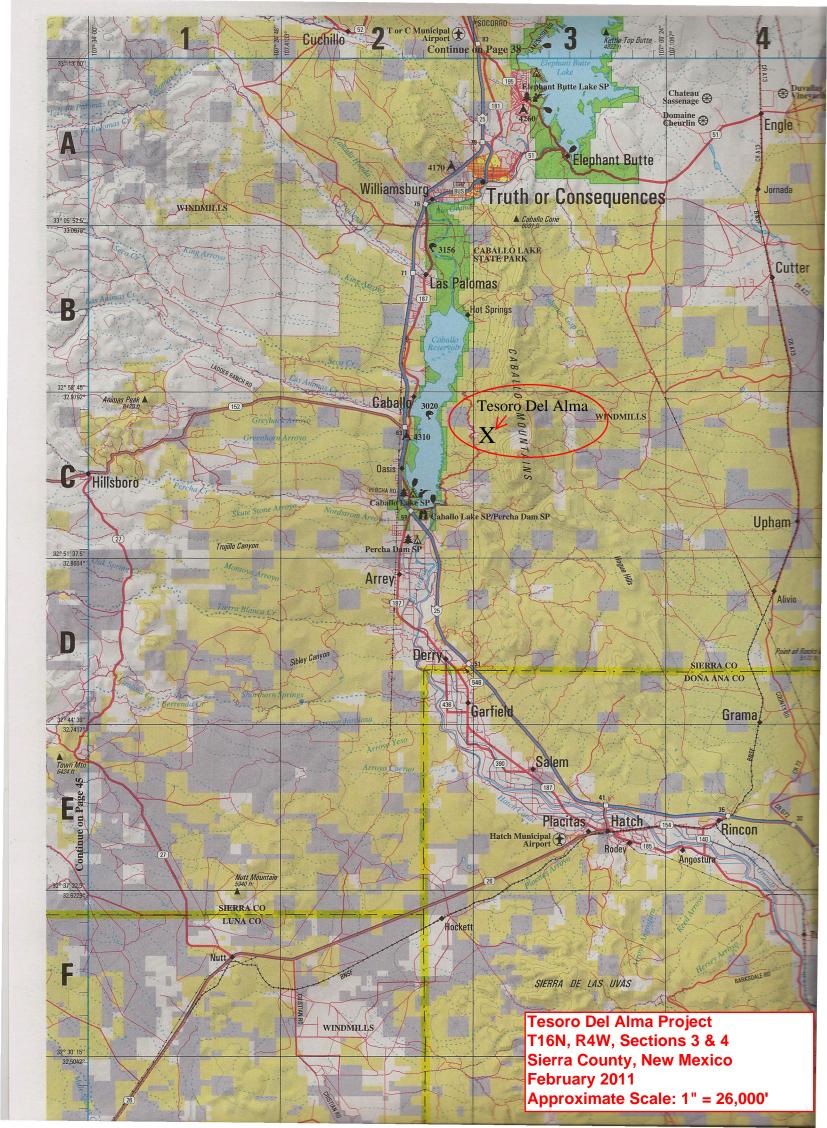
**Tesoro Del Alma Project** 

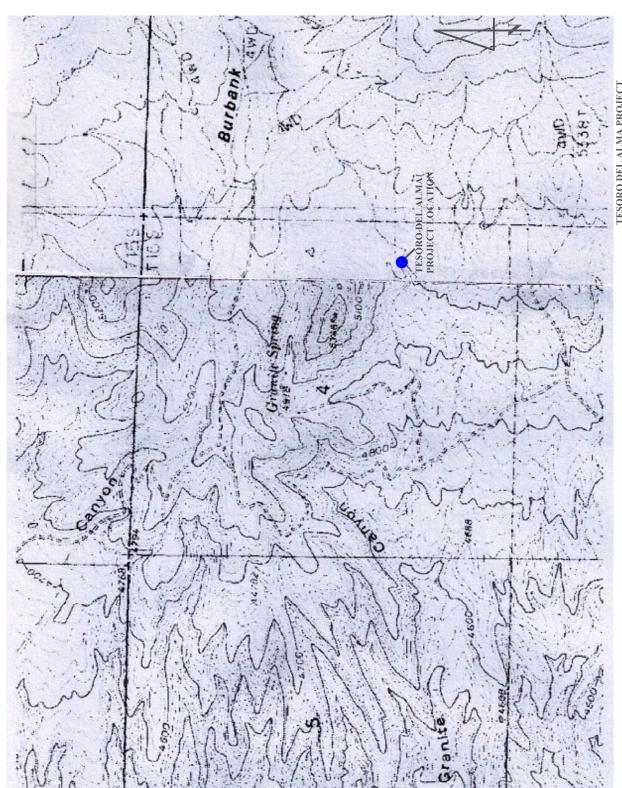
Maps, Figures, Topography and Cross Sections

**Existing Pre-Act Conditions** 

And

**Post Reclamation Topography and Cross Sections** 





TESORO DEL ALMA PROJECT
New Mexico Mining Act Reclamation Program
Minimal Impact Permit Application
Project Location and Project Boundary Map
T16S, R4W, Sections 3 & 4, Sierra County, New Mexico
Approximate Scale: 1" = 1,500
February 2011

