ANDALEX RESOURCES
CENTENNIAL PROJECT
C/007/019

CHANGE TO APPENDIX X

GVH 10 THRU 17

File in:
☐ Confidential
☐ Shelf
☒ Expandable
Refer to Record No 0018 Date 5/8/2007
In C/ 007/0018, 2007, Incomming
For additional information

110 MINIMUM REQUIREMENTS FOR LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

111 Introduction

This project is a "Ventilation Assistance Program", wherein hazardous "gob gas" from the longwall will be partially vented to the surface. The quantity and quality of the vented gas will be the same as that presently being discharged at the mine fan. The discharged "gob gas" will be of no commercial value.

Five holes have been approved and drilled in 2005. These are holes GVH#1, GVH#3, GVH#4, GVH#5 and GVH#6. Four additional holes were completed in early 2006 - GVH#5A, GVH #7, GVH #8 and GVH #9. Three additional holes were approved in late 2006 - GVH #5B, GVH #7A and GVH #8A. Of these, only 2 holes were drilled - GVH#7A and GVH#8. Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the bonding. GVH #7A was drilled on the existing disturbed pad area of GVH #7.

This proposal is for an additional 8 primary holes - GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17 and 7 alternate holes - GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, GVH#16A. The alternate holes would be located midway between the primary holes.

It is possible not all of the holes will be needed; however, all are proposed to be permitted in case they are needed. The existing reclamation bond is posted in the amount of $1,296,000.00. It has been determined that the total bonding amount for each additional GVH will be $28,000 per hole. Additional bonding of $224,000 has been secured for the 8 primary sites (GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17). Bonding will be in place for each site prior to any surface disturbing activities. GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, and GVH#16A presently do not have bonding in place. These holes are conditionally approved and will not be constructed until additional bonding has been posted. These holes are alternates to be constructed in the unlikely event that one of the primary holes fails for some reason or if additional holes are needed for safety of the miners.

The holes will be located on surface property owned by Dave R. and Mildred Cave, et al., and Mathis Land, Inc. The mineral rights are owned by Mathis Land, Inc. and the United States Government (B.L.M.) And are under lease by Andalex Resources, Inc. Memorandum of surface owner agreements are included in Appendix 4-2 of Appendix X.

The existing and proposed hole locations are described in Table 1-1 and are shown on Figure 1-1.

TABLE 1-2
Disturbed Acres by Well Site

Well Site	Status	Disturbed Acres	
		Original	Existing**
GVH-1	Hole Completed	1.15	0.52
GVH-3	Hole Completed	1.11	0.55
GVH-4	Hole Completed	0.95	0.45
GVH-5	Hole Completed	0.97	0.51
GVH-6	Hole Completed	1.49	0.46
GVH-5A	Hole Completed	0.76	0.59
GVH-7, 7A	Hole Completed	0.50	0.33
GVH-8	Hole Completed	0.65	0.65
GVH-9	Hole Completed	0.81	0.81
GVH-5B	Eliminated	-	-
GVH-8A	Hole Completed	1.25	0.49
GVH-10	Proposed	-	-
GVH-10A	Proposed	-	-
GVH-11	Proposed	-	-
GVH-11A	Proposed	-	-
GVH-12	Proposed	-	-
GVH-12A	Proposed	-	-
GVH-13	Proposed	-	-
GVH-13A	Proposed	-	-
GVH-14	Proposed	-	-
GVH-14A	Proposed	-	-
GVH-15	Proposed	-	-
GVH-15A	Proposed	-	-
GVH-16	Proposed	-	-
GVH-16A	Proposed	-	-
GVH-17	Proposed	-	-

* Redrilled on existing pad GVH#7.

** Existing acres reflect contemporaneous reclamation work completed to date.

Sage Grouse - Sage Grouse leks are known to exist within a mile or two north of the proposed drill sites in the park area. Therefore it is possible that the drill sites may be within Sage Grouse nesting areas. Prior to construction of any drill site an on-the-ground reconnaissance of the area will be conducted by knowledgeable wildlife biologists. If any nesting areas are found near the proposed drill sites the drill sites will be moved (in an east-west direction) in order to avoid the nest. Road access to the drill sites (including future sites) will be from the south, through Deadman Canyon rather than from the north through the park.

There are no known groundwater or surface water flows to the Colorado or Green Rivers with potential for impact by the drilling of the degas wells. Potential adverse affects to the four Colorado River endangered fish species (refer to Table 3-2) would not be likely since there is no direct route to the Colorado River or Green River from the proposed well locations. Per the Windy Gap Process consumption estimates for the degas wells are as follows: Drilling - approximately 100,000 gallons per hole; road watering - approximately 5,000 gallons per day for 70 days per year; evaporation from ventilation - zero, drill holes will not intersect the coal seam being mined, therefore no access to mine ventilation until after area is sealed; coal preparation - zero, no coal preparation at degas sites (see Sections 522 and 523); sediment pond evaporation - zero, no sediment pond at degas sites (see Section 732.200); subsidence effects on springs - zero, no anticipated subsidence at degas sites (see Section 525); alluvial aquifer abstraction into mines - zero, no alluvial aquifer abstractions associated with degas drill holes (see Sections 513.500 and 600); postmining inflow to workings - zero, no workings for postmining inflow associated with degas wells (see Sections 513.500 and 600); coal moisture loss - zero, no coal therefore no moisture loss (See Sections 522 and 523). The overall impact of the mining operations, (including the degas holes) is shown on Table 3-2. Based on these calculations, the mining operation has a net positive impact to the Colorado River Drainage by the addition of 45.001 ac.ft./year.

GVH#15, GVH#15A, GVH#16, GVH#16A, GVH#17. Each of the proposed hole locations (GVH#10 through GVH#17) along with access corridors, has had an intensive cultural resource survey and inventory completed on them. The results of these surveys are included in Attachment 4-3 - "Cultural Resource Survey and Inventory - Proposed Holes GVH-10 through GVH-17".

It should be noted that all sites had findings of "No Effect" and all were recommended for Archaeological Clearance.

Andalex Resources, Inc. agrees to notify the Division and State Historical Preservation Office (SHPO) of previously unidentified cultural resources discovered in the course of operations. Andalex also agrees to have any such cultural resources evaluated in terms of NRHP eligibility criteria. Protection of eligible cultural resources will be in accordance with Division and SHPO requirements. Andalex will also instruct its employees that it is a violation of federal and state low to collect individual artifacts or to otherwise disturb cultural resources.

411.200 Previous Mining Activity

Andalex Resource, Inc. has no knowledge of the removal of coal or other minerals in the well site areas.

412 Reclamation Plan

412.100 Postmining Land-Use Plan

All uses of the land prior to the wells construction/operation and the capacity of the land to support prior alternate uses will remain available throughout the life of the sites.

Andalex Resource, Inc. intends the postmining land use to be livestock and wildlife grazing and other uses as indicated by the land owner (hunting, etc.). Final reclamation activities will be completed in a manner to provide the lands to parallel the premining land use.

412.200 Land Owner or Surface Manager Comments

Surface lands are owned by Dave R. & Mildred Cave, et al., and Mathis Land, Inc. Appropriate landowner approvals have been obtained for the proposed wells. Required notification of drilling will be sent to the landowners prior to start. Memorandum of surface owner agreements are included in Appendix 4-2 of Appendix X.

APPENDIX X
ATTACHMENT 4-2
(SUPPLEMENT)

SURFACE OWNERS AGREEMENTS

Date 7-APR-2005 12:43pm
Fee: 20.00 Cash
SHARON MURDOCK, Recorder
Filed By AP
For SAMUEL QUIGLEY
CARBON COUNTY CORPORATION

MEMORANDUM OF DRILLING AND SURFACE USE AGREEMENT

THIS MEMORANDUM OF DRILLING AND SURFACE USE AGREEMENT (hereinafter "Agreement") made and entered into effective as of the 18th day of March, 2005, by and between Judson Dorse Critchlow and Cherie Critchlow, husband and wife, as joint tenants as to an undivided one-half interest in the surface estate and an undivided one-fourth interest in the mineral estate (except coal) and David R. Cave and Mildred Cave (also known as Mildred Jean Cave), husband and wife, as joint tenants as to an undivided one-half interest in the surface estate and an undivided one-fourth interest in the mineral estate (except coal) whose address is c/o David R. and Mildred Cave, 3379 East Highway 6, Price, Utah 84501 (hereinafter collectively called "Grantor"), and ANDALEX Resources, Inc., a Delaware corporation, whose address is 45 West 10000 South, #401, Sandy, Utah 84070 (hereinafter called "ANDALEX").

WITNESSETH:

The parties hereto agree:

1. Upon the terms and conditions set forth in that certain Drilling and Surface Use Agreement (hereinafter "Agreement"), effective of even date herewith, all of which are hereby incorporated herein as if set forth in full, Grantor does hereby consent to the use of the Premises by ANDALEX for underground coal mining operations and grants and conveys to ANDALEX and its affiliates as well as its employees agents, contractors, successors and assigns the rights and privileges as more fully set forth in said Drilling and Surface Use Agreement. The Premises subject to the Agreement are those certain land situated in Carbon County, State of Utah, more particularly described to wit:

Township 12 South, Range 11 East, SLB&M
Section 31: All (Lots 1 through 22, inclusive).

Township 13 South, Range 11 East, SLB&M
Section 6: All (Lots 1 through 8, inclusive)

Said lands are herein referred to as the "Premises"

2. The Drilling and Surface Use Agreement grants to ANDALEX a non-exclusive right to make use of the surface in connection with its underground mining operations including, but not limited to, the construction and maintenance of access roads and the siting and location of drill holes and the use of the surface and mineral estates for any and all purposes associated with the drilling maintenance, operation, refurbishment, sealing and reclamation of gob gas ventilation wells associated with underground mining operations.

3. The term of this Agreement terminates on March 17, 2011 subject to the right of ANDALEX to extend said term on a year-to-year basis in the event the Premises are needed in connection with ANDALEX's mining operations for no more than four additional one year periods.

IN WITNESS WHEREOF, the parties hereto have caused this Memorandum of Drilling and Surface Use Agreement and the Drilling and Surface Use Agreement to be signed effective as of the day and the year first above written.

GRANTOR:

Judson Dorse Critchlow

Cherie Critchlow

David R. Cave

Mildred Cave

SaltLake-250085.1 0020261-00001

ANDALEX Resources, Inc.
a Delaware Corporation

BY Samuel C. Quigley
Its: V.P. Operations

STATE OF UTAH)
)ss.
COUNTY OF CARBON)

On this day personally appeared before me Judson Dorse Critchlow, to me known to be the individual or individuals described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes mentioned.

Given under my hand and official seal this 7TH day of April, 2005.

NOTARY PUBLIC
LINDA KERNS
345 NORTH 700 EAST
PRICE, UT 84501
MY COMMISSION EXPIRES
MAY 08, 2005
STATE OF UTAH

Signature: Linda Kerns
Name (Print): LINDA KERNS
NOTARY PUBLIC in and for the State of Utah, residing at 345 N. 700 E., PRICE, UT.
My appointment expires: 05-08-05

STATE OF UTAH)
)ss.
COUNTY OF CARBON)

On this day personally appeared before me Cherie Critchlow, to me known to be the individual or individuals described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes mentioned.

Given under my hand and official seal this 7TH day of April, 2005.

NOTARY PUBLIC
LINDA KERNS
345 NORTH 700 EAST
PRICE, UT 84501
MY COMMISSION EXPIRES
MAY 08, 2005
STATE OF UTAH

Signature: Linda Kerns
Name (Print): LINDA KERNS
NOTARY PUBLIC in and for the State of Utah, residing at 345 N. 700 E. PRICE, UT.
My appointment expires: 05-08-05

SaltLake-250085.1 0020261-00001

STATE OF UTAH)
)ss.
COUNTY OF CARBON)

On this day personally appeared before me David R. Cave, to me known to be the individual or individuals described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes mentioned.

Given under my hand and official seal this 7TH day of April, 2005.

NOTARY PUBLIC
LINDA KERNS
345 NORTH 700 EAST
PRICE, UT 84501
MY COMMISSION EXPIRES
MAY 08, 2005
STATE OF UTAH

Signature: Linda Kerns

Name (Print): LINDA KERNS

NOTARY PUBLIC in and for the State of Utah, residing at 345 N. 700 E. Price, ut.
My appointment expires: 05.08.05

STATE OF UTAH)
)ss.
COUNTY OF CARBON)

On this day personally appeared before me Mildred Cave, to me known to be the individual or individuals described in and who executed the within and foregoing instrument, and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes mentioned.

Given under my hand and official seal this 7TH day of April, 2005.

NOTARY PUBLIC
LINDA KERNS
345 NORTH 700 EAST
PRICE, UT 84501
MY COMMISSION EXPIRES
MAY 08, 2005
STATE OF UTAH

Signature: Linda Kerns

Name (Print): LINDA KERNS

NOTARY PUBLIC in and for the State of Utah, residing at 345 N. 700 E. Price, ut.
My appointment expires: 05.08.05

SaltLake-250085.1 0020261-00001

STATE OF UTAH)
)ss.
COUNTY OF CARBON)

On this 7TH day of April, 2005, before me personally appeared Samuel C Quigley, to me known to be the V.P.Operations of, ANDALEX Resources, Inc. the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that Samuel C. Quigley was authorized to execute said instrument and that the seal affixed, if any, is the corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

NOTARY PUBLIC
LINDA KERNS
345 NORTH 700 EAST
PRICE, UT 84501
MY COMMISSION EXPIRES
MAY 08, 2005
STATE OF UTAH

Signature: Linda Kerns

Name (Print): LINDA KERNS

NOTARY PUBLIC in and for the State of Utah, residing at 345 N. 700 E., Price, UT 84501

My appointment expires: 05-08-05

SaltLake-250085.1 0020261-00001

MEMORANDUM OF UNDERGROUND COAL LEASE

THIS MEMORANDUM OF UNDERGROUND COAL LEASE ("Lease") entered into effective as of the 1st day of January, 1998, among **Mathis Land, Inc.**, a Utah corporation, c/o William Dale Mathis, 643 South 200 East, Price, Utah 84501; **Rex Morrell Mathis**, Box 311, Duchesne, Utah 84021; **JoAnn L. Mathis Ross**, 1208 North 575 West, Centerville, Utah 84014; **William Dale Mathis**, 643 South 200 East, Price, Utah 84501; **Marc Pickup** and **Shawnda Pickup Cave** (Mark Pickup and Shawnda Pickup Cave are executing individually and as an heir to the Estate of Gwen Dora Mathis Pickup, respectively son and daughter) having an address at 818 North 900 West, Price, Utah 84501 (collectively all of the above hereinafter referred to as "Lessors"); and ANDALEX Resources, Inc., a Delaware corporation, with an address at 45 West 10000 South, Suite 401, Sandy, Utah 84070, hereinafter called "Lessee."

W I T N E S S E T H:

The parties hereto agree:

1. Upon the terms and conditions set forth in that certain Underground Coal Lease (hereinafter "Lease"), effective of even date herewith, all of which are hereby incorporated herein as if set forth in full, Lessor does hereby grant and lease unto Lessee for the purposes described in paragraph 2 of this Memorandum of Underground Coal Lease and in the Lease those certain lands situated in Carbon County, State of Utah, more particularly described as follows, to-wit:

Township 12 South, Range 10 East, SLB&M

Section 36: All.

00065992 Bk00408 Pg00348-00355

ANN B. O'BRIEN-COUNTY OF CARBON
1998 MAY 07 10:19 AM FEE $28.00 BY
REQUEST: ANDALEX RESOURCES, INC

2. The Underground Coal Lease grants to Lessee the exclusive right and privilege to explore for, mine (by any method), remove extract, store, prepare, ship and dispose of the coal and gas occurring in coal seams, beds or deposits when vented as a non-commercial substance in conjunction with coal development or extraction operations. The leasing, exploration for, or development of other minerals or substances other than coal and substances mixed with coal shall not interfere in any way with the coal mining operations of the Lessee during the term of this Lease. Leases related to other minerals issued by Lessors after the date of this Lease shall be specifically made subject to the priority of the coal mining operations.

3. The term of the Lease is for a term of ten (10) years which commenced on January 1, 1998, subject to the right of Lessee to extend said term for ten (10) additional periods of one year.

00065992 Bk00408 Pg00349

IN WITNESS WHEREOF, the parties hereto have caused this Memorandum of Underground Coal Lease and the Underground Coal Lease to be signed effective as of the day and year first above written.

SOCIAL SECURITY NUMBER OR EMPLOYER IDENTIFICATION NO.:	LESSORS:
87-0379137	MATHIS LAND, INC., a Utah Corporation
	By: Wm Dale Mathis Its: President
529-56-7255	Rex Morrell Mathis Rex Morrell Mathis
528-66-3380	JoAnn L. Mathis Ross JoAnn L. Mathis Ross
528-66-3381	Wm Dale Mathis William Dale Mathis
	HEIRS OF GWEN DORA MATHIS PICKUP:
529-21-2381	Marc Pickup ~~Mark~~ Pickup Marc
528-21-9058	Shawnda Pickup Cave Shawnda Pickup Cave

00065992 Bk00408 Pg00350

LESSEE:

61-0931325

ANDALEX RESOURCES, INC.,
a Delaware corporation

By: Samuel C Dudley
Its: ~~V. President - Western Operations~~

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 6 day of May, 1998, personally appeared before me William Dale Mathis, the President of Mathis Land, Inc., a Utah corporation, who signed the foregoing instrument on behalf of Mathis Land, Inc. and acknowledged to me that he executed the same.

NYLA NOYES
NOTARY PUBLIC • STATE of UTAH
190 N. CARBON AVE.
PRICE, UT. 84501
COMM. EXP. 11-17-1999

Nyla Noyes
Notary Public
Residing at: Price, Utah

My commission expires:

11-17-99

00065992 Bk00408 Pg00351

00065992 Bk00408 Pg00352

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 6th day of May, 1998, personally appeared before me Rex Morrell Mathis, who signed the foregoing instrument and acknowledged to me that he executed the same.

NYLA NOYES
NOTARY PUBLIC • STATE of UTAH
190 N. CARBON AVE.
PRICE, UT. 84501
COMM. EXP. 11-17-1999

Nyla Noyes
Notary Public
Residing at: Price, Utah

My commission expires:

11-17-99

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 5 day of May, 1998, personally appeared before me JoAnn L. Mathis Ross, who signed the foregoing instrument and acknowledged to me that she executed the same.

Margie Hancock
Notary Public
Residing at: Centerville

My commission expires:

5/12/99

MARGIE HANCOCK
Notary Public
STATE OF UTAH
My Comm. Expires MAY 12, 1999
25 WEST PARRISH LANE CENTERVILLE UT 84014

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 6th day of May, 1998, personally appeared before me William Dale Mathis, who signed the foregoing instrument and acknowledged to me that he executed the same.

NYLA NOYES
NOTARY PUBLIC • STATE of UTAH
190 N. CARBON AVE.
PRICE, UT. 84501
COMM. EXP. 11-17-1999

Nyla Noyes
Notary Public
Residing at: Price, Utah

My commission expires:

11-17-99

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 4th day of May, 1998, personally appeared before me Marc Pickup, who signed the foregoing instrument and acknowledged to me that he executed the same.

NYLA NOYES
NOTARY PUBLIC • STATE of UTAH
190 N. CARBON AVE.
PRICE, UT. 84501
COMM. EXP. 11-17-1999

Nyla Noyes
Notary Public
Residing at: Price, Utah

My commission expires:

11-17-99

00065992 Bk00408 Pg00353

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 4th day of May, 1998, personally appeared before me Shawnda Pickup Cave, who signed the foregoing instrument and acknowledged to me that she executed the same.

NYLA NOYES
NOTARY PUBLIC • STATE of UTAH
190 N. CARBON AVE.
PRICE, UT. 84501
COMM. EXP. 11-17-1999

Nyla Noyes
Notary Public
Residing at: 11-17-99 Price, Utah

My commission expires:

11-17-99

STATE OF UTAH)
: ss.
COUNTY OF SALT LAKE)

On the 6th day of May, 1998, personally appeared before me Samuel C. Quigley, the V. President - Western Operations of ANDALEX Resources, Inc., who signed the foregoing instrument on behalf of ANDALEX Resources, Inc. and acknowledged to me that he executed the same.

NYLA NOYES
NOTARY PUBLIC • STATE of UTAH
190 N. CARBON AVE.
PRICE, UT. 84501
COMM. EXP. 11-17-1999

Nyla Noyes
Notary Public
Residing at: Price, Utah

My commission expires:

11-17-99

00065992 Bk00408 Pg00354

E 110733 B 588 P 77
Date 6-APR-2005 8:23am
Fee: 13.00 Check
SHARON MURDOCK, Recorder
Filed By SR
For WHITE JOANE PAPPAS
CARBON COUNTY CORPORATION

MEMORANDUM OF LICENSE AGREEMENT

This Memorandum of License Agreement (hereinafter "Agreement") is made and entered into effective as of the 29th day of March 2005 by and between Funnon T. Shimmin, also known as Funnon Thayn Shimmin, whose address is 1551 East North Coal Creek Road, Wellington, Utah 84542 (hereinafter "Owner") and ANDALEX Resources, Inc., a Delaware corporation, whose address is 45 West 10000 South, #401, Sandy, Utah 84070 (hereinafter "ANDALEX").

W I T N E S S E T H:

The parties hereto agree:

1. Upon the terms and conditions set forth in that certain License Agreement with Surface Owner Consent (hereinafter "License") effective of even date herewith, all of which are hereby incorporated herein as if set forth as in full, Owner does hereby consent to the use of the Premises by ANDALEX for the drilling of gob gas vent holes as necessary for underground coal mining operations and hereby licenses and permits ANDALEX subject to the terms and conditions stated in the License to access the Premises using roads on the Premises and on the Access Lands for the purpose of transporting men, materials and equipment and the establishment of gob gas well sites associated with the drilling of up to 3 gob gas ventilation wells. The Premises subject to the License are those certain lands situated in Carbon County, State of Utah, more particularly described as follows to wit:

<u>Township 12 South, Range 11 East, SLB&M</u>
Section 32: all

The "Access Lands" as referred to in the License and made subject to this Agreement are more particularly described as follows to wit:

<u>Township 12 South, Range 11 East, SLB&M</u>
Section 29: S½; NE¼

2. The term of this Agreement and the License commences on March 22, 2005 and shall terminate as of December 31, 2010 subject to the right of ANDALEX to extend the term upon written notice to Owner.

IN WITNESS WHEREOF, the parties hereto have caused this Memorandum of License Agreement and the License Agreement with Surface Owner Consent to be signed effective as of the day and the year first above written.

OWNER

Funnon T. Shinnin

ANDALEX Resources, Inc.

By: Samuel C Quigley
Its: VP. Operations

STATE OF UTAH)
: ss.
COUNTY OF CARBON)

The foregoing instrument was acknowledged before me this 5th day of March, 2005, by Funnon T. Shimmin.

KATHLEEN ATWOOD
NOTARY PUBLIC • STATE of UTAH
100 N. 200 W. #13
HUNTINGTON, UT 84528
COMM. EXPIRES 12-2-2007

Notary Public for
Residing at:
My Commission Expires:

STATE OF UTAH)
: ss.
COUNTY OF CARBON)

The foregoing instrument was acknowledged before me this 5 day of March, 2005, by Samuel C. Quigley, its V. P. of ANDALEX Resources, Inc., a Delaware corporation located at 45 West 10000 South, #401, Sandy, Utah 84070.

KATHLEEN ATWOOD
NOTARY PUBLIC • STATE of UTAH
100 N. 200 W. #13
HUNTINGTON, UT 84528
COMM. EXPIRES 12-2-2007

Notary Public for
Residing at:
My Commission Expires:

SaltLake-249556.1 0020261-00001

527 Transportation Facilities

527.100 Road Classification

Well sites will be developed near existing private roads whenever possible. The new access roads will be classified as ancillary roads and will be maintained by the permitee.

527.200 Description of Transportation Facilities

The well sites have been chosen close to existing roads whenever possible in the area to limit surface disturbance. The existing roads were constructed and are maintained by the land owner. The existing roads are approximately 16 feet wide. See Figure 5-5 for a typical cross section of the existing roads.

The following is a description of each of the roads used to access the GVH Sites:

Right Fork of Deadman Canyon - This road is located in the bottom of Deadman Canyon north of the Centennial Project Minesite surface facilities. The road was existing, constructed by the surface owner; however, it did require minor drainage control upgrades in the form of 18" and 24" culverts, and slight widening of sharp turns for drilling equipment access. This road is approximately 12,300' long with an average slope of 11.79% and is approximately 16' wide. The road runs from the Centennial Minesite to the top of the ridge. The road is native rock and gravel surfaced, and is protected from runoff by a combination of berms, road ditches and culverts. This road will remain in place upon completion of the drilling project.

GVH-5 - This road runs from the top of Deadman Canyon along the fence line past the GVH-5 Site. This is an existing road, approximately 16' wide, 4400' in length, with an average slope of approximately 5.00%. The road is constructed on native material and protected from runoff by berms, ditches and culverts as needed. From this existing road a short (250') road was constructed to the drill site. This short segment will be reclaimed when no longer used. There are no plans to remove or reclaim the existing road.

GVH-5A - This road was constructed from an existing road (see GVH-5) west approximately 800' to GVH-5A. The road is approximately 16' wide with a slight slope to the pad. This road will be reclaimed when no longer used.

GVH-5B - This site was originally proposed approximately halfway between GVH-5 and GVH-5A but has been eliminated due to changes in the mining plan.

GVH-1 - This is a short section of road running from an existing road to the GVH-1 Site. The road was constructed on native material by ARI, and is approximately 16' wide, 300' in length and has an average slope of 3.33%. The drainage is controlled by ditches and berms, with runoff retained on the pad. This road will be removed and reclaimed unless requested otherwise by the landowner.

GVH-6 - This road is constructed from an existing road. The newly constructed segment is approximately 16' wide, 1500' long and has an average slope of 2.67%. It is constructed on native material, with gravel used as needed on soft areas. Drainage is controlled by a combination of ditches and berms. This road will be removed and reclaimed when no longer used unless otherwise directed by the landowner.

Ridge Road - This is an existing road along the ridge above the Right and Left Forks of Deadman Canyon. The road is approximately 16' wide, 7100' long and has an average grade of 3.10%. It runs westward from the top of the Right Fork of Deadman Canyon to the turnoff to the road to GVH-9. The road is constructed on native material and being on the ridgeline, has need for only minimal drainage control in the form of ditches where needed. This road will remain in place after the project is completed.

GVH-3 - This is an existing road from the Ridge Road to the GVH-3 Site. The road is approximately 16' wide, 1200' long and has an average grade of 4.17%. The road is constructed on native material and hydrologic controls consist of berms and ditches. This road is not scheduled for removal after the project is completed.

GVH-7 - This section of road is from GVH-3 to GVH-7 and is a continuation of the existing road to GVH-3. This section is approximately 16' wide, 1600' long and at an average grade of 8.13%. The road is constructed on native material and hydrologic controls are primarily from ditches. This road is also scheduled to remain after the project.

GVH-7A - This site will be a re-drill of existing site GVH-7, and will use the existing access road to GVH-7.

GVH-8 - This is a newly constructed road from GVH-4 to GVH-8. The road is approximately 16' wide, 1700' long and at an average grade of 8.0%. The road is on native material and hydrologic controls are primarily from ditches. This road will be reclaimed when no longer used unless otherwise directed by the landowner.

GVH-8A - This site is accessed by a short spur road to be constructed from the road which presently provides access to GVH-8. The spur road is approximately 650' long, 16' wide with an average grade of approximately 7.5%. The road is constructed on native material with runoff control primarily by berms. The spur road will be removed and reclaimed unless otherwise directed by the landowner.

GVH-4 - This newly constructed road runs from the Ridge Road to the GVH-4 Site. It is approximately 16' wide, 1100' long at an average grade of approximately 3.64%. The road was constructed on native material, and runoff is controlled by ditches and berms with containment on the pad. This road will be removed and reclaimed when no longer used unless otherwise requested by the landowner.

GVH-9 - This is an existing road from the Ridge Road to the GVH-9 Site. The road is approximately 16' wide, 3500' long and has an average grade of approximately 8.14%. The road is constructed on native material and runoff is controlled by ditches and berms. Since this is also an existing road, it will not be removed unless requested by the landowner.

GVH-10 - This site will be accessed along the same existing road that accesses GVH-1 and GVH-5. The road parallels the fence line and is approximately 16' wide, 1700' long and has an average grade of approximately 12.5%. The road is constructed on native material, and hydrologic controls are primarily from ditches and berms. The road is not scheduled for removal after the project is completed.

GVH-10A - This site will be accessed from a short (150') newly constructed road from the existing road which accesses GVH-10. The road will be approximately 150' in length, 16' wide and at an average grade of -3.75%. The road will be constructed on native material with hydrologic controls primarily by ditches and berms. This road will be reclaimed when no longer used unless directed otherwise by the landowner.

GVH-11 - This site will be on the existing road below GVH-6. The road is approximately 16' wide at an average grade of -5.00%. The existing road is on native material with drainage controls primarily by ditches or berms. This road is not scheduled to be removed.

GVH-11A - This road will be constructed from the existing road at site GVH#11. The constructed road will be approximately 450' in length, 16' wide and at an average grade of -8.88%. The road will be built on native material with runoff control by ditches or berms. This road is scheduled to be removed and reclaimed.

GVH-12 - This road will also be constructed from the above referenced road to GVH#11A. It will be approximately 600' in length, 16' wide and at an average grade of -10.00%. It will be built on native material and runoff control will be primarily from ditches or berms. This road will be removed and reclaimed.

GVH-12A - This road will be constructed from the above referenced road to GVH#12. The new road will be approximately 600' long, 16' wide at an average grade of -7.5%. It will be built on native material with runoff control by ditches or berms. This road is also planned to be removed and reclaimed.

GVH-13 - This site is on an existing road on the east side of the Right Fork of Summit Creek, as shown on Figure 1-1. The road is approximately 16' wide and at an average grade of -6.67%. It is built on native material with runoff control by ditches. This road is not scheduled to be removed and reclaimed at the completion of operations.

GVH-13A - This site is on an existing road below GVH-7. The existing road is approximately 16' wide and at an average grade of -8.13%. The road is constructed on native material with hydrologic controls primarily from ditches. This road is scheduled to remain.

GVH-14 - This site is also located on the existing road below GVH-7 as referenced above. It is also approximately 16' wide, on native material with runoff control by ditches. This road will also remain after the project.

GVH-14A - This site is also on the above referenced existing road for GVH-13A and GVH-14. The road is approximately 16' wide and constructed on native material. Runoff control is primarily by ditches. This road will also remain after the project.

GVH-15 - This will be a newly constructed road from the existing road below GVH-8. The new road will be approximately 600' long, 16' wide and have an average grade of -10.83%. It will be constructed on native material with runoff control by ditches and/or berms. This road will be removed and reclaimed.

GVH-15A - This site is located on an existing road. It is not scheduled to be removed.

GVH-16 - This site is on the existing road below GVH-9. The existing road is approximately 16' wide with an average grade of - 8.14%. The road is on native material with ditches and berms for runoff control. This road is scheduled to remain.

GVH-16A - This site will be accessed by a new road constructed from the above referenced road below GVH-9. The new road will be approximately 500' long, 16' wide with an average grade of +8.00%. It will be on native material with runoff control by ditches an/or berms. The new portion of road is scheduled to be removed and reclaimed.

GVH-17 - This site will be accessed from a short spur road leading from the existing road (which also serves as the OSO pipeline corridor). The GVH-17 road will be approximately 400' long, 16' wide and have an average grade of -8.00%. It will be on native material with runoff control by ditches and/or berms. This spur road will be removed and reclaimed when no longer used unless otherwise directed by the landowner.

All roads described above are shown on Figure 1-1 of this Appendix.

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810 BONDING DEFINITIONS AND DIVERSION RESPONSIBILITIES

This chapter provides information regarding the bonding for reclamation of the completed and proposed gob gas vent hole sites at the Centennial Project. Andalex, Resources, Inc. has on file with the Division a bond payable to the Division for performance of all requirements of the State Program.

Completed holes are GVH#1, GVH#3, GVH#4, GVH#5, GVH#5A, GVH#6, GVH#7, GVH#7A, GVH#8, GVH#8A, and GVH#9. The following is a list of holes proposed for approval - GVH#10, GVH#10A, GVH#11, GVH#11A, GVH#12, GVH#12A, GVH#13, GVH#13A, GVH#14. GVH#14A, GVH#15, GVH#15A, GVH#16, GVH#16A and GVH#17. All holes are shown on Figure 1-1.

Due to required changes in the mining plan, hole GVH#5B will not be drilled and has been shown as eliminated, although the site has been approved and included in the existing bonding.

820 REQUIREMENTS TO FILE A BOND

A description of the disturbed area location for each well site is found in Chapter 1, Table 1-1. Reclamation of the disturbed areas are discussed in Section 340 of this submittal. The performance bond period is for the duration of coal mining and reclamation operations including the extended period designated by the Division. The bond is in the form of a surety bond and is described in Section 860 of the M&RP.

830 DETERMINATION OF BOND AMOUNT

The existing reclamation bond is posted in the amount of $1,296,000.00. It has been determined that the total bonding amount for each additional GVH will be $28,000 per hole. Additional bonding of $224,000 has been secured for the 8 primary sites (GVH#10, GVH#11, GVH#12, GVH#13, GVH#14, GVH#15, GVH#16, and GVH#17). Bonding will be in place for each site prior to any surface disturbing activities. GVH#10A, GVH#11A, GVH#12A, GVH#13A, GVH#14A, GVH#15A, and GVH#16A presently do not have bonding in place. These holes are conditionally approved and will not be constructed until additional bonding has been posted. These holes are alternates to be constructed in the unlikely event that one of the primary holes fails for some reason or if additional holes are needed for safety of the miners.

840 GENERAL TERMS AND CONDITIONS OF THE BOND

Refer to Chapter 8 and Appendix B of the approved M&RP.

850 BONDING REQUIREMENTS FOR UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES

Refer to Chapter 8 of the approved M&RP.

860 FORMS OF BONDS

Refer to Chapter 8 of the approved M&RP.

870 REPLACEMENT BONDS

Refer to Chapter 8 of the approved M&RP.

880 REQUIREMENTS TO RELEASE PERFORMANCE BONDS

The applicant will comply with the requirements described in Section R645-301-880 of the Division regulations when applying for the release of performance bonds.

890 TERMS AND CONDITIONS FOR LIABILITY INSURANCE

Certificates of insurance issued for the Centennial Project are included in Appendix B of the approved M&RP.

Bonding Calculations
Centennial Mine C/007/019

Bond Summary

Direct Costs		
Subtotal Demolition and Removal	$371,538.00	
Subtotal Backfilling and Grading	$426,800.00	
Subtotal Revegetation	$210,074.00	
Direct Costs	$1,008,412.00	
Indirect Costs		
Mob/Demob	$100,841.00	10.0%
Contingency	$50,421.00	5.0%
Engineering Redesign	$25,210.00	2.5%
Main Office Expense	$68,572.00	6.8%
Project Mainagement Fee	$25,210.00	2.5%
Subtotal Indirect Costs	$270,254.00	26.8%
Total Cost	$1,278,666.00	
Escalation factor		0.012
Number of years		4
Escalation	$62,490.00	
Reclamation Cost	$1,341,156.00	
Bond Amount (rounded to nearest $1,000) 2009 Dollars	$1,341,000.00	
Bond Posted	$1,520,000.00	
Difference Between Cost Estimate and Bond	-$179,000.00	
Percent Difference	13.35%	

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Aberdeen Mine																			1600
		Loadout Bin No 01																			325
		Concrete No 02																			2880
		Reclaim No 03																			800
		Conveyor No 04																			1200
		Hopper No 05																			1300
		Conveyor No 06																			1728
		Tunnel No 07																			640
		Fan No 08																			1914
		Substation No 09																			188
		Water Tank No 10																			2560
		Portals No 11																			15135
		Subtotal																			
		Main Office																			10889
		Main Office No 12																			10889
		Subtotal																			
		Bath House																			5150
		Bath House No 13																			5150
		Subtotal																			
		Upper Pinnacle																			3373
		Substation No 14																			2245
		Loadout Bin No 15																			640
		Conveyor No 16																			461
		Reclaim No 17																			1152
		Hopper No 18																			740
		Conveyor No 19																			1728
		Tunnel No 20																			282
		Water Tank No 21																			314
		Rock Dust Tank No 22																			3036
		Trailers No 23																			14560
		Portals No 24																			28531
		Subtotal																			
		Lower Pinnacle																			1999
		Office No 25																			7680
		Portals No 26																			9679
		Subtotal																			
		Shop/Warehouse																			39105
		Shop/Warehouse No 27																			39105
		Subtotal																			
		Apex																			1657
		Loadout No 28																			1120
		Conveyor No 29																			3264
		Reclaim No 30																			1843
		Hopper No 31																			1000
		Conveyor No 32																			2400
		Tunnel No 33																			13920
		Portals No 34																			188
		Water Tank No 35																			800
		Shed No 36																			38
		Magazines No 37																			1917
		Substation No 38																			1755
		Office No 39																			29902
		Subtotal																			
		Culverts																			18100
		Culverts No 41																			18100
		Subtotal																			
		Gob Vent Well																			73980
		Gob Vent Well 1, 3, 4, 5, 5A, 6, 7, 8, 9																			24660
		Gob Vent Well 2679																			65760
		Gob Vent Well 10 thru 17																			164400
		Subtotal																			
2679		Vent Shaft Blowing Fan																			48537
2679		Aberdeen Substation																			2110
		Subtotal																			50647
		Total																			371558

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Loadout Bin No 01																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	20								FT		8000	CF	1600
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1600
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
																					1600

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Concrete No 02																			
		Structure's Demolition Cost																			
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	20	28	0.75								FT		16	CY	64
		Concrete's Vol. Demolished																1.3	21	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													21	CY	29
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													21	CY	72
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													21	CY	160
																					325
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					325

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Reclaim No 03																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	8	12	150										14400	CF	2880
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			2880
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					2880

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor No 04																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	4	4	250								FT		4000	CF	800
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					800
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					800

Task ID	Ref.	Description Hopper No 05	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Hopper No 05																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	15								FT		6000	CF	1200
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					1200
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1200

p

Task ID	Ref.	Description Conveyor No 06	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor No 06																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	5	5	260								FT		6500	CF	1300
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					1300
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1300

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Tunnel No 07																			
		Structure's Demolition Cost	Steel Bid. Large	02220 110 0012	0.2	/CF	8	12	90								FT		8640	CF	1728
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1728
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1728

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Fan No 08																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	8	20	20								FT		3200	CF	640
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			640
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			640

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Substation No 09																			
		Structure's Demolition Cost																			
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Equipment 's Disposal Cost	Mechanical equipment heavy	15055 300 3600	805	/ton										2	EA		2	EA	1610
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					1610
		Equipment 's Disposal Cost	Chain link remove 8'-10'	02220 220 1700	2.92	/LF	104										FT		104	FT	304
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					304
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1914

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Water Tank No 10																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF						941					CF		941	CF	188
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			188
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			188

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Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Portals No 11																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	8							4	CF		12800	CF	2560
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			2560
		Portals are already sealed																			
		Equipment 's Disposal Cost	Seal Portals	AML1	5200	EA.										0	EA		0	EA	0
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			0
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
																					2560

p

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Main Office No 12																			
		Office's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	32	60	16								FT		30720	CF	6451
		Trailer's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	8	12	70								FT		6720	CF	1411
		Water Tank's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF						706					CF		706	CF	141
		Structure's Vol. Demolished nonsteel																0.35	485	CY	
		Structure's Vol. Demolished steel																0.1	3	CY	
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel	City Services	City Service Price	4	/CY													485	CY	1940
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		[illegible]																			9943
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY						47.15					CT		47	CY	187
		Concrete's Vol. Demolished																1.3	61	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													61	CY	85
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													61	CY	210
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													61	CY	464
		[illegible]																			946
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		[illegible]																			10889

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Bath House No 13																			
		Bath House 1's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	14	65	8								FT		7280	CF	1529
		Bath House 2's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	12	50	8								FT		4800	CF	1008
		Trailer's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	12	42	8								FT		4032	CF	847
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF						941				2	CF		1882	CF	376
		Structure's Vol. Demolished non steel																			
		Structure's Vol. Demolished steel																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel	City Services	City Service Price	4	/CY												0.35	177	CY	708
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			4466
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	14	65	0.5								FT		17	CY	67
		Concrete's Vol. Demolished																1.3	22	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													22	CY	31
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													22	CY	76
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													22	CY	167
		Subtotal																			341
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	14	65	0.5								FT		17	CY	67
		Concrete's Vol. Demolished																1.3	22	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													22	CY	31
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													22	CY	76
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													22	CY	167
		Subtotal																			341
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			5150

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Substation No 14																			
		Structure's Demolition Cost																			
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			
		Transformers																			
		Equipment 's Disposal Cost	Mechanical equipment heavy	15055 300 3600	805	/ton										3	EA		3	EA	2415
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			2415
		Chain Link Fence																			
		Equipment 's Disposal Cost	Chain link remove 8'-10'	02220 220 1700	2.92	/LF	328										FT		328	FT	958
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			958
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			3373

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Loadout Bin No 15																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	24								FT		9600	CF	1920
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1920
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	20	24	0.75								FT		16	CY	64
		Concrete's Vol. Demolished																1.3	21	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													21	CY	29
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi, md. tri	02315 490 0320	3.44	/CY													21	CY	72
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													21	CY	160
		Subtotal																			325
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			2245

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor No 16																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	4	4	200								FT		3200	CF	640
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		[illegible]																			640
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		[illegible]																			640

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Reclaim No 17																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	8	12	24								FT		2304	CF	461
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		[illegible]																			461
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		[illegible]																			461

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Hopper No 18																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	10	24	24								FT		5760	CF	1152
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					1152
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1152

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor No 19																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	4	5	185								FT		3700	CF	740
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			740
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					740

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Tunnel No 20																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	8	12	90										8640	CF	1728
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1728
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1728

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Water Tank No 21																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF						1412					CF		1412	CF	282
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					282
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					282

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Rock Dust Tank No 22																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF						1570					CF		1570	CF	314
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		[illegible]																			314
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		[illegible]																			314

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Trailers No 23																			
		Structure's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	10	55	8								FT		4400	CF	924
		Structure's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	10	50	8								FT		4000	CF	840
		Structure's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	10	40	8								FT		3200	CF	672
		Structure's Vol. Demolished																0.35	150	CY	
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel	City Services	City Service Price	4	/CY													150	CY	600
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					3036
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					3036

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Portals No 24																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	8							4	FT		12800	CF	2560
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					2560
		Equipment 's Disposal Cost	Seal Portals (Cost /sqft)	AML 4	25	/SqFt	20	6								4	FT		480	Sq. Ft	12000
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					12000
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					14560

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Office No 25																			
		Structure's Demolition Cost	Steel Bid. Large	02220 110 0012	0.2	/CF	24	42	8								FT		8064	CF	1613
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1613
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	24	42	0.5								FT		19	CY	75
		Concrete's Vol. Demolished																1.3	25	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													25	CY	35
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													25	CY	86
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													25	CY	190
		Subtotal																			386
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			1999

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Portals No 26																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	7							3	FT		8400	CF	1680
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1680
		Equipment 's Disposal Cost	Seal Portals (Cost /sqft)	AML 4	25	/SqFt	20	4								3	EA		240	Sq. Ft.	6000
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			6000
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			7680

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		ShopWarehouse No 27																			
		Structure's Demolition Cost	Steel Bld, Large	02220 110 0012	0.2	/CF	150	60	18								FT		162000	CF	32400
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					32400
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	150	60	1										333	CY	1322
		Concrete's Vol. Demolished																1.3	433	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													433	CY	602
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													433	CY	1490
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													433	CY	3291
																					6705
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					39105

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Loadout No 28																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	18								FT		7200	CF	1440
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					1440
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition															FT				
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	20	20	0.75										11	CY	44
		Concrete's Vol. Demolished																1.3	14	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY													14	CY	19
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY													14	CY	48
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY													14	CY	106
																					217
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1657

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor No 29																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	4	4	350								FT		5600	CF	1120
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		SUBTOTAL																			1120
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		SUBTOTAL																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		SUBTOTAL																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		SUBTOTAL																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		SUBTOTAL																			
		TOTAL																			1120

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Reclaim No 30																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	8	12	170								FT		16320	CF	3264
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		[illegible]																			3264
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		[illegible]																			
		[illegible]																			3264

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Hopper No 31																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	24	24	16								FT		9216	CF	1843
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					1843
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1843

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Conveyor No 32																			
		Structure's Demolition Cost	Steel Bid. Large	02220 110 0012	0.2	/CF	5	4	250								FT		5000	CF	1000
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					1000
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					1000

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Tunnel No 33																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	8	12	125								FT		12000	CF	2400
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					2400
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					2400

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Portals No 34																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	6							4	FT		9600	CF	1920
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1920
		Equipment 's Disposal Cost	Seal Portals (Cost /sqft)	AML 4	25	/SqFt	20	6								4	EA		480	Sq. Ft.	12000
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			12000
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			13920

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Water Tank No 35																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF					941						CF		941	CF	188
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					188
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					188

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Shed No 36																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	10	50	8								CF		4000	CF	800
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			800
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			800

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Magazines No 37																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	4	4	6							2	FT		192	CF	38
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			38
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			38

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Substation No 38																			
		Structure's Demolition Cost	Mechanical equipment heavy	15055 300 3600	805	/ton										2	EA		2	EA	1610
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1610
		Fence																			
		Equipment 's Disposal Cost	Chain link remove 8'-10'	02220 220 1700	2.92	/LF	105										FT		105	FT	307
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			307
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
																					1917

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Office No 39																			
		Structure's Demolition Cost	Mixed Materials Bld. Large	02220 110 0100	0.21	/CF	25	40	8								FT		8000	CF	1680
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel	City Services	City Service Price	4	/CY															
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			1680
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	3.97	/CY	25	40	0.5								FT		19	CY	75
		Concrete's Vol. Demolished																			
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.39	/CY															
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.44	/CY															
		Disposal Costs	On site disposal	02220 240 5550	7.6	/CY															
		Subtotal																			75
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
																					1755

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Portals No 40																			
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	25	8								FT		4000	CF	800
		Structure's Demolition Cost	Steel Bld. Large	02220 110 0012	0.2	/CF	20	20	8							2	FT		6400	CF	1280
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
																					2080
		Equipment 's Disposal Cost	Seal Portals (Cost /sqft)	AML 4	25	/SqFt	20	6								2	EA		240	Sq. Ft.	6000
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					6000
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					8080

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Culverts No 41																			
		12 inch culvert remove	Excavation Bulk Bank 2 CY (322BL)	02315 424 0260	1.7	/CY	260	4	2										77	CY	131
		12 inch culvert backfill	Backfill Trench Mininal Haul 2 1/4 CY	02315 610 3080	1.53	/CY													77	CY	118
		18 inch culvert remove	Excavation Bulk Bank 2 CY (322BL)	02315 424 0260	1.7	/CY	1340	4	3										596	CY	1013
		18 inch culvert backfill	Backfill Trench Mininal Haul 2 1/4 CY	02315 610 3080	1.53	/CY													596	CY	912
		24 inch culvert remove	Excavation Bulk Bank 2 CY (322BL)	02315 424 0260	1.7	/CY	330	4	4										196	CY	333
		24 inch culvert backfill	Backfill Trench Mininal Haul 2 1/4 CY	02315 610 3080	1.53	/CY													196	CY	300
		36 inch culvert remove	Excavation Bulk Bank 2 CY (322BL)	02315 424 0260	1.7	/CY	1885	4	6										1676	CY	2849
		36 inch culvert backfill	Backfill Trench Mininal Haul 2 1/4 CY	02315 610 3080	1.53	/CY													1676	CY	2564
		42 inch culvert remove	Excavation Bulk Bank 2 CY (322BL)	02315 424 0260	1.7	/CY	2950	4	7										3059	CY	5200
		42 inch culvert backfill	Backfill Trench Mininal Haul 2 1/4 CY	02315 610 3080	1.53	/CY													3059	CY	4680
																					16100
																					16100

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Gob Vent Well 1, 3, 4, 5, 5A, 6, 7, 8, 9																			
		Structure's Demolition Cost	Mechanical equipment heavy	15055 300 3600	805	/ton							36				tons		36	tons	28980
		Plug Well	Plug Well	AML3	5000	EA.										9	EA		9	EA	45000
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			73960
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
																					73960

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
		Gob Vent Well 2679																			
		Gob Vent Well 5B, 8A, 7A																			
		7A is a redrill																			
		Structure's Demolition Cost	Mechanical equipment heavy	15055 300 3600	805	/ton							4			3	tons		12	tons	9660
		Plug Well	Plug Well	AML3	5000	EA.										3	EA		3	EA	15000
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			24660
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Total																			24660

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
2359		Gob Vent Well 10 thru 17																			
		7A is a redrill																			
		Structure's Demolition Cost	Mechanical equipment heavy	15055 300 3600	805	/ton							4			8	tons		32	tons	25760
		Plug Well	Plug Well	AML3	5000	EA.										8	EA		8	EA	40000
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Subtotal																			65760
		Equipment 's Disposal Cost																			
		Dismantling Cost																			
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Subtotal																			
																					65760

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	2679	Vent Shaft Blowing Fan																			
		Structure's Demolition Cost																			
		Structure's Vol. Demolished							370	16							FT		2755	CY	
																		0.2	3306	CY	
		Truck's Capacity										16					CY		16	CY	
		Total Truck Hours													1		HR		1	HR	
		Number of trips																	207	Trips	
		Transportation Cost Truck	Truck dump 16 ton payload	01 54 33 20 5300	435.96	/day													25.9	day	11291
		Transportation Cost Truck Driver	Truck Driver, Heavy	Trhv	$43.30	HR													207	HR	8963
		Place Backfill	Excavation Bulk Bank 2 CY (322BL)	02315 424 0260	1.74	/CY													3306	CY	5752
		Backfill at pit	Centennial Backfill	Centennial 001	3.31	CY													3306	CY	10943
																					36949
		Fan																			
		Equipment 's Disposal Cost																			
		Dismantling Cost	Mechanical equipment heavy	15055 300 3600	850	/ton									5		ton		5	ton	4250
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					4250
		Transformer																			
		Equipment 's Disposal Cost																			
		Dismantling Cost	Mechanical equipment heavy	15055 300 3600	850	/ton									2		ton		2	ton	1700
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					1700
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY						242					CY		242	CY	1648
		Concrete's Vol. Demolished																1.3	315	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY													315	CY	450
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.49	/CY													315	CY	1099
		Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													315	CY	2441
																					5638
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
																					48537

Task ID	Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
2679		Aberdeen Substation																			
		Structure's Demolition Cost																			
		Structure's Vol. Demolished																			
		Rubble's Weight (exclude steel)																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Non Steel Truck																			
		Transportation Cost Non Steel Drive																			
		Disposal Cost Non Steel																			
		Steel's Weight																			
		Truck's Capacity																			
		Haulage																			
		Transportation Cost Steel Truck																			
		Transportation Cost Steel Truck Drive																			
		Disposal Cost Steel																			
		Equipment 's Disposal Cost																			
		Dismantling Cost	Chain link remove 8'-10'	02220 220 1700	3.05	/LF	105										ft		105	ft.	320
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					320
		Concrete Demolition																			
		Demolition Cost																			
		Concrete's Vol. Demolished																			
		Loading Cost																			
		Transportation Cost																			
		Disposal Costs																			
		Transformer																			
		Equipment 's Disposal Cost																			
		Dismantling Cost	Mechanical equipment heavy	15055 300 3600	850	/ton									2		ton		2	ton	1700
		Equipment 's Vol. Demolished																			
		Loading Costs																			
		Transport Costs																			
		Disposal Costs																			
																					1700
		Concrete Demolition																			
		Demolition Cost	Concrete demolition	ConcreteDemo1	6.81	/CY	10	10	1								ft		4	CY	27
		Concrete's Vol. Demolished																1.3	5	CY	
		Loading Cost	Front end loader 3 CY	02315 424 1300	1.43	/CY													5	CY	7
		Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. md. tri	02315 490 0320	3.49	/CY													5	CY	17
		Disposal Costs	On site disposal	02220 240 5550	7.75	/CY													5	CY	39
																					90
																					2110

Task ID		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
	Centennial Mine															
	Mine Site															332737
	Gob Hole															43414
2359	Gob Hole 5A, 8A, 7A															11758
	Gob Hole 10 thru 17															38891
	Total															426800

Task ID		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
	Mine Site															
	Grading															
	Backfill and rough grade pond, canyon and bench areas															
	D9R Semi-U EROPS (9-54) (2H04)	17115	72.3	0.1	52	238.5	1	238.5	$/HR	81912	CY	144	CY/HR	568.8	HR	135659
	CLAB					41.55	0.5	20.78	$/HR					568.8	HR	11820
	Subtotal															147479
	Backfill and grade benches, out slope and highwalls															
	Use dozer productivity for time estimate															
	D8R Series II Semi-U EROPS (9-55) (2nd04)	13720	53.4	0.1	52	196.49	1	196.49	$/HR	386	Scrapper/Hr	4	Scrapper	96.5	HR	18961
	627G EROPS (9-52) (2nd04)	16080	84.6	0.1	52	245.56	4	982.24	$/HR	81913	CY	212.5	CY/HR	96.5	HR	94786
	CLAB					41.55	2	83.1	$/HR					96.5	HR	8019
	Subtotal															121766
	Haul and spread topsoil															
	D8R Series II Semi-U EROPS (9-55) (2nd04)	13720	53.4	0.1	52	196.49	1	196.49	$/HR	118	Scrapper/Hr	4	Scrapper	29.5	HR	5796
	627G EROPS (9-52) (2nd04)	16080	84.6	0.1	52	245.56	4	982.24	$/HR	27568	CY	235	CY/HR	29.5	HR	28976
	Excavator for pocking															
	CAT 325BL (10-7)(3Q00)	9780	26.05	0.1	45.95	135.73	1	135.73	$/HR					29.5	HR	4004
	CLAB					41.55	2	83.1	$/HR					29.5	HR	2451
	Subtotal															41227
	Ripping															
	D7R Series II (9-55) (2nd2004)	10565	41.1	0.1	52	163.24	1	163.24	$/HR	110352	CY	3083.8	CY/HR	35.8	HR	5844
	Multi-Shank Ripper 190-259 P (9-61) (2nd04)	1835	5.95	0.1	0	18.01	1	18.01	$/HR					35.8	HR	645
	CLAB					41.55	0.5	20.78	$/HR					35.8	HR	744
	Subtotal															7233
	Support Personel															
	Foreman Average, Outside					57.3	1	57.3	$/HR					96.5	HR	5529
	Pickup Truck Crew 4x4 1 ton (20-17) (2N04)	820	7.8	0.1	0	13.71	1	13.71	$/HR					96.5	HR	1323
	4,000 gal H2O truck Diesel (20-16) (2N04)	3350	19.85	0.1	42	84.77	1	84.77	$/HR					96.5	HR	8180
	Subtotal															15032
	Total															332737

Task ID		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
	Centennial Mine															
	1, 3, 4, 5, 5A, 6, 7, 8, 9															
	Grading															
	Backfill and rough grade pond, canyon and bench areas															
	D7R Series II (9-55) (2nd2004)	10565	41.1	0.1	52	163.24	1	163.24	$/HR	45000	CY	250	CY/HR	180	HR	29383
	Subtotal															29383
	Haul and spread topsoil															
	D7R Series II (9-55) (2nd2004)	13720	53.4	0.1	52	196.49	1	196.49	$/HR	14400	CY	250	CY/HR	57.6	HR	11318
	Subtotal															11318
	Support Personel															
	4,000 gal H2O truck Diesel (20-16) (2N04)	3350	19.85	0.1	42	84.77	1	84.77	$/HR					32	HR	2713
	Subtotal															2713
	Total															43414

Task ID		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
2359	Gob Hole 5A, 8A, 7A															
	7A is a redrill															
	Grading															
	Backfill and rough grade pond, canyon and bench areas															
	D7R Series II (9-55) (2nd2004)	10565	41.1	0.1	52	163.24	1	163.24	$/HR	10000	CY	250	CY/HR	40	HR	6530
	Subtotal															6530
	Haul and spread topsoil															
	D7R Series II (9-55) (2nd2004)	13720	53.4	0.1	52	196.49	1	196.49	$/HR	3200	CY	250	CY/HR	12.8	HR	2515
	Subtotal															2515
	Support Personel															
	4,000 gal H2O truck Diesel (20-16) (2N04)	3350	19.85	0.1	42	84.77	1	84.77	$/HR					32	HR	2713
	Subtotal															2713
	Total															11758

Task ID		Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
	Gob Hole 10 thru 17															
	Grading 5,000 CY per hole															
	Grading															
	Backfill and rough grade pond, canyon and bench areas															
	D7R Series II (9-55) (2nd2004)	10565	41.1	0.1	52	163.24	1	163.24	$/HR	40000	CY	250	CY/HR	160	HR	26118
	Subtotal															26118
	Topsoil 1,600 CY per hole															
	Haul and spread topsoil															
	D7R Series II (9-55) (2nd2004)	13720	53.4	0.1	52	196.49	1	196.49	$/HR	12800	CY	250	CY/HR	51.2	HR	10060
	Subtotal															10060
	Support Personel															
	4,000 gal H2O truck Diesel (20-16) (2N04)	3350	19.85	0.1	42	84.77	1	84.77	$/HR					32	HR	2713
	Subtotal															2713
	Total															38891

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
																				142126
	Mine Site																			32199
	Gob Holes																			7149
	Gob Holes 2679																			28600
	Gob Holes New																			
																				210074

Ref.	Description	Materials
	Mine Site	
	Slopes	
	Ground Preparation	
	Gouging/Pocking	Excavation Bulk Bank 2 CY (322BL)
	Assume vol = area(18.1 AC) x 1 ft.	
	Seed for hydromulch	Seed Mix for Centennial Drainage
	Hydroseed application	Hydro Spreader (equip. & labor) B-81 80MS
	Mulch material	Hay 1" material only 029105000250
	Hydroseed application	Hydro Spreader (equip. & labor) B-81
	Flat Areas	
	Ground Preparation	
	Scarify Area	75 HP Dozerw/scarifiers
	Seed for drilling	Seed Mix for Centennial Slopes
	Drill seeding	Tractor Spreader (equip. & labor) B-66
	Drainages	
	Seedlings material cost	Transplants for Centennial Mine
	Seedlings labor	Common Labor
	Subto	
	Reseeding	
	Assume 25% reseeding rate	

	Subtotal	
	Total	

Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area
M023154240260	1.7	/CY					
Centennial 001	447.7	$/AC					18.1
Reveg002	19.13	/MSF					18.1
Reveg001	68	/MSF					18.1
Reveg005	19.13	/MSF					18.1
M029107103100	3.87	MSF					15.02
Centennial 002	560.55	$/AC					15.02
Reveg004	10.5	/MSF					15.02
Centennial 003	2835	$/AC					2.15
CLAB	41.55	/HR					

Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit
29201					CY		29201	CY
					AC		18.1	AC
					AC		788	MSF
					AC		18.1	AC
					AC		788	MSF
					AC		654	MSF
					AC		15.02	AC
					AC		654	MSF
					AC		2.15	AC
			16		HR		16	HR

Cost
49642
8103
15074
1231
15074
2531
8419
6867
6095
665
28425

28425

142126

Ref.	Description	Materials
	Gob Holes	
	Ground Preparation	
	Gouging/Pocking	Excavation Bulk Bank 2 CY (322BL)
	Assume vol = area(18.1 AC) x 1 ft.	
	Seed for hydromulch	Seed Mix for Centennial Drainage
	Hydroseed application	Hydro Spreader (equip. & labor) B-81 80MS
	Mulch material	Hay 1" material only 029105000250
	Hydroseed application	Hydro Spreader (equip. & labor) B-81
	Subtotal	
	Reseeding	
	Assume 25% reseeding rate	
	Subtotal	
	Total	

Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area
M023154240260	1.7	/CY					
Centennial 001	447.7	$/AC					9
Reveg002	19.13	/MSF					9
Reveg001	68	/MSF					9
Reveg005	19.13	/MSF					9

Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit
3600					CY		3600	CY
					AC		9	AC
					AC		392	MSF
					AC		9	AC
					AC		392	MSF

Cost
6120
4029
7499
612
7499
25759
6440
6440
32199

Ref.	Description	Materials
	Gob Holes 2679	
	Ground Preparation	
	Gouging/Pocking	Excavation Bulk Bank 2 CY (322BL)
	Assume vol = area(18.1 AC) x 1 ft.	
	Seed for hydromulch	Seed Mix for Centennial Drainage
	Hydroseed application	Hydro Spreader (equip. & labor) B-81 80MSI
	Mulch material	Hay 1" material only 029105000250
	Hydroseed application	Hydro Spreader (equip. & labor) B-81
	Subtotal	
	Reseeding	
	Assume 25% reseeding rate	
	Subtotal	
	Total	

Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area
M023154240260	1.7	/CY					
Centennial 001	447.7	$/AC					2
Reveg002	19.13	/MSF					2
Reveg001	68	/MSF					2
Reveg005	19.13	/MSF					2

Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit
800					CY		800	CY
					AC		2	AC
					AC		87	MSF
					AC		2	AC
					AC		87	MSF

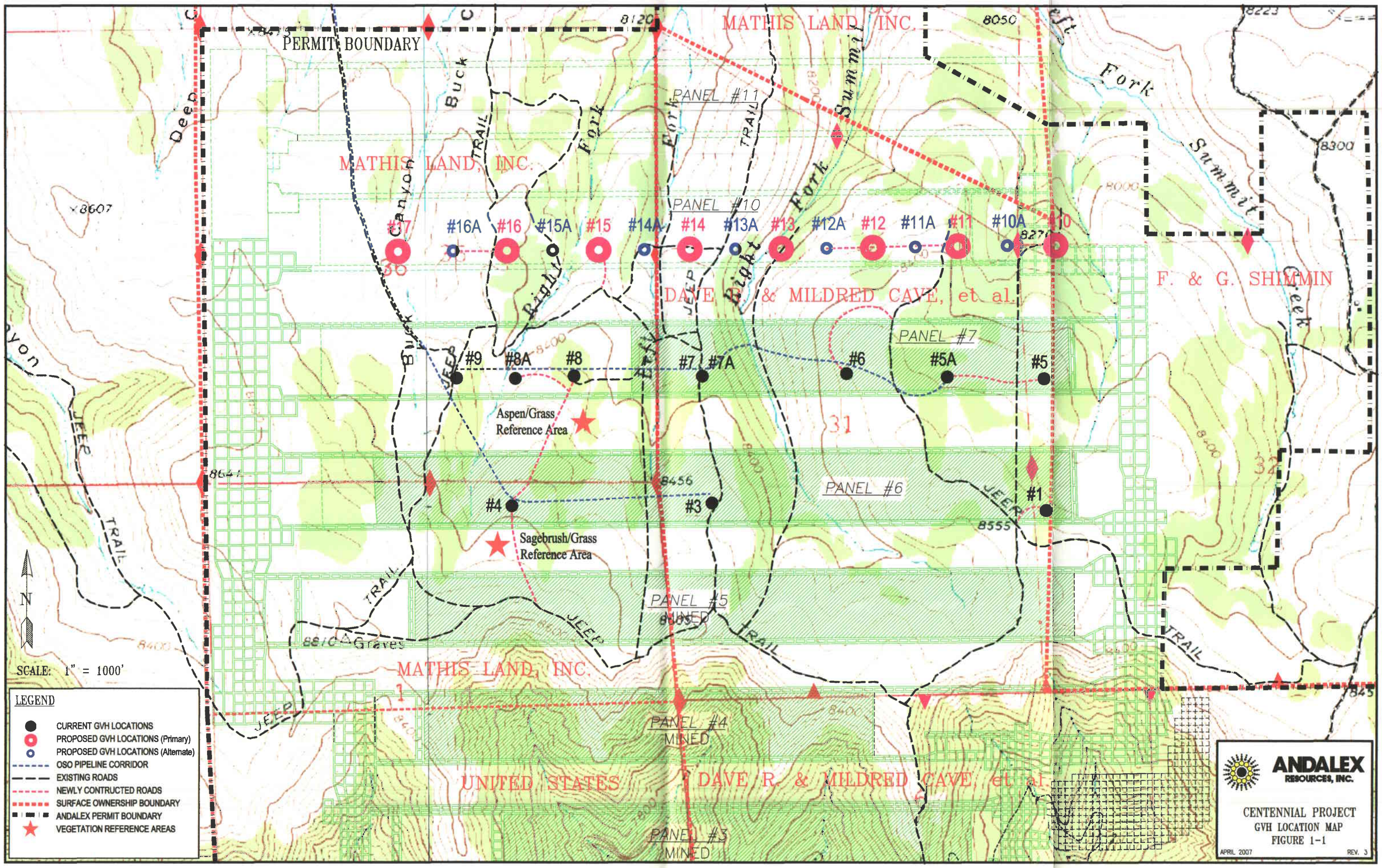
Cost
1360
895
1664
136
1664
5719
1430
1430
7149

Ref.	Description	Materials
	Gob Holes New	
	Ground Preparation	
	Gouging/Pocking	Excavation Bulk Bank 2 CY (322BL)
	Assume vol = area(18.1 AC) x 1 ft.	
	Seed for hydromulch	Seed Mix for Centennial Drainage
	Hydroseed application	Hydro Spreader (equip. & labor) B-81 80MS
	Mulch material	Hay 1" material only 029105000250
	Hydroseed application	Hydro Spreader (equip. & labor) B-81
	Subtotal	
	Reseeding	
	Assume 25% reseeding rate	
	Subtotal	
	Total	

Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area
M023154240260	1.7	/CY					
Centennial 001	447.7	$/AC					8
Reveg002	19.13	/MSF					8
Reveg001	68	/MSF					8
Reveg005	19.13	/MSF					8

Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit
3200					CY		3200	CY
					AC		8	AC
					AC		348	MSF
					AC		8	AC
					AC		348	MSF

Cost
5440
3582
6657
544
6657
22880
5720
5720
28600



PERMIT BOUNDARY
MATHIS LAND, INC.
MATHIS LAND, INC.
MATHIS LAND, INC.
F. & G. SHIMMIN
DAVE R. & MILDRED CAVE, et al.
DAVE R. & MILDRED CAVE, et al.
UNITED STATES
PANEL #11
PANEL #10
PANEL #7
PANEL #6
PANEL #5
MINED
PANEL #4
MINED
PANEL #3
MINED
#17
#16A
#16
#15A
#15
#14A
#14
#13A
#13
#12A
#12
#11A
#11
#10A
#10
#9
#8A
#8
#7
#7A
#6
#5A
#5
#4
#3
#1
Aspen/Grass Reference Area
Sagebrush/Grass Reference Area
Deep Canyon
Buck Canyon
Right Fork
Left Fork
Summit Creek
JEEP TRAIL
Graves
N
SCALE: 1" = 1000'
LEGEND
CURRENT GVH LOCATIONS
PROPOSED GVH LOCATIONS (Primary)
PROPOSED GVH LOCATIONS (Alternate)
OSO PIPELINE CORRIDOR
EXISTING ROADS
NEWLY CONTRUCTED ROADS
SURFACE OWNERSHIP BOUNDARY
ANDALEX PERMIT BOUNDARY
VEGETATION REFERENCE AREAS
ANDALEX RESOURCES, INC.
CENTENNIAL PROJECT
GVH LOCATION MAP
FIGURE 1-1
APRIL 2007
REV. 3