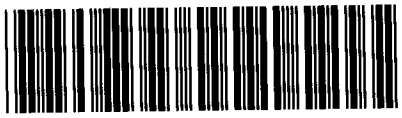

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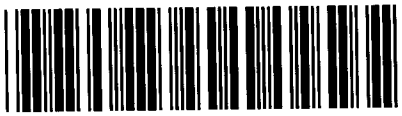

Item Number: 620

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SOAH DOCKET NO. 473-15-3596
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(ROUTE PHASE)

APPLICATION OF CROSS TEXAS TRANSMISSION, LLC TO AMEND A CERTIFICATE OF CONVENIENCE AND NECESSITY FOR THE PROPOSED LIMESTONE TO GIBBONS CREEK 345-KV TRANSMISSION LINE IN BRAZOS, FREESTONE, GRIMES, LEON, LIMESTONE, MADISON AND ROBERTSON COUNTIES, TEXAS	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

NRG ENERGY, INC. AND TEXAS WESTMORELAND COAL COMPANY'S RESPONSE TO FIRST REQUESTS FOR INFORMATION CROSS TEXAS TRANSMISSION, LLC

NRG Energy, Inc. ("Complainant") submits the following attached Responses to Cross Texas Transmission, LLC's ("CTT") First Set of Requests for Information to NRG Energy, Inc. ("NRG") and Texas Westmoreland Coal Company, Inc. ("Westmoreland") filed on July 21, 2015. Responses are due on or before July 31, 2015 therefore these responses are timely filed. NRG stipulates that all parties may treat these responses as if the answers were filed under oath.

Respectfully submitted,

By: Heidi Bloch by chas Reeder

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ATTORNEYS NRG ENERGY, INC.

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of this pleading has been filed with the Commission, forwarded by electronic mail to counsel for Cross Texas Transmission, LLC, served on the party listed below via United States Mail, and served on all other parties via the PUC Interchange on this 31st day of July, 2015.

Barbara McCutcheon
5807 Sugar Hill Drive
Houston, Texas 77047

Heidi Bloch by Chris Reeder
Heidi Bloch

NRG ENERGY, INC.'S RESPONSES TO CROSS TEXAS TRANSMISSION LLC'S FIRST REQUEST FOR INFORMATION

CTT 1-1 Please provide the most current Life of Mine or similar map or similar map for the current Jewett Mine Permit Area, which shows the following:

a. Mine block areas with year(s) to be mined (draglines);

b. Mine block areas with year(s) to be mined (auxiliary equipment);

c. Areas not to be mined, but within the Mine Permit Area;

d. Areas where mining has been completed and which are currently in reclamation;

e. For areas identified in 1-1(d) above, anticipated year when reclamation will be complete;

f. Areas where reclamation has been completed and which have been released from reclamation bond;

g. Areas that are protected for endangered or threatened species;

h. Areas that are designated wetlands;

i. Any public and private roads;

j. Railroads;

k. Water features, such as ponds (natural or man-made), rivers, or streams;

l. Habitable and non-habitable structures; and

m. Oil and gas wells

If the foregoing is not represented on a single map, please provide maps as necessary to reflect the requested information. Please provide a color copy and electronic shapefile for each map.

RESPONSE: As discussed and agreed to with counsel for Cross Texas Transmission, LLC these maps are not being produced in shapefile format, but rather in PDF and DWG format.

1-1(a): Please see the Attachment attached as 1-1(a).
1-1(b): Please see the Attachment attached as 1-1(b).
1-1(c): Attachments 1-1(a) and 1-1(b) show the Mine Permit Area as well as outline the areas already mined and areas to be mined in the future. Any areas within the Mine Permit Area that are not designated as already mined, to be mined, or disturbed by mining are responsive to this question.
1-1(d): Please see the Attachment attached as 1-1(d).
1-1(e): As discussed and agreed to with counsel for Cross Texas, NRG and Westmoreland cannot respond to this subpart. The various components and factors involved in determining when the reclamation process will be complete make it impractical to predict.

1-1(f): Please see the Attachment attached as 1-1(f).
1-1(g): Westmoreland monitors for all threatened and endangered species within the entire permit boundary. Please see the Attachment attached as 1-1(g) which lists the federal species in the three counties the mine encompasses.
1-1(h): There are no areas designated as wetlands.
1-1(i): Please see the Attachment attached as 1-1(i).
1-1(j): Please see the Attachment attached as 1-1(j).
1-1(k): Please see the Attachment attached as 1-1(k).
1-1(l): There are no habitable structures within the Permitted Mining Area.
1-1(m): Please see the Attachment attached as 1-1(m).

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: Attachments 1-1 (a), 1-1(b), 1-1 (d), 1-1(f),1-1(g), 1-1(h), 1-1(i), 1-1(j), 1-1(k), 1-1(l), 1-1(m).

CTT 1-2 Please identify each and every permit application for renewal or revision of the Jewett Mine permit currently on file at the Railroad Commission of Texas

RESPONSE: Permit Nos. 32F and 47A are currently under renewal and it is expected to be approved by the end of 2015.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: None.

CTT 1-3 Please identify any anticipated filings for renewal or revision of the Jewett Mine permit within the next 5 years.

RESPONSE: The renewal applications will be due five (5) years from the date of approval respectively. Revisions are made to each permit as Westmoreland makes changes to our operations and reclamation plan.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: None.

CTT 1-4 Please refer to page 3, lines 1-3 of Mr. Kingsley's direct testimony regarding the "Eastern Routes" Is the movement of the "Draglines" in the "next five to seven years" contemplated in the current approved Jewett Mine permit? If not, when do you anticipate filing for approval to move the Draglines.

RESPONSE: The area referred to in Mr. Kingsley's testimony is not currently in the permitted area. When Westmoreland makes plans to cross the proposed transmission lines, we will have submitted a permit revision to the Railroad Commission of Texas approximately 9-12 months prior to the estimated walking date.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: None.

CTT 1-5 Please refer to page 3, lines 3-8 of Mr. Kingsley's direct testimony regarding the "Eastern Routes." What are the costs that Westmoreland has to "pay for" in connection with the deactivation and temporary removal of the two referenced existing transmission lines? What is the anticipated amount of those costs if the proposed Cross Texas transmission line is added to the existing two lines?

RESPONSE: Please see the attached Attachment 1-5 for the crossing that occurred in March 2015 for two transmission lines. The costs associated with removing a transmission line varies with the type of transmission line being removed, with the higher voltage lines generally being more expensive to remove. The Oncor 69kV line referenced in the Attachments is in the same location where the CenterPoint power line currently is located, and where the proposed Cross Texas transmission line will be located if the Eastern Routes were chosen. The 138kV line is in a different area of the mine, however Westmoreland has included documents evidencing the costs associated with removing that line to demonstrate the variation in costs.

Westmoreland cannot estimate the cost to remove the proposed Cross Texas transmission line but would note such removal for a larger, 345 kV line will be greater than these examples. As was the case with every utility company, Cross Texas must determine the cost to remove and lower their proposed transmission line. Consequently, Cross Texas is in a better position to estimate this expense than NRG or Westmoreland.

SPONSORING WITNESS: Deny Kingsley

RESPONSIVE DOCUMENTS: Attachment 1-5.

CTT 1-6 Please refer to page 3, lines 3-8 of Mr. Kingsley's direct testimony regarding the "Eastern Routes." Has Westmoreland ever not been able to coordinate the deactivation and temporary removal of existing transmission lines to accommodate the movement of a Dragline, such that Westmoreland was unable to mine for coal with the Dragline for any period of time? If so, please identify and describe such occasion.

RESPONSE: There has not been a point where Westmoreland was unable to mine for coal due to the coordination of moving Draglines. However, as explained in Mr. Kingsley's direct testimony the addition of a *third* transmission line owned by a *third* utility that greatly increases the logistical conflicts and complexity of coordinating the timing and execution of the removal and lowering all three lines at the same time.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: None.

CTT 1-7 Please refer to page 3, lines 3-8 of Mr. Kingsley's direct testimony regarding the "Eastern Routes." Admit or deny that Westmoreland routinely coordinates with existing utilities in connection with the movement of Draglines.

RESPONSE: Westmoreland admits that it has successfully coordinated with utility companies in the past. Westmoreland does not consider this to be a "routine" process. As explained in Mr. Kingsley's direct testimony, the process of moving draglines is a complex process. The circumstances behind each instance are largely unique and involve different considerations and logistical hurdles. The addition of a *third* transmission line owned by a *third* utility that greatly increases the logistical conflicts and complexity of coordinating the timing and execution of the removal and lowering all three lines at the same time.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: None.

CTT 1-8 Please provide a copy of the narrative description of your current five year mine plan as included in your current approved Jewett Mine permit.

RESPONSE: Please see the attached documentation for Permit 32F and 47A, sections 125 and 139, respectively for each permit.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: Attachment 1-8.

CTT 1-9 Please refer to page 13, lines 5-7 of Mr. Kingsley's direct testimony regarding the "Eastern Routes." Please state all reasons why Westmoreland believes it is likely that use of the Eastern Routes will result in "greater periods of unavailability for mining"?

RESPONSE: This question is answered in Mr. Kingsley's direct testimony. Please refer to page 12 lines 8-16 of aforementioned testimony. In summary, Mr. Kinsley's testimony is that the additional transmission line proposed in the Eastern Routes increases the complexity of coordinating the Draglines being moved. While Westmoreland will likely be able to coordinate this process eventually, the timing of the dragline movement is a significant factor in Westmoreland being able to reliably produce coal. The fact that Westmoreland would need to obtain approval to move the dragline at a time that is convenient for *all three transmission lines,* each owned by separate utilities, will likely delay the process significantly due to increases on the logistical conflicts and complexity of coordinating the timing and execution of the removal and lowering all three lines at the same time. The Eastern Routes would place an additional hurdle on Westmoreland, and the risk is that this could cause a delay in mining. These risks and costs are unnecessary given the availability of alternate routes.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: None.

CTT 1-10 Please refer to page 13, lines 17-20 of Mr. Kingsley's direct testimony. Please provide citations to all referenced MSHA regulations regarding clearance from the top of Westmoreland equipment.

RESPONSE: Please see the attached documentation and refer to 30 CFR§ 77.807-2 and 77.807-3 of MSHA regulations.

SPONSORING WITNESS: Denny Kingsley

RESPONSIVE DOCUMENTS: Attachment 1-10.

CTT 1-11 Admit or deny that surface mining operations such as those at the Jewett Mine routinely co-exist with electric transmission lines

RESPONSE: Westmoreland does not have the ability to opine on what is routine for the entire mining industry. Therefore, we deny that surface mining operations such as those at the Jewett Mine routinely co-exist with electric transmission lines. Westmoreland admits that based on its own experience is it is possible for transmission lines to co-exist with lignite coal mines on the same property—provided certain precautions are met. However, the fact that the Jewett Mine can still "exist" with the addition of the proposed transmission lines does not negate the fact that such transmission lines, when placed without adequate or reasonable regard to the current practices of the mine, can negatively impact the operations of the Jewett Mine causing additional expenses to Westmoreland. The additional burden and costs to the operations and of the Jewett Mine and NRG are unreasonable given the availability of alternate routes.

SPONSORING WITNESS: Denny Kingsley.

RESPONSIVE DOCUMENTS: None.

CTT 1-12 Please refer to page 17, lines 8-13 of Mr. Kingsley's direct testimony. With respect to when CenterPoint and Oncor lower transmission lines to accommodate Westmoreland Dragline movement, do Centerpoint and/or Oncor reimburse Westmoreland for:

a. direct costs, and if so, what are those direct costs;

b. indirect costs, and if so, what are those indirect costs; and/or.

c. consequential costs, and if so, what are those consequential costs.

RESPONSE: a. No.

b. No.

c. No.

SPONSORING WITNESS: Denny Kingsley.

RESPONSIVE DOCUMENTS: None.

CTT 1-13 Please refer to page 17, lines 8-13 of Mr. Kingsley's direct testimony. Has Westmoreland or NRG ever recovered from CenterPoint or Oncor damages associated with Westmoreland or NRG needing to import more expensive out-of-state coal? If so, how did Westmoreland or NRG calculate those damages?

RESPONSE: Neither Westmoreland nor NRG have recovered damages from Oncor or CenterPoint that are associated with needing to import more expensive out of state coal. However, Westmoreland has never had to deactivate three lines in this area before. The addition of a *third* transmission line owned by a *third* utility that greatly increases the logistical conflicts and complexity of coordinating the timing and execution of the removal and lowering all three lines at the same time. Mr. Kingsley's testimony points to the fact that the additional line would significantly narrow the window of time when Westmoreland could move the Draglines and therefore increase the likelihood of a significant delay between the completion of mining in the current area and the start of new mining in the proposed area. Consequently, there is no direct analogy to previous dealings with CenterPoint and Cross Texas.

SPONSORING WITNESS: Denny Kingsley.

RESPONSIVE DOCUMENTS: None.

CTT 1-14 Please refer to page 3, lines 7-15 of Mr. Irvins direct testimony. For the past 24 months of generation activity at the Limestone Plant, please provide on a monthly basis:

a. the percentage of coal from the Jewett Mine consumed as a percentage of total coal consumed; and
b. the percentage of coal from out-of-state mines consumed as percentage of total coal consumed.

RESPONSE: Please see attached table which describes highly sensitive protected information that is being submitted separately.

SPONSORING WITNESS: Neal Irvin.

RESPONSIVE DOCUMENTS: Attachment 1-14.

CTT 1-15 Please refer to page 3, lines 7-15 of Mr. Irvin's direct testimony. Has NRG ever been required to use a greater percentage of coal from out-of-state mines at the Limestone Plant than it would otherwise have used as a result of the inability to move a Dragline due to delays caused by CenterPoint or Oncor? If so, please describe each such incident, including the relevant time period when NRG had to consume the additional out-of state coal.

RESPONSE: No, NRG has not had to increase out of state coal use due to the inability to move a Dragline caused by delays from CenterPoint or Oncor. However, based on the testimony from our mining operator, Westmoreland, NRG has a reasonable concern that the addition of a third transmission line owned by a *third* utility that greatly increases the logistical conflicts and complexity of coordinating the timing and execution of the removal and lowering all three lines at the same time, and thus .creates great risk for that situation. The additional risk to the operations and costs for the Jewett Mine and NRG are unreasonable given the availability of alternate routes.

SPONSORING WITNESS: Neal Irvin.

RESPONSIVE DOCUMENTS: None.

CTT 1-16 Please refer to page 6, lines 19021 of Mr. Irvin's direct testimony. In addition to NRG coal reserves, does Westmoreland maintain reserve stockpiles of coal in the event that coal mining is interrupted for any reason? If so, how much coal is stockpiled and, when coupled with NRG's stockpiles, how long can NRG maintain normal levels of usage of coal from the Jewett Mine before needing to increase consumption of out-of-state coal beyond normal levels.

RESPONSE: This response has been designated as highly protected sensitive material and is submitted separately.

SPONSORING WITNESS: Neal Irvin.

RESPONSIVE DOCUMENTS: None.

CTT 1-17 Please refer to page 7, lines 10-17 of Mr. Irvin's direct testimony. Please provide citations to all referenced OSHA regulations regarding clearance from the top of Westmoreland equipment.

RESPONSE: Please see attached table.

SPONSORING WITNESS: Neal Irvin.

RESPONSIVE DOCUMENTS: Attachment 1-17.

CTT 1-18 Please refer to page 9, lines 8-10 of Mr. Irvin's direct testimony. When do Westmoreland and NRG expect the Jewett Mine to be depleted?

RESPONSE: The current Jewett Mine is expected to be depleted in five (5) to ten (10) years.

SPONSORING WITNESS: Neal Irvin.

RESPONSIVE DOCUMENTS: None.

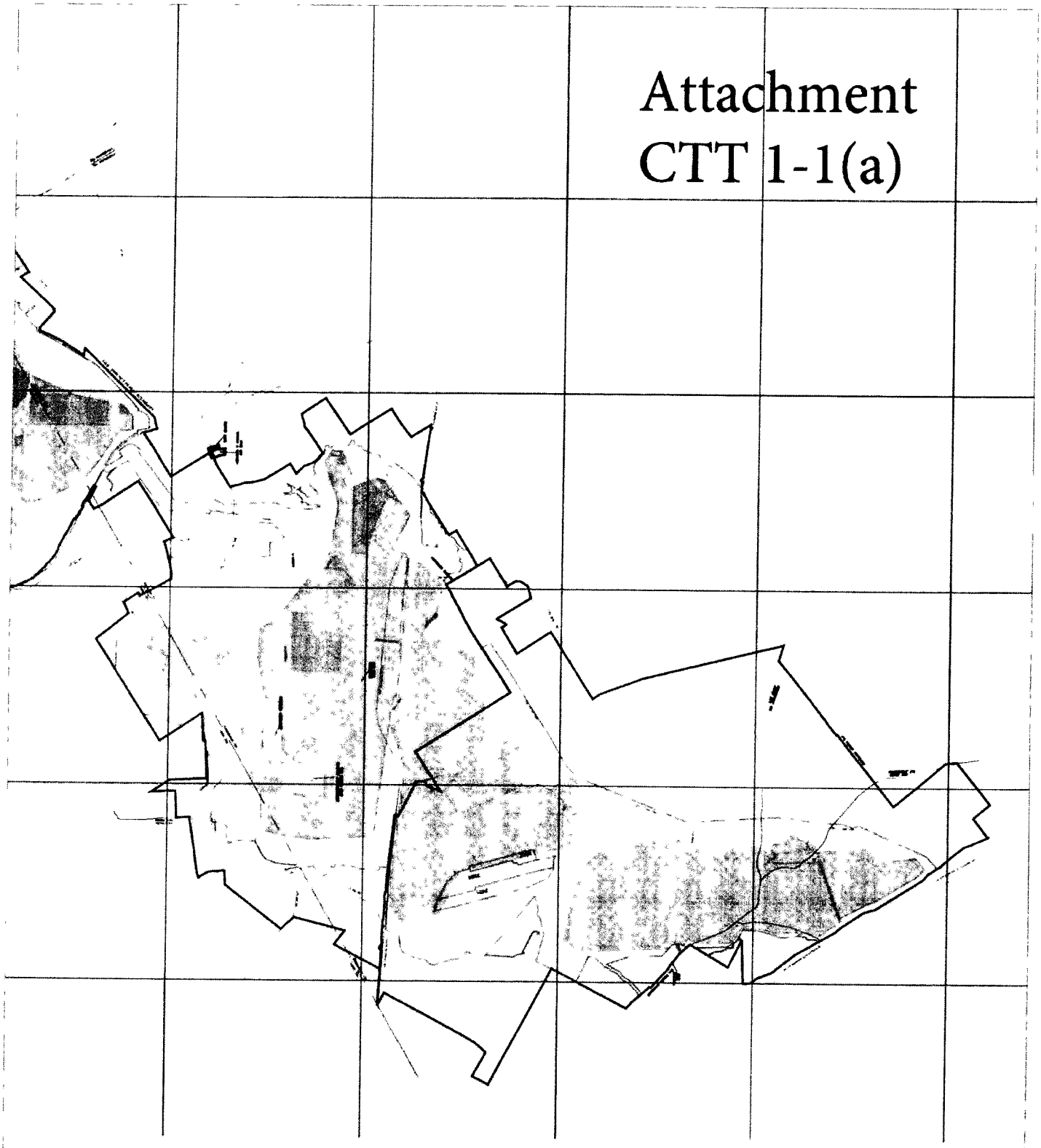
CTT 1-19 Please refer to page 9, lines 8-20 of Mr. Irvin's direct testimony. When does NRG expect to build the second railway into the Limestone Plant? Has NRG made any required public filings, regulatory or otherwise, with respect to construction of the second railway? Please provide all studies, reports, drawings, analyses or other documents demonstrating your plans for constructing the second railway.

RESPONSE: NRG purchased land, easements, performed surveys, and determined the planned route. NRG used an outside engineering and architectural firm, HDR, Inc., to perform and site review and survey of the proposed route. NRG also met with local community leaders and officials to discuss the railway. At the moment, NRG does not have a target date to build the railway line. No formal public filings regulatory or otherwise, have been made with respect to construction of the railway.

SPONSORING WITNESS: Neal Irvin

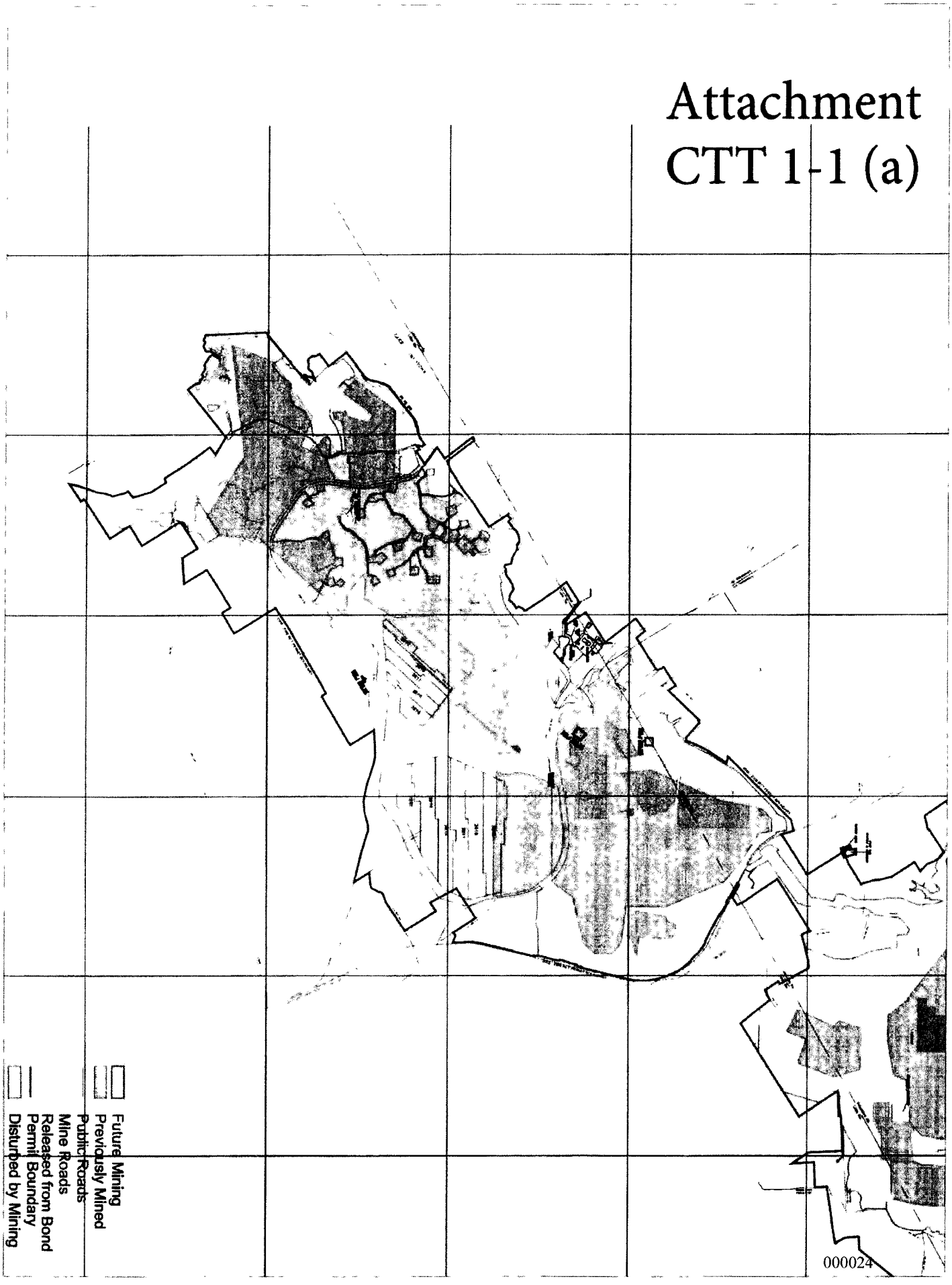
RESPONSIVE DOCUMENTS: None.

Attachment CTT 1-1(a)



Future Mining
Previously Mined
Public Roads
Mine Roads
Released from Bond
Permit Boundary
Disturbed by Mining

Attachment CTT 1-1 (a)



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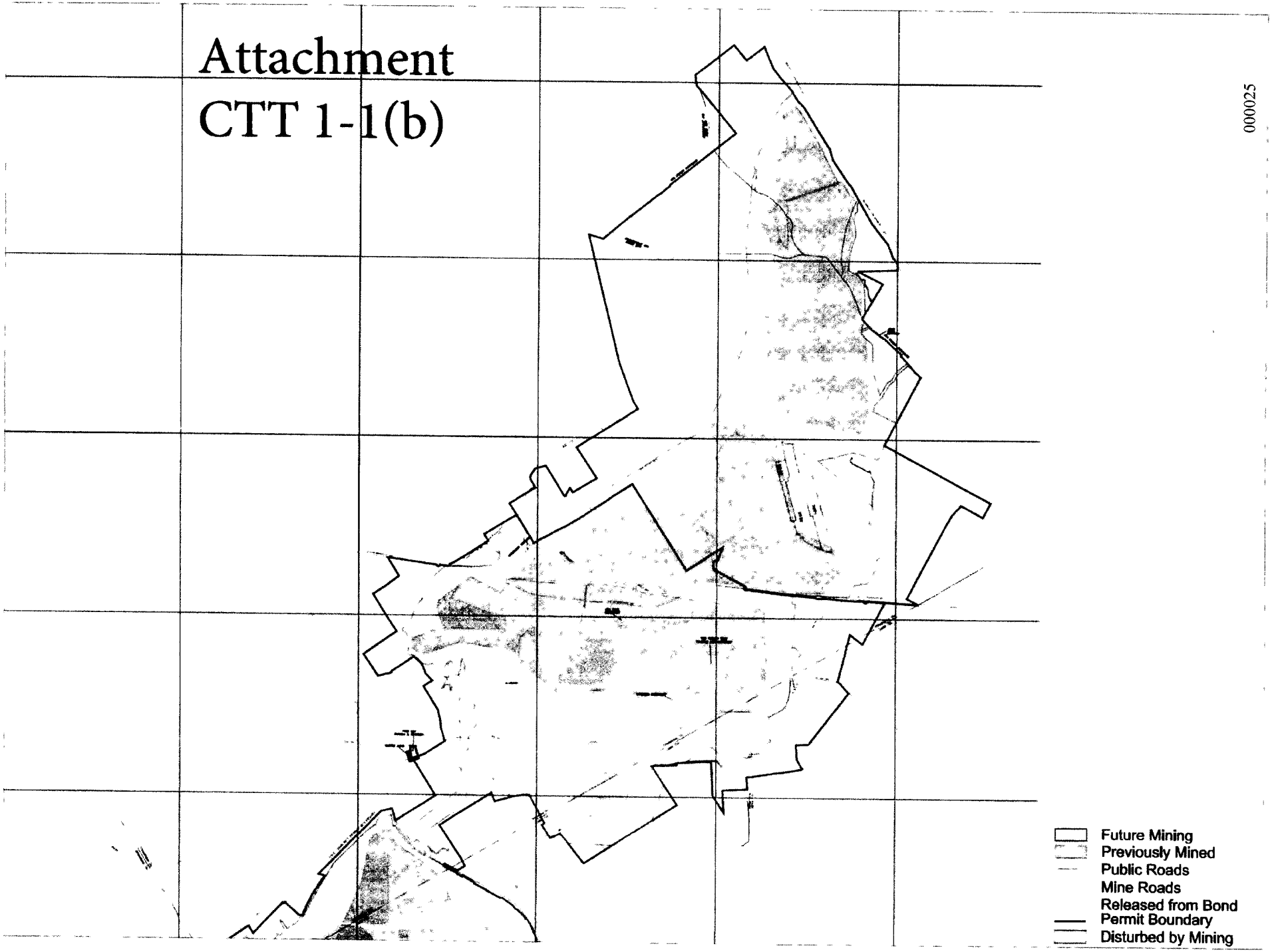

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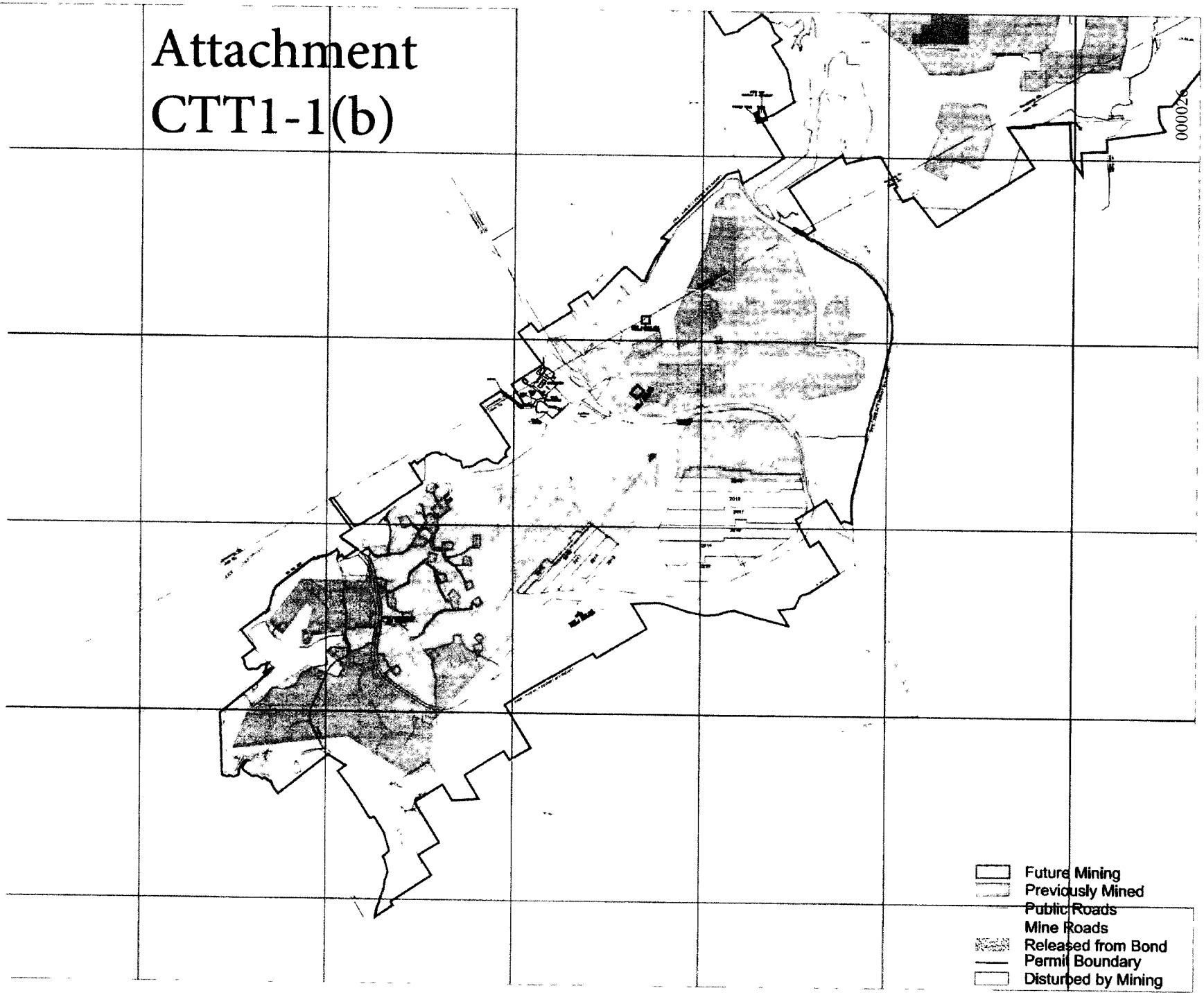
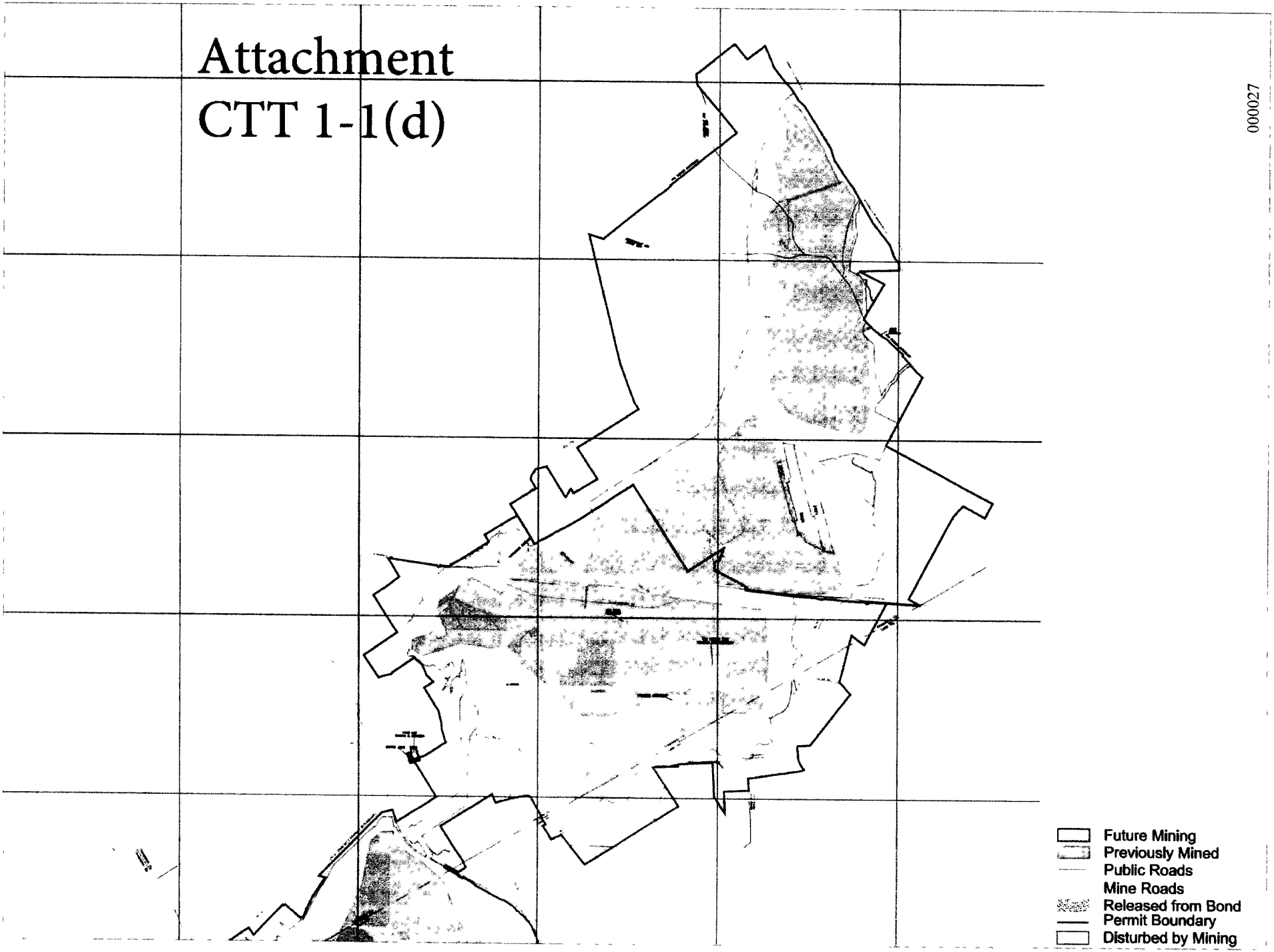
CTT1-1(b)



Attachment
CTT 1-1(d)



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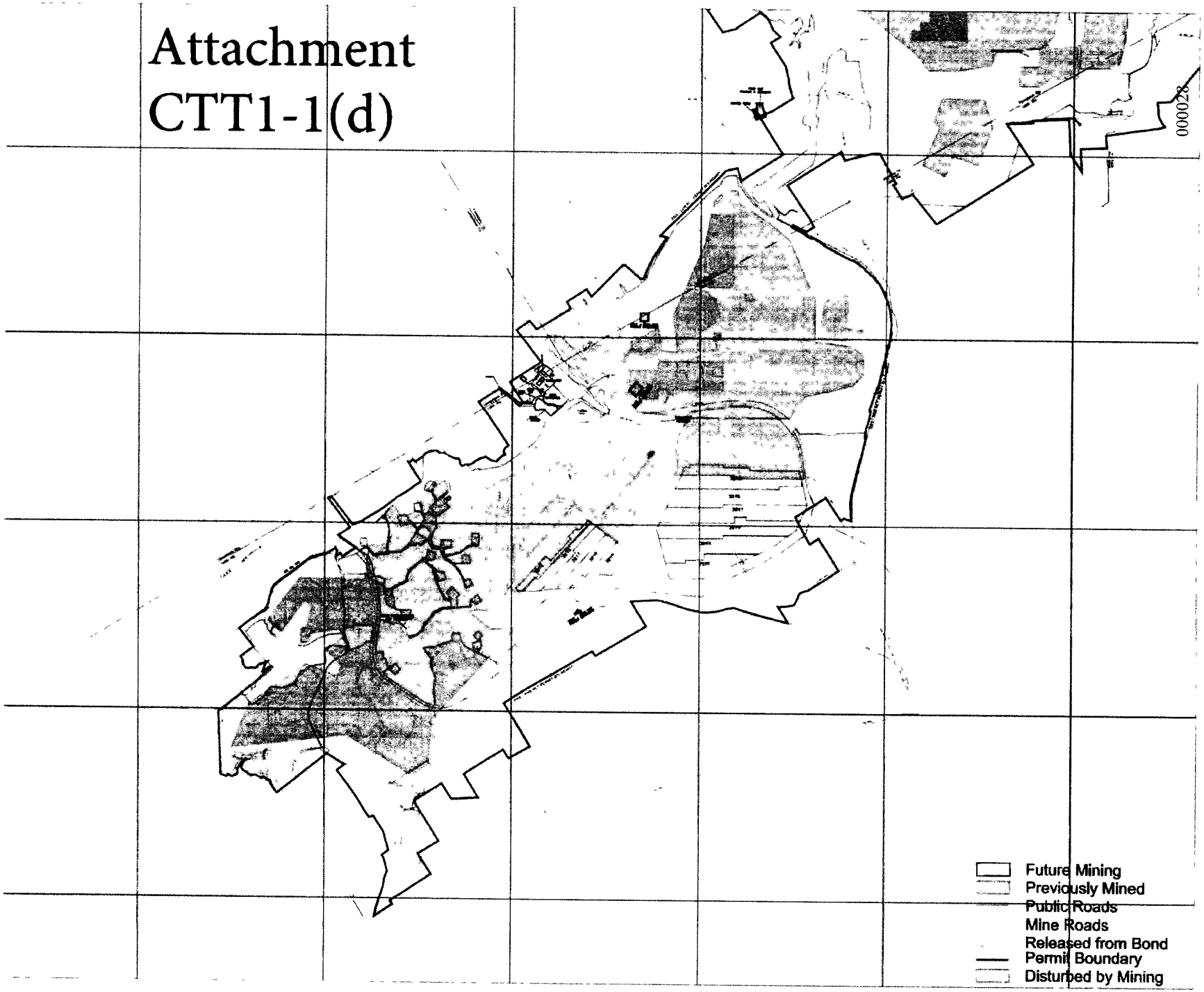
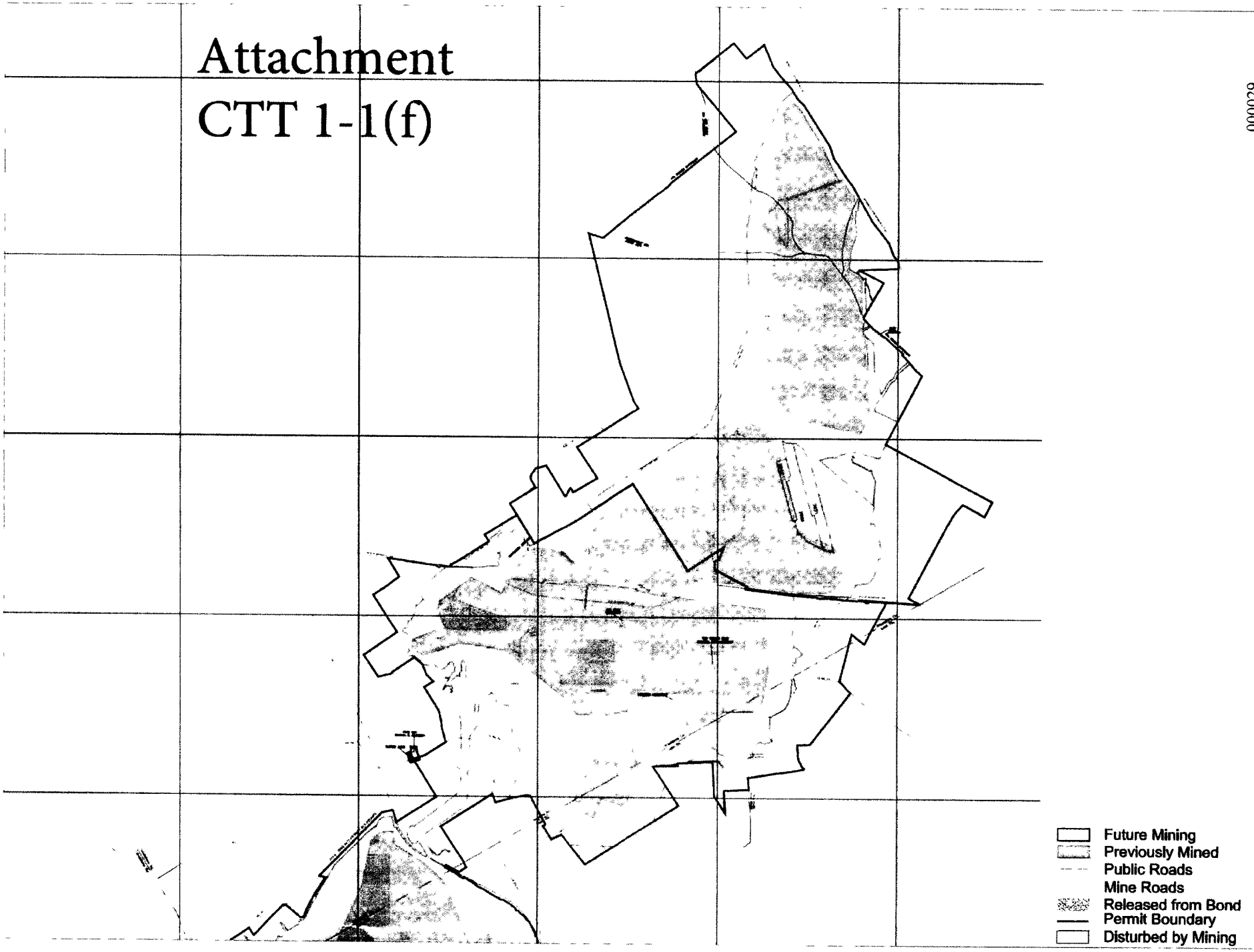
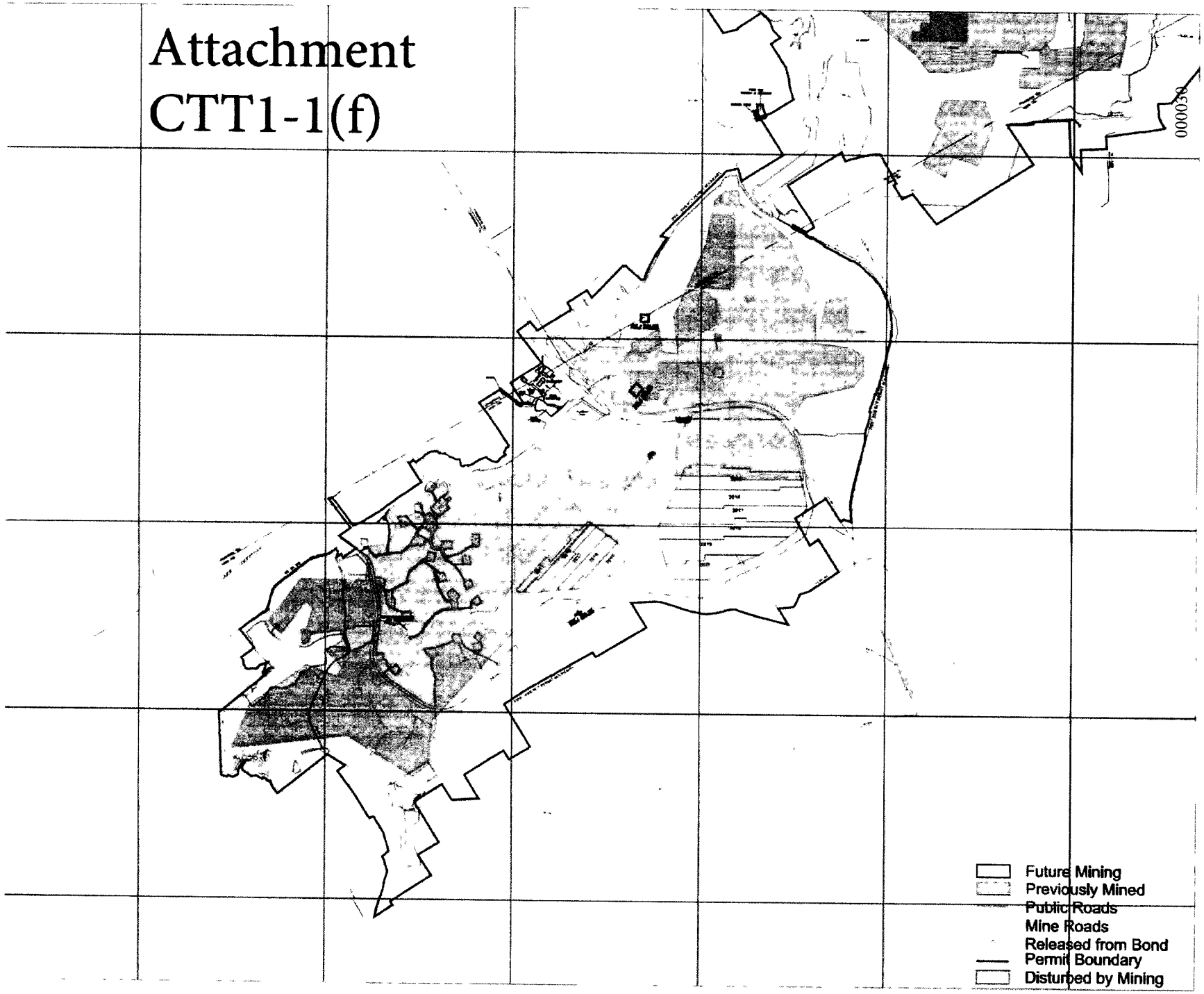


Attachment
CTT 1-1(f)



Attachment
CTT1-1(f)



Attachment
CTT 1-1(g)

U.S. Fish and Wildlife Threatened and Endangered Species

Limestone County			
Common Name	**Scientific Name**	**Species Group**	**Listing Status**
bald eagle	*Haliaeetus leucocephalus*	Birds	DM
least tern	*Sterna antillarum*	Birds	E
Navasota ladies'-tresses	*Spiranthes parksii*	Flowering Plants	E
whooping crane	*Grus americana*	Birds	E, EXPN

Endangered Species Act Status Codes:
E -- Endangered
T -- Threatened
EXPN -- Experimental Population
DM -- Delisted Taxon, Recovered, Being Monitored First Five Years
Source: http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

Attachment
CTT 1-1(g)

U.S. Fish and Wildlife Threatened and Endangered Species

Freestone County			
Common Name	**Scientific Name**	**Species Group**	**Listing Status**
bald eagle	*Haliaeetus leucocephalus*	Birds	R
large-fruited sand-verbena	*Abronia macrocarpa*	Flowering Plants	E
least tern	*Sterna antillarum*	Birds	E
Navasota ladies'-tresses	*Spiranthes parksii*	Flowering Plants	E
whooping crane	*Grus americana*	Birds	E

Leon County			
Common Name	**Scientific Name**	**Species Group**	**Listing Status**
bald eagle	*Haliaeetus leucocephalus*	Birds	R
Houston toad	*Bufo houstonensis*	Amphibians	E
large-fruited sand-verbena	*Abronia macrocarpa*	Flowering Plants	E
least tern	*Sterna antillarum*	Birds	E
Navasota ladies'-tresses	*Spiranthes parksii*	Flowering Plants	E
smooth pimpleback	*Quadrula houstonensis*	Clams	C
whooping crane	*Grus americana*	Birds	E

Endangered Species Act Status Codes:

C -- Candidate

E -- Endangered

R -- Recovery

Source: http://www.fws.gov/endangered/ Last updated: June 9, 2014

Last Revision 10/14/2010 11:56:00 AM

FREESTONE COUNTY

AMPHIBIANS		Federal Status	State Status
Houston toad	*Anaxyrus houstonensis*	LE	E

endemic; sandy substrate, water in pools, ephemeral pools, stock tanks; breeds in spring especially after rains; burrows in soil of adjacent uplands when inactive; breeds February-June; associated with soils of the Sparta, Carrizo, Goliad, Queen City, Recklaw, Weches, and Willis geologic formations

BIRDS		Federal Status	State Status
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from more northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon	*Falco peregrinus tundrius*	DL	

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Bachman's Sparrow	*Aimophila aestivalis*		T

open pine woods with scattered bushes and grassy understory in Pineywoods region, brushy or overgrown grassy hillsides, overgrown fields with thickets and brambles, grassy orchards; remnant grasslands in Post Oak Savannah region; nests on ground against grass tuft or under low shrub

Bald Eagle	*Haliaeetus leucocephalus*	DL	T

found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Henslow's Sparrow	*Ammodramus henslowii*		

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking

Interior Least Tern	*Sterna antillarum athalassos*	LE	E

subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of

Peregrine Falcon	*Falco peregrinus*	DL	T

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along coast and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see subspecies for habitat.

Piping Plover *Charadrius melodus* LT T
wintering migrant along the Texas Gulf Coast; beaches and bayside mud or salt flats

Whooping Crane *Grus americana* LE E
potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties

Wood Stork *Mycteria americana* T
forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-

MAMMALS

Federal Status State Status

Plains spotted skunk *Spilogale putorius interrupta*
catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Red wolf *Canis rufus* LE E
extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal

Southeastern myotis bat *Myotis austroriparius*
roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures

MOLLUSKS

Federal Status State Status

Creeper (squawfoot) *Strophitus undulatus*
small to large streams, prefers gravel or gravel and mud in flowing water; Colorado, Guadalupe, San Antonio, Neches (historic), and Trinity (historic) River basins

Fawnsfoot *Truncilla donaciformis*
small and large rivers especially on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in still to swiftly flowing waters; Red (historic), Cypress (historic), Sabine (historic), Neches, Trinity, and San Jacinto River basins.

Little spectaclecase *Villosa lienosa*
creeks, rivers, and reservoirs, sandy substrates in slight to moderate current, usually along the banks in slower currents; east Texas, Cypress through San Jacinto River basins

Louisiana pigtoe *Pleurobema riddellii* T
streams and moderate-size rivers, usually flowing water on substrates of mud, sand, and gravel; not generally known from impoundments; Sabine, Neches, and Trinity (historic) River basins

Sandbank pocketbook *Lampsilis satura* T
small to large rivers with moderate flows and swift current on gravel, gravel-sand, and sand bottoms; east Texas, Sulfur south through San Jacinto River basins; Neches River

Texas heelsplitter *Potamilus amphichaenus* T
quiet waters in mud or sand and also in reservoirs. Sabine, Neches, and Trinity River basins

Texas pigtoe *Fusconaia askewi* T
rivers with mixed mud, sand, and fine gravel in protected areas associated with fallen trees or other structures; east Texas River basins, Sabine through Trinity rivers as well as San Jacinto River

Wabash pigtoe *Fusconaia flava*
creeks to large rivers on mud, sand, and gravel from all habitats except deep shifting sands; found in moderate to swift current velocities; east Texas River basins, Red through San Jacinto River basins; elsewhere occurs in reservoirs and lakes with no flow

REPTILES		Federal Status	State Status
Alligator snapping turtle	*Macrochelys temminckii*		T

perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near deep running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquatic vegetation; may migrate several miles along rivers; active March-October; breeds April-October

Texas garter snake *Thamnophis sirtalis annectens*
wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August

Texas horned lizard *Phrynosoma cornutum* T
open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September

Timber/Canebrake rattlesnake *Crotalus horridus* T
swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone bluffs, sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto

PLANTS		Federal Status	State Status
Chapman's yellow-eyed grass	*Xyris chapmanii*		

mostly in soft, spongy, peaty substrates in deep muck seepage bogs; mostly in muckiest parts of hillside seepage bogs; flowering August-September, with seed maturing September-October

Large-fruited sand-verbena *Abronia macrocarpa* LE E
Texas endemic; restricted to sparse herbaceous vegetation in deep, somewhat excessively drained sands in openings in Post oak woodlands, sometimes in active blowouts; all known sites underlain by sandy Eocene strata; flowering late February-May (-June; also in the fall following periods of high rainfall)

Navasota ladies'-tresses *Spiranthes parksii* LE E
Texas endemic; openings in post oak woodlands in sandy loams along upland drainages or intermittent streams, often in areas with suitable hydrologic factors, such as a perched water table associated with the underlying claypan; flowering populations fluctuate widely from year to year, an individual plant does not flower every year; flowering late October-early November (-early December)

Rough-stem aster *Symphyotrichum puniceum var*
relatively open sites in saturated soils associated with seepage areas, bogs, marshes, ponds, drainages, and degraded wetland remnants on the Queen City, Carrizo, and Sparta sand formations; flowering late September-early November

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LIMESTONE COUNTY

BIRDS

		Federal Status	State Stat
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from mo northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habita during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopove leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon *Falco peregrinus tundrius* DL

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier island low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Bald Eagle *Haliaeetus leucocephalus* DL T

found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especi in winter; hunts live prey, scavenges, and pirates food from other birds

Henslow's Sparrow *Ammodramus henslowii*

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur alo with vines and brambles; a key component is bare ground for running/walking

Interior Least Tern *Sterna antillarum athalassos* LE E

subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars wi braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Peregrine Falcon *Falco peregrinus* DL T

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along c and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishabl a distance, reference is generally made only to the species level; see subspecies for habitat.

Western Burrowing Owl *Athene cunicularia hypugaea*

open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near huma habitation or airports; nests and roosts in abandoned burrows

White-faced Ibis *Plegadis chihi* T

prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nes in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats

Whooping Crane *Grus americana* LE E

potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, Refugio counties

Wood Stork *Mycteria americana* T

forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-wa usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries) breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associat with forested areas; formerly nested in Texas, but no breeding records since 1960

FISHES

		Federal Status	State Stat
Smalleye shiner	*Notropis buccula*	C	

endemic to upper Brazos River system and its tributaries (Clear Fork and Bosque); apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warr water; presumably eats small aquatic invertebrates

MAMMALS

		Federal Status	State Stat
Plains spotted skunk	*Spilogale putorius interrupta*		

catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

Red wolf	*Canis rufus*	LE	E

extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal

MOLLUSKS

		Federal Status	State Stat
False spike mussel	*Quadrula mitchelli*		T

possibly extirpated in Texas; probably medium to large rivers; substrates varying from mud through mixtures of sand, gravel and cobble; one study indicated water lilies were present at the site; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins

Smooth pimpleback	*Quadrula houstonensis*	T

small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins

Texas fawnsfoot	*Truncilla macrodon*	T

little known; possibly rivers and larger streams, and intolerant of impoundment; flowing rice irrigation canals, possibly sand, gravel, and perhaps sandy-mud bottoms in moderate flows; Brazos and Colorado River basins

REPTILES

		Federal Status	State Stat
Alligator snapping turtle	*Macrochelys temminckii*		T

perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near d running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquat vegetation; may migrate several miles along rivers; active March-October; breeds April-October

Texas garter snake	*Thamnophis sirtalis annectens*

wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August

Texas horned lizard	*Phrynosoma cornutum*	T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock whe inactive; breeds March-September

Timber/Canebrake rattlesnake	*Crotalus horridus*	T

swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone blu sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto

PLANTS		Federal Status	State Stat
Navasota ladies'-tresses	*Spiranthes parksii*	LE	E

Texas endemic; openings in post oak woodlands in sandy loams along upland drainages or intermittent streams, often in areas with suitable hydrologic factors, such as a perched water table associated with the underlying claypan; flowering populations fluctuate widely from year to year, an individual plant does not flower every yea flowering late October-early November (-early December)

Small-headed pipewort *Eriocaulon koernickianum*

in East Texas, post-oak woodlands and xeric sandhill openings on permanently wet acid sands of upland seeps a hillside seepage bogs, usually in patches of bare sand rather than among dense vegetation or on muck; in Gilles County, on permanently wet or moist hillside seep on decomposing granite gravel and sand among granite outcrops; flowering/fruiting late May-late June

LEON COUNTY

AMPHIBIANS

		Federal Status	State Stat
Houston toad	*Anaxyrus houstonensis*	LE	E

endemic; sandy substrate, water in pools, ephemeral pools, stock tanks; breeds in spring especially after rains; burrows in soil of adjacent uplands when inactive; breeds February-June; associated with soils of the Sparta, Carrizo, Goliad, Queen City, Recklaw, Weches, and Willis geologic formations

BIRDS

		Federal Status	State Stat
American Peregrine Falcon	*Falco peregrinus anatum*	DL	T

year-round resident and local breeder in west Texas, nests in tall cliff eyries; also, migrant across state from mor northern breeding areas in US and Canada, winters along coast and farther south; occupies wide range of habita during migration, including urban, concentrations along coast and barrier islands; low-altitude migrant, stopover leading landscape edges such as lake shores, coastlines, and barrier islands.

Arctic Peregrine Falcon *Falco peregrinus tundrius* DL

migrant throughout state from subspecies' far northern breeding range, winters along coast and farther south; occupies wide range of habitats during migration, including urban, concentrations along coast and barrier island low-altitude migrant, stopovers at leading landscape edges such as lake shores, coastlines, and barrier islands.

Bachman's Sparrow *Aimophila aestivalis* T

open pine woods with scattered bushes and grassy understory in Pineywoods region, brushy or overgrown grass hillsides, overgrown fields with thickets and brambles, grassy orchards; remnant grasslands in Post Oak Savann region; nests on ground against grass tuft or under low shrub

Bald Eagle *Haliaeetus leucocephalus* DL T

found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especia in winter; hunts live prey, scavenges, and pirates food from other birds

Henslow's Sparrow *Ammodramus henslowii*

wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur alor with vines and brambles; a key component is bare ground for running/walking

Interior Least Tern *Sterna antillarum athalassos* LE E

subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars wi braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony

Peregrine Falcon *Falco peregrinus* DL T

both subspecies migrate across the state from more northern breeding areas in US and Canada to winter along c and farther south; subspecies (F. p. anatum) is also a resident breeder in west Texas; the two subspecies' listing statuses differ, F.p. tundrius is no longer listed in Texas; but because the subspecies are not easily distinguishabl a distance, reference is generally made only to the species level; see subspecies for habitat.

Whooping Crane *Grus americana* LE E

potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, a Refugio counties

Wood Stork *Mycteria americana* T

forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-wat usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries) breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associat with forested areas; formerly nested in Texas, but no breeding records since 1960

MAMMALS

		Federal Status	State Stati
Louisiana black bear	*Ursus americanus luteolus*	LT	T

possible as transient; bottomland hardwoods and large tracts of inaccessible forested areas

Plains spotted skunk *Spilogale putorius interrupta*

catholic; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded,

Red wolf	*Canis rufus*	LE	E

extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal

Southeastern myotis bat *Myotis austroriparius*

roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures

MOLLUSKS

Federal Status State Stati

Creeper (squawfoot) *Strophitus undulatus*

small to large streams, prefers gravel or gravel and mud in flowing water; Colorado, Guadalupe, San Antonio, Neches (historic), and Trinity (historic) River basins

Fawnsfoot *Truncilla donaciformis*

small and large rivers especially on sand, mud, rocky mud, and sand and gravel, also silt and cobble bottoms in to swiftly flowing waters; Red (historic), Cypress (historic), Sabine (historic), Neches, Trinity, and San Jacinto River basins.

Little spectaclecase *Villosa lienosa*

creeks, rivers, and reservoirs, sandy substrates in slight to moderate current, usually along the banks in slower currents; east Texas, Cypress through San Jacinto River basins

Louisiana pigtoe *Pleurobema riddellii* T

streams and moderate-size rivers, usually flowing water on substrates of mud, sand, and gravel; not generally known from impoundments; Sabine, Neches, and Trinity (historic) River basins

Sandbank pocketbook *Lampsilis satura* T

small to large rivers with moderate flows and swift current on gravel, gravel-sand, and sand bottoms; east Texas Sulfur south through San Jacinto River basins; Neches River

Smooth pimpleback *Quadrula houstonensis* T

small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins

Texas heelsplitter *Potamilus amphichaenus* T

quiet waters in mud or sand and also in reservoirs. Sabine, Neches, and Trinity River basins

Texas pigtoe *Fusconaia askewi* T

rivers with mixed mud, sand, and fine gravel in protected areas associated with fallen trees or other structures; (Texas River basins, Sabine through Trinity rivers as well as San Jacinto River

Wabash pigtoe *Fusconaia flava*

creeks to large rivers on mud, sand, and gravel from all habitats except deep shifting sands; found in modcrate t swift current velocities; east Texas River basins, Red through San Jacinto River basins; elsewhere occurs in reservoirs and lakes with no flow

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REPTILES		Federal Status	State Stati
Alligator snapping turtle	*Macrochelys temminckii*		T

perennial water bodies; deep water of rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near d running water; sometimes enters brackish coastal waters; usually in water with mud bottom and abundant aquat vegetation; may migrate several miles along rivers; active March-October; breeds April-October

Texas horned lizard	*Phrynosoma cornutum*		T

open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock wher inactive; breeds March-September

Timber/Canebrake rattlesnake	*Crotalus horridus*		T

swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland; limestone blu sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto

PLANTS		Federal Status	State Stati
Chapman's yellow-eyed grass	*Xyris chapmanii*		

mostly in soft, spongy, peaty substrates in deep muck seepage bogs; mostly in muckiest parts of hillside seepage bogs; flowering August-September, with seed maturing September-October

Large-fruited sand-verbena	*Abronia macrocarpa*	LE	E

Texas endemic; restricted to sparse herbaceous vegetation in deep, somewhat excessively drained sands in openings in Post oak woodlands, sometimes in active blowouts; all known sites underlain by sandy Eocene strat flowering late February-May (-June; also in the fall following periods of high rainfall)

Navasota ladies'-tresses	*Spiranthes parksii*	LE	E

Texas endemic; openings in post oak woodlands in sandy loams along upland drainages or intermittent streams, often in areas with suitable hydrologic factors, such as a perched water table associated with the underlying claypan; flowering populations fluctuate widely from year to year, an individual plant does not flower every yea flowering late October-early November (-early December)

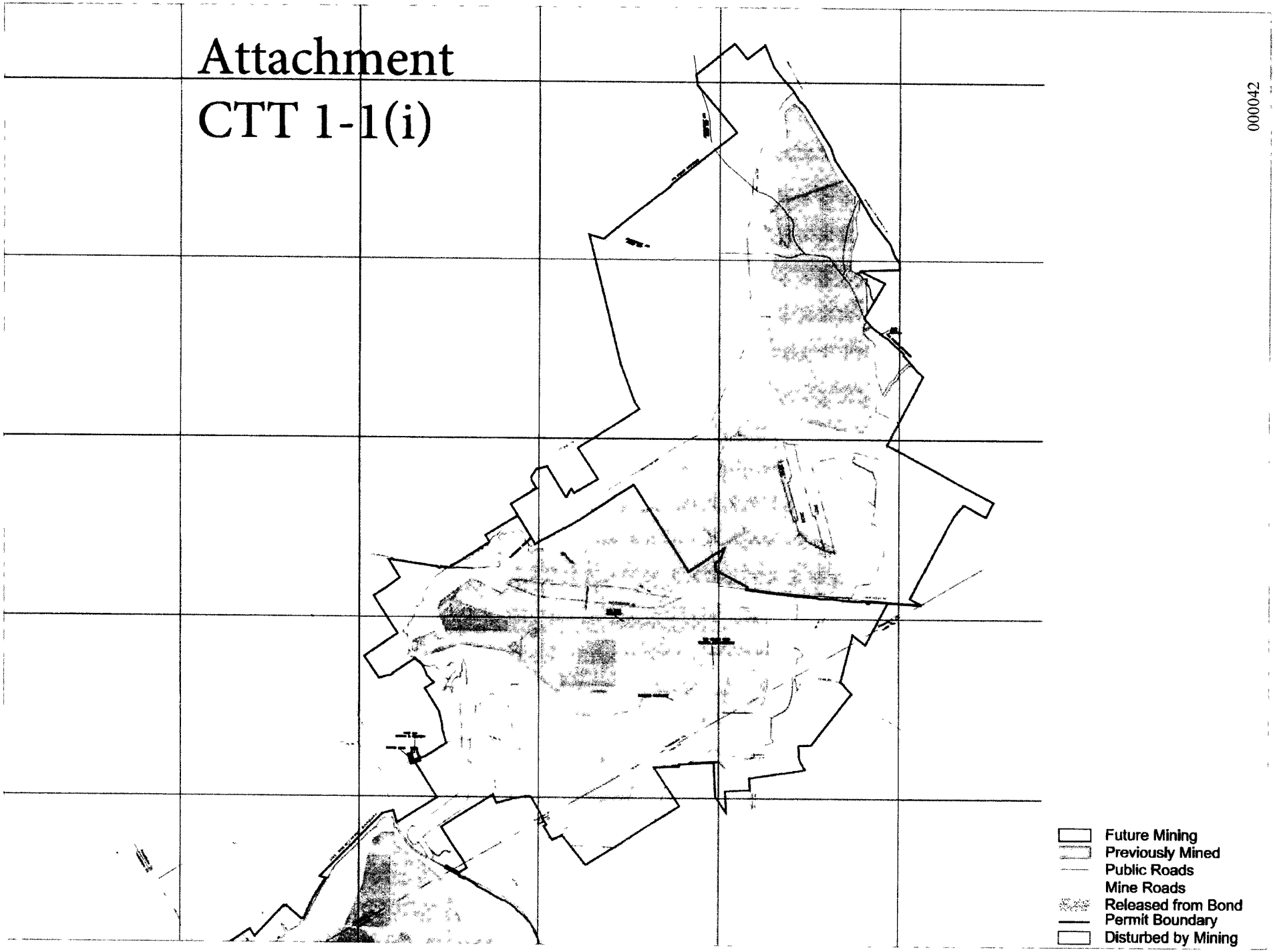
Parks' jointweed	*Polygonella parksii*		

Texas endemic; mostly found on deep, loose, whitish sand blowouts (unstable, deep, xeric, sandhill barrens) in l Oak Savanna landscapes over the Carrizo and Sparta formations; also occurs in early successional grasslands, al right-of-ways, and on mechanically disturbed areas; flowering June-late October or September-November

Sandhill woollywhite	*Hymenopappus carrizoanus*		

Texas endemic; disturbed or open areas in grasslands and post oak woodlands on deep sands derived from the Carrizo Sand and similar Eocene formations; flowering April-June

Attachment
CTT 1-1(i)



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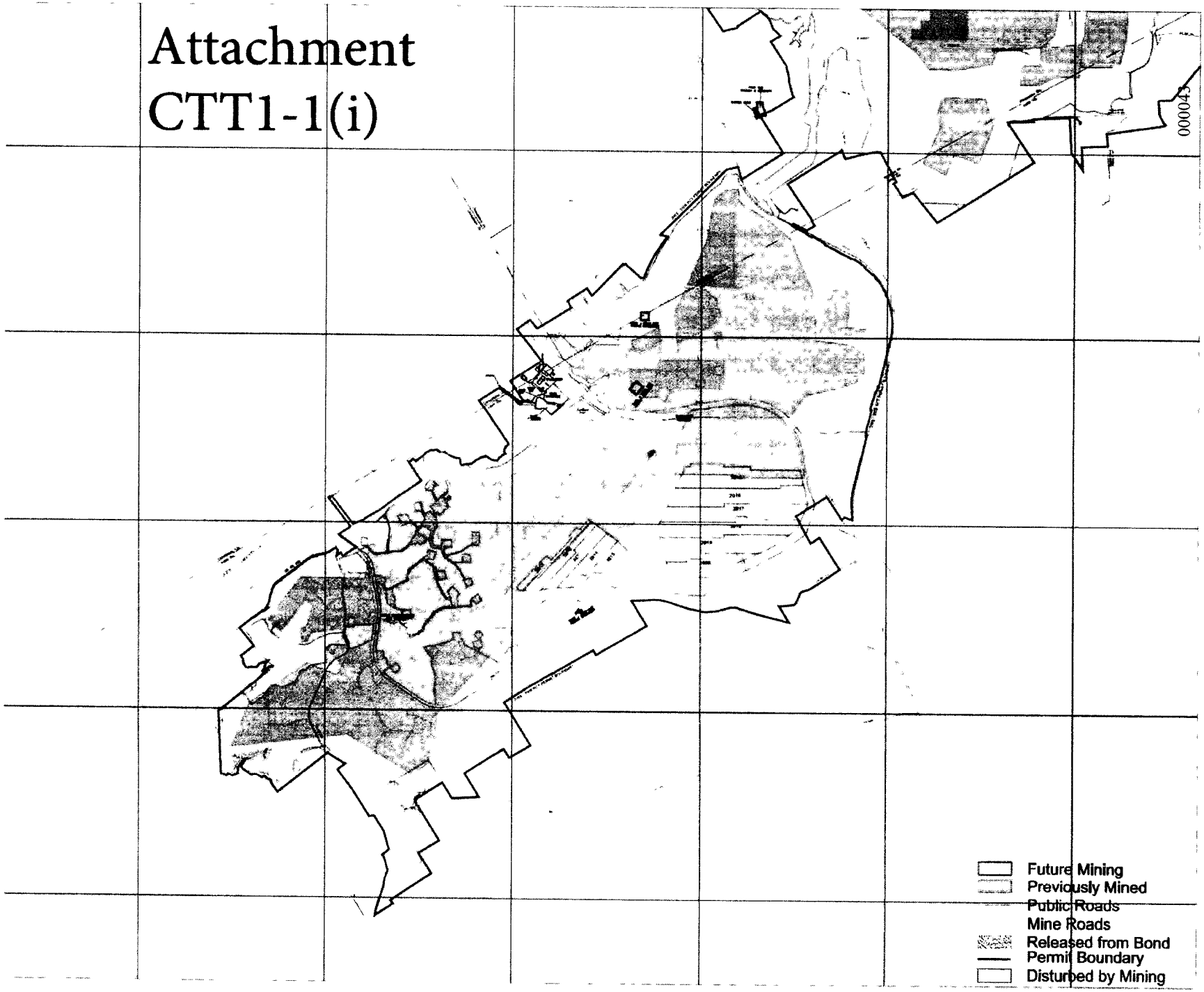

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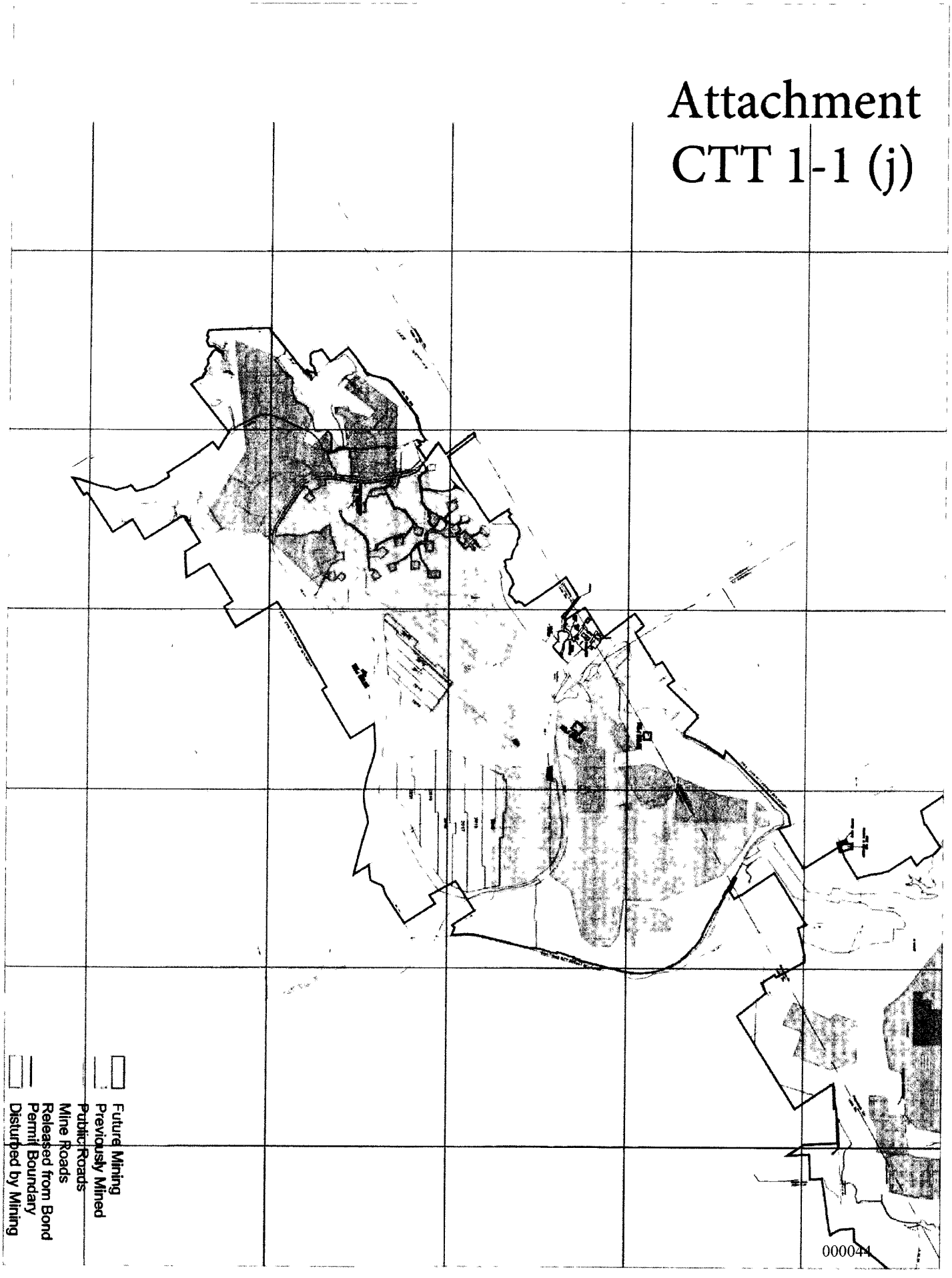

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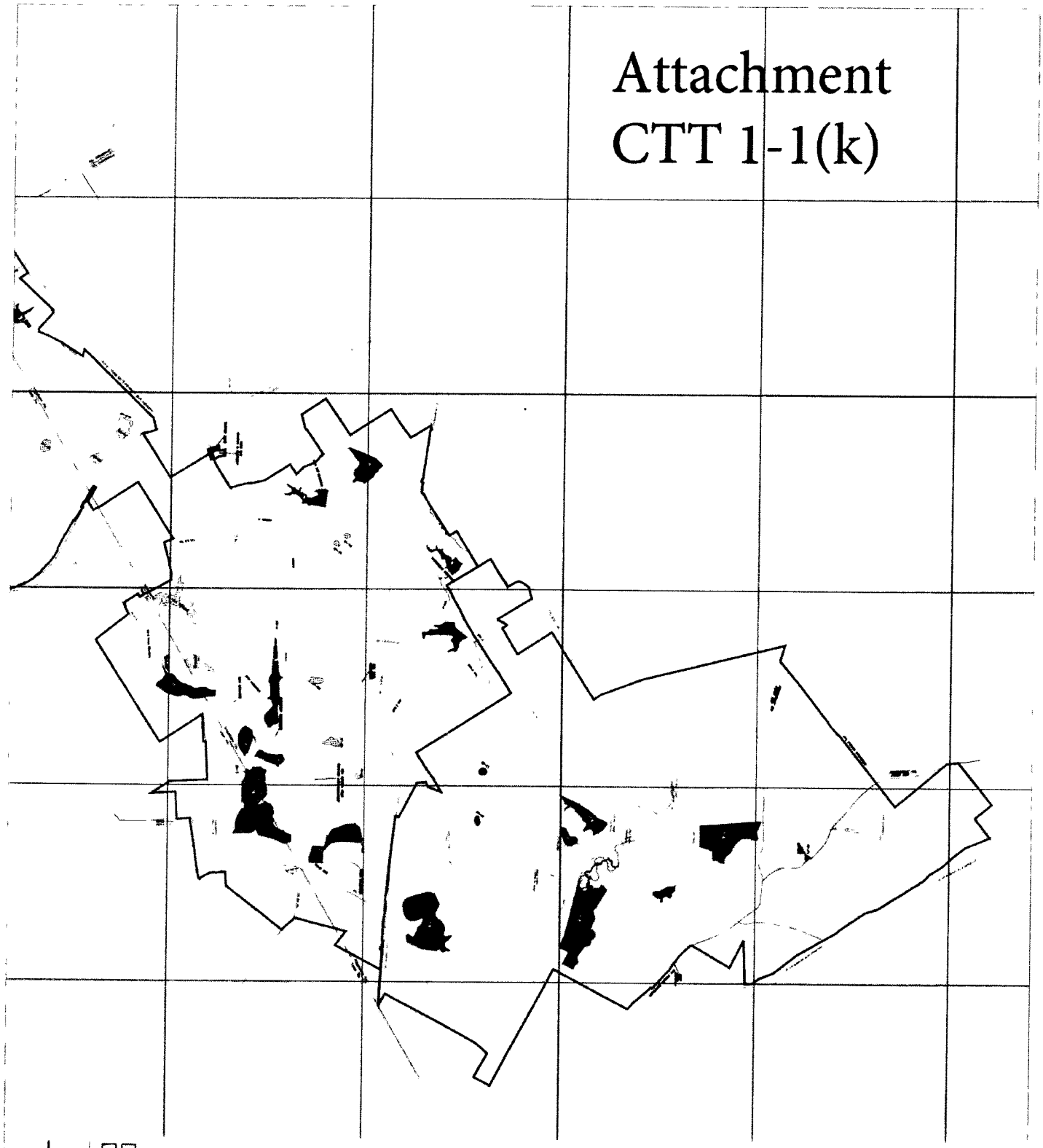

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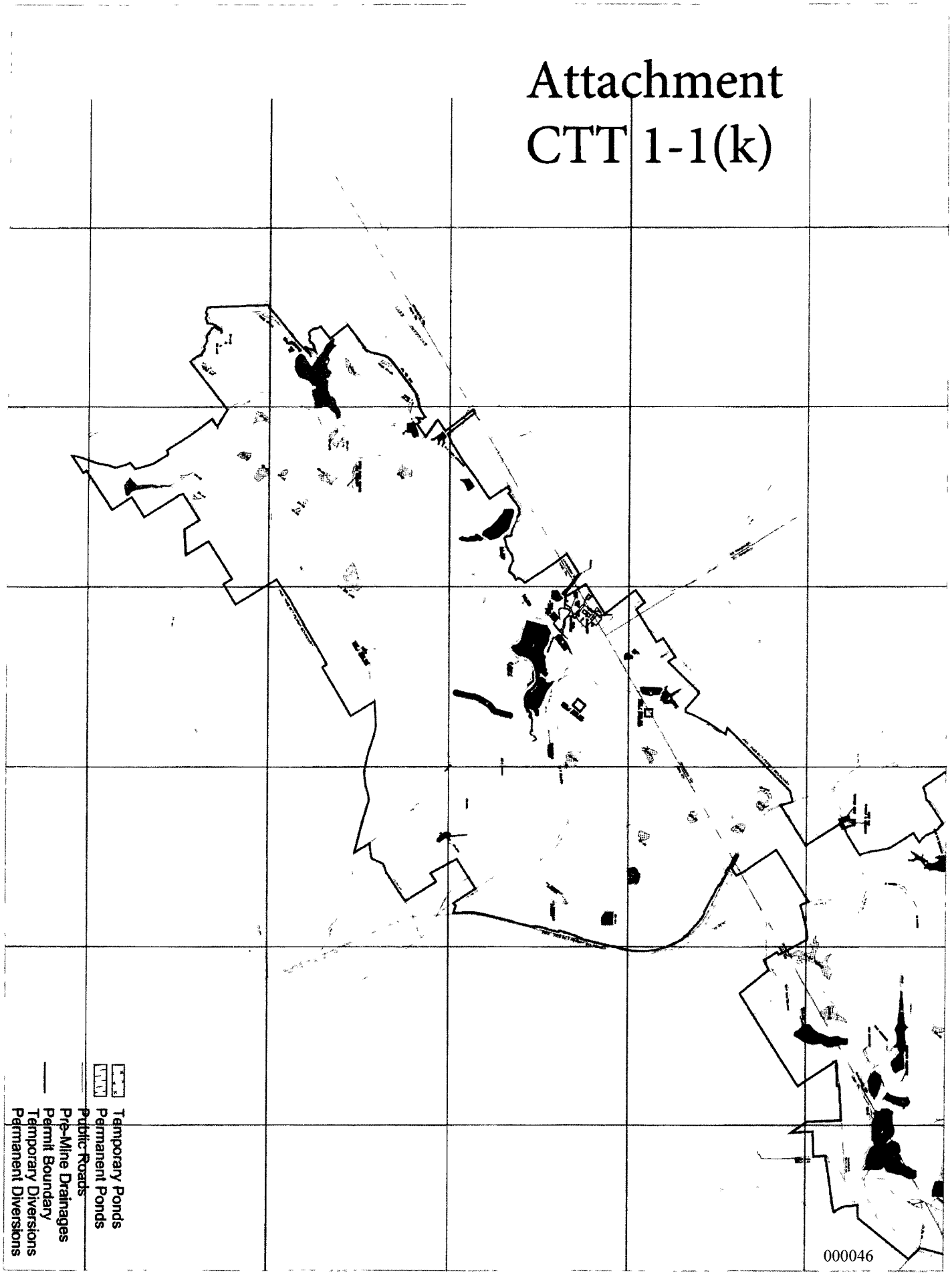

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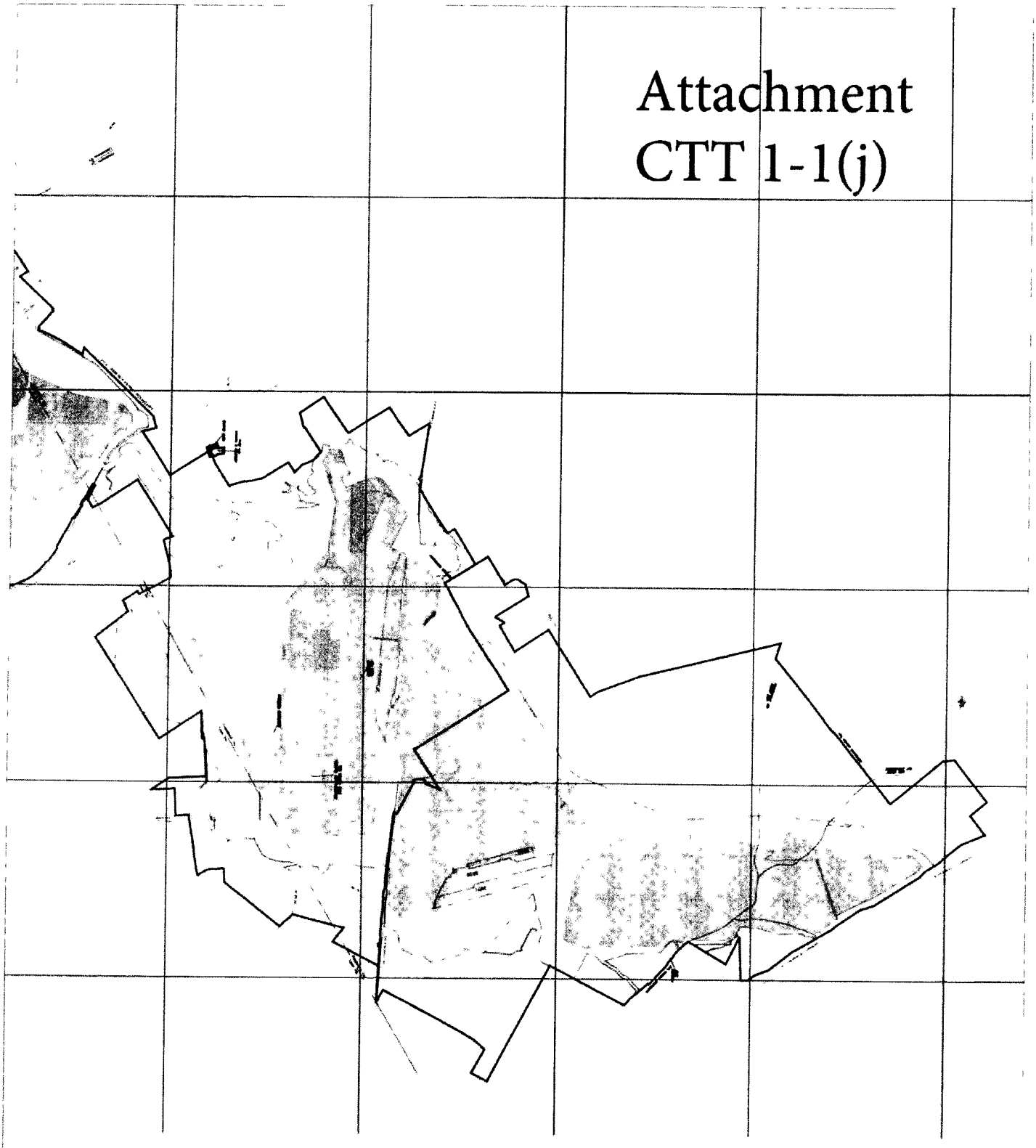
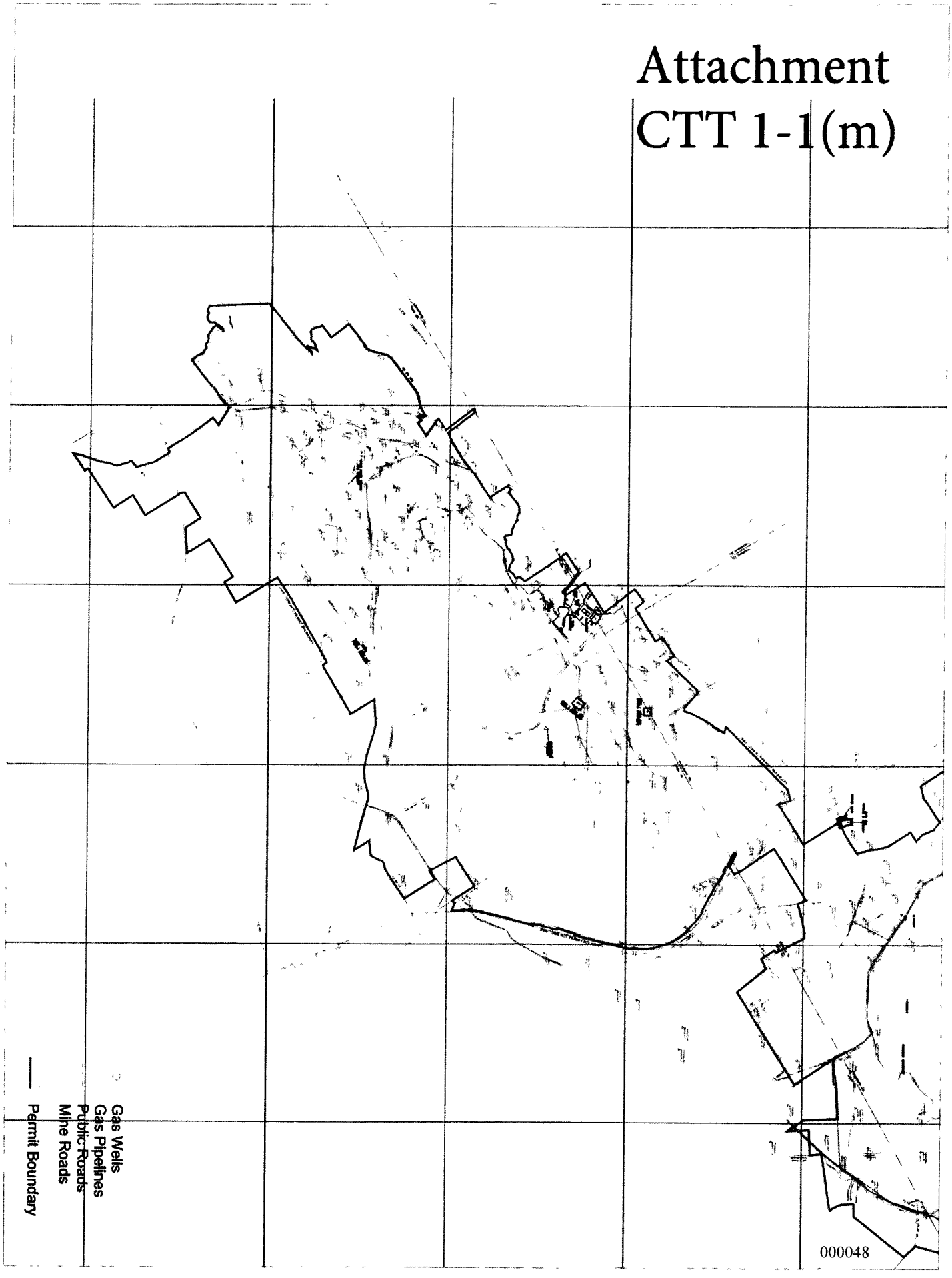


Future Mining
Previously Mined
Public Roads
Mine Roads
Released from Bond
Permit Boundary
Disturbed by Mining

Attachment
CTT 1-1(m)



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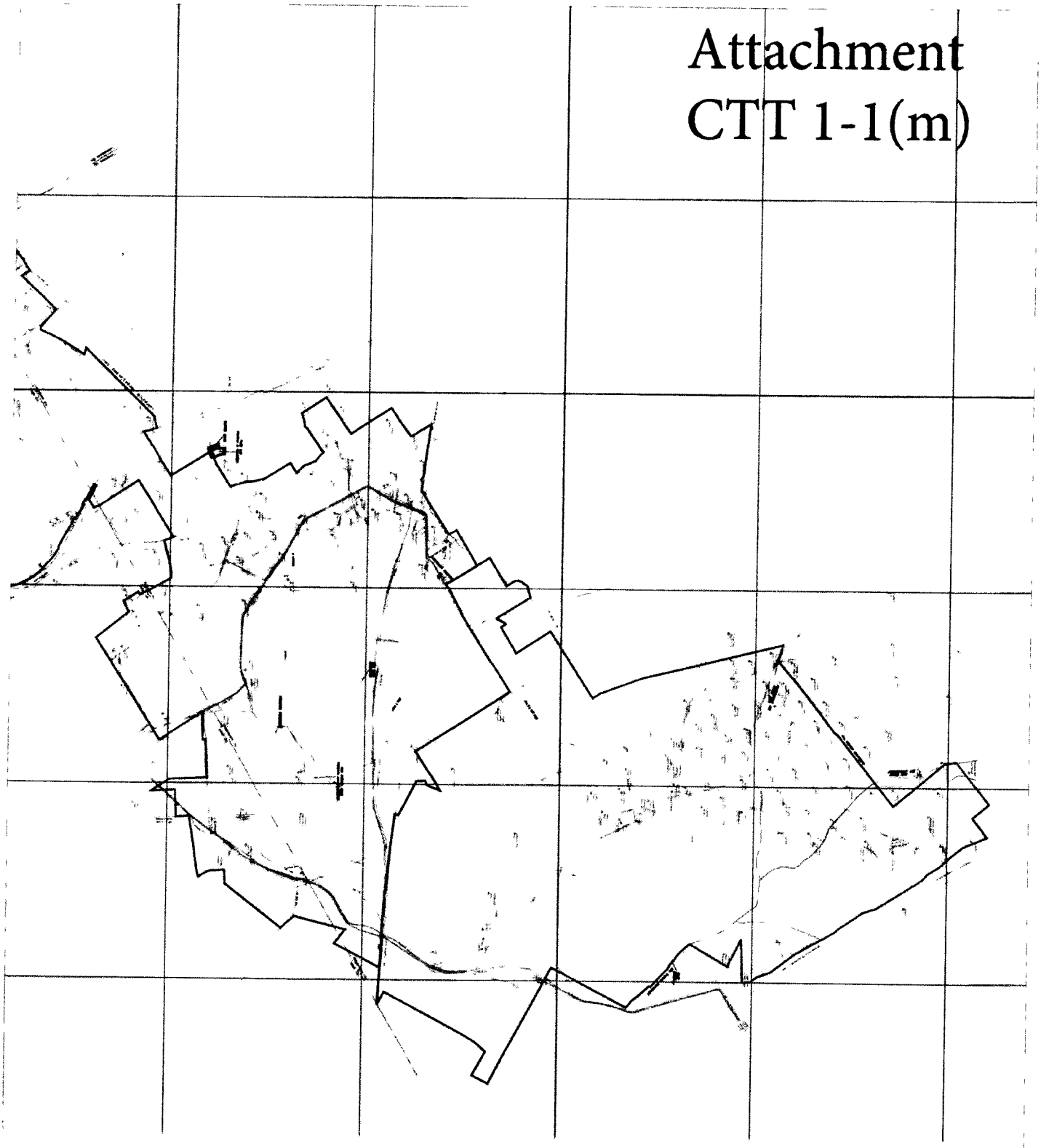

Gas Wells
Gas Pipelines
Public Roads
Mine Roads
Permit Boundary