

**AERIAL PHOTOGRAPHIC ANALYSIS
CASMALIA DISPOSAL SITE
CASMALIA, CALIFORNIA**

April 27, 2001

Prepared By: ERI

Aerial Photographic Analysis Casmalia Disposal Site Casmalia, California

April 27, 2001

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INTRODUCTION

A historical aerial photographic analysis of the Casmalia Disposal Site, located in Casmalia, California, was conducted for CH2MHILL. This analysis was conducted to document landscape morphology, patterns of waste disposal, and other observable activities and conditions of environmental significance at the site, and for the adjacent area encompassed by a one-mile radius from the center of the site. The period of analysis spans the time frame from 1973 to 1989.

Figure 1 consists of an overlay to a color-copy mosaic of the Casmalia and Guadalupe, California 1982 U.S. Geological Survey (USGS) topographic maps, 1:24,000-scale, and illustrates the local study area of the Casmalia Disposal Site. The Casmalia Disposal Site encompasses approximately 101 hectares (250 acres), and is represented as Photo Area A in this report. The adjacent area encompassed by a one-mile radius from the center of the site is represented as Photo Area B.

One date of black-and-white aerial photographs, and six dates of color aerial photographs, were acquired, analyzed, and reproduced for this report. Stereoscopic aerial photographic coverage was not available for 1984 or 1987 for either Photo Area A or Photo Area B. Complete monoscopic coverage was available for all dates of aerial photography analyzed for Photo Area A. Only partial monoscopic coverage was available for Photo Area B for the following dates: 1978, 1984, and 1987.

Significant features identified in Photo Area A by this analysis include 40 ponds (*P*), impoundments, a *Burial Cells Unit*, six landfills (of which five had visible drums), ground scars, tank trailers, sludge (*SL*), oil spreading areas, liquid spray areas, staining, liquid tanks, horizontal tanks, vertical tanks, excavations, graded areas, mounded material, trenches, and light-colored objects. Significant features identified in Photo Area B by this analysis include dark-colored staining on the primary access road, disturbed ground, excavations, grading, ground scars, blue-gray and light-colored material, runoff, staining, trenches, and a vertical tank.

All environmentally significant features are annotated on the print enlargements found in the Appendix in the back of this report. Features (e.g. access roads, impoundments, etc.) will be annotated when they are visible; however, they may not be discussed unless associated with an environmentally significant observation. Additionally, environmentally significant features and/or observations that are discussed when first visible may not be further discussed in subsequent years of analysis unless significant change is noted. Stains are identified and annotated throughout the analysis when they are visible. The source for a stain is only discussed or annotated when it is determined. Features not annotated on the subsequent year's print enlargement are no longer visible or are inactive.

Previously known features taken from a CH2MHill Casmalia Disposal Site map (CH2MHill, 2000) have been transferred to the overlays and described in the tables when activity associated with these features was observed. These features appear on the overlays in italics.

A Glossary, defining features or conditions identified in this report, follows the Analysis section. Sources for all maps, aerial photographs, and collateral data used in this report are listed in the References section. A Fold-out Legend, identifying the acronyms that are used as annotations on the overlays to the photographs, is located in the back of this report.

METHODOLOGY

This report was prepared using a standard methodology that includes the following steps:

- data identification and acquisition,
- photographic analysis, and
- graphics and text preparation.

These steps are described in this section. Subsections also address details related to specific kinds of analyses that may be required to identify environmental features, such as surface drainage and wetlands. All steps and processes used to perform this work adhere to strict QA/QC guidelines and standard operating procedures (SOPs).

Data identification and acquisition included a search of government and commercial sources of historical aerial photographs to identify and obtain photography with optimal spatial and temporal resolution and image quality for the study area. In addition, U.S. Geological Survey (USGS) topographic maps were obtained to show the study area location and to provide geographic and topographic context.

To conduct this analysis, the photographic analyst obtained diapositives (transparencies) of historical aerial photographs showing the study area. Diapositives are most often used for analysis instead of prints because the diapositives have superior photographic resolution. Diapositives show minute details of significant environmental features that may not be discernible on paper prints.

A photographic analyst uses a stereomicroscope to view adjacent, overlapping pairs of diapositives on a backlit light table. In most cases, the stereomicroscope is capable of magnifications up to 60 times the size of the feature on the diapositive. Stereoscopic viewing applies the principle of parallax (observing a feature from slightly different positions) to observe a three-dimensional representation of the area of interest.

The stereomicroscope enhances the photographic interpretation process by allowing the analyst to observe vertical as well as horizontal spatial relationships of natural and cultural features.

Photographic analysis involves visual examination and comparison of many components of a photographic image. These components include size, shape, shadow, tone, color, texture, pattern, and landscape context of individual elements of a photograph. The photographic analyst identifies objects, features, and "signatures" associated with specific environmental conditions or events. The term "signature" refers to a combination of components or characteristics that indicate a specific object, condition, or pattern of environmental significance. The analyst employs academic and professional training, photo interpretation experience gained through repetitive observations of similar features or activities, and deductive logic as well as background information from collateral sources (e.g., site maps, geologic reports, and soil surveys) in the photographic analysis.

The photographic analyst records the results of the analysis by using a standard set of annotations and terminology to identify objects and features observed in the diapositives. These objects, features, and other significant findings are annotated on overlays attached to the photographs in the report and are discussed in the accompanying text. Annotations that are self-explanatory may not be discussed in the text. The acronyms that are used as annotations are identified in the fold-out legend located in the back of this report and in the text when they are first used.

Objects and features are identified on the print enlargements and in the text according to the photographic analyst's degree of confidence in the evidence. When the analyst believes the identification is unmistakable, no qualifier is used. "Probable" is used when a limited number of discernible characteristics allow the analyst to be reasonably certain of a particular identification. "Possible" is used when only a few characteristics are discernible and the analyst can only infer an identification.

The print enlargements presented in this report have been reproduced from the original film by computer methods. The computer-produced prints used in this report are generated from scans of the film diapositives at approximately 1,300 dots per inch (dpi) and are printed at 720 dpi. Although the reproductions allow effective display of the interpretive annotations, they have less photographic resolution than the film diapositives. Therefore, some of the objects and features identified on the film diapositives and described in the text may not be clearly discernible on the print enlargements in this report.

Study area boundaries shown in this report were determined from aerial photography or collateral data and do not denote legal property lines or ownership.

Surface Drainage

The surface drainage analysis produced for this report identifies the direction and potential path that a surface runoff or a liquid spill would follow based on the topography of the terrain and the presence of discernible obstacles to surface flow. The photographic analyst determines the direction of surface drainage by stereoscopic analysis of the aerial photographs and by examining USGS topographic maps. Site-specific surface drainage patterns are annotated on the map and/or overlays to the photographs. Where the direction of drainage cannot be determined, an indeterminate drainage line symbol is used. Regional surface flow is ascertained from the USGS topographic maps.

PHOTO ANALYSIS

MAY 20, 1974 PHOTO AREA A (FIGURE 2)

The Casmalia Disposal Site is accessed by a road entering the southeastern edge of the site from Black Road (not annotated). This road will be referred to as the primary access road in this report.

Two buildings (B) are visible at the disposal site, one along the primary access road at the eastern entrance of the site, and one east of the central access road in the northern portion of the site.

A horizontal tank (HT) is seen in the southwestern portion of the site. An impoundment (IM) with light-toned material and liquid is seen southeast of the horizontal tank. North of the horizontal tank, a ground scar (GS) is visible along an access road. In the far northern portion of the site, a vertical tank (VT) is visible along the central access road. Several excavations (EX) are seen in the southeastern portion of the site. An excavated area is seen east of the disposal site along an access road. This excavation has created a leveled area.

MAY 20, 1974 PHOTO AREA A (FIGURE 2)

Annotation	Description
<i>P1</i>	An excavation is visible. An impoundment is seen northwest of <i>P1</i> .
<i>P2</i>	Two ponds containing liquid are separated by a berm. A drainage channel containing liquid flows south into the northernmost pond. Liquid is impounded in a drainage channel, in three areas, in the eastern portion of <i>P2</i> . An impoundment is seen in a graded area north of <i>P2</i> .
<i>P3</i>	Liquid is visible in the pond.
<i>P10</i>	Liquid is visible in the pond. Drainage channels extend through <i>P10</i> from the north and exit to the southwest.

MAY 20, 1974 PHOTO AREA A (FIGURE 2)

Annotation	Description
<i>P13</i>	Liquid is visible in the pond. Two drainage channels enter the pond from the north.
<i>P14</i>	The pond contains turbid liquid.
<i>P16</i>	The pond contains liquid and light-toned material.
<i>P17</i>	Liquid is visible in the pond. A drainage channel containing liquid extends from near <i>P16</i> to <i>P17</i> .
<i>P18</i>	Liquid is visible in an excavated area located within a larger graded area.
<i>PA</i>	Liquid is visible in the pond.
<i>PB</i>	The pond contains liquid along with light- and medium-toned material. Light- and medium-toned material is visible on a berm that forms the northern boundary of the pond. A vehicle (V), probably an earth-moving vehicle, is seen at the top of this berm. Liquid (LQ) is seen in drainage channels south of <i>PB</i> .
<i>PC</i>	A tanker truck (TT) is backed up to the berm that forms the northern boundary of the pond. Liquid is being released from a possible pipe on the top of the berm. Light- and medium-toned material, liquid, and staining are visible on the berm. Liquid, along with light- and medium-toned material, is visible in the pond.
<i>PD</i>	Liquid, as well as light- and medium-toned materials, are visible in the pond. The light-toned material appears to be partially graded.
<i>PE</i>	Liquid is visible in the pond.
<i>PJ</i>	The pond contains liquid. A drainage channel leads to the pond from the north. Light- and medium-toned material is visible in the eastern portion of the pond. This material probably enters the pond through a pipe visible in the northeastern corner of the pond.
<i>PL</i>	This pond appears to be receiving liquid via drainage channels that extend from <i>PC</i> and <i>PD</i> , and possibly from <i>PE</i> .
BURIAL CELLS UNIT	Two trenches (TR) are visible in this location. The southern trench contains liquid.

MAY 20, 1974 PHOTO AREA B (FIGURE 3)

The land in Photo Area B is primarily being used for livestock grazing. Agricultural fields are visible south of the disposal site (Photo Area A). A tank (T), possibly used for water storage, is visible west of the disposal area. Drainage from the disposal site flows to the south through Photo Area B. Drainage from Photo Area B flows into Casmalia Canyon, located to the west of the disposal site, and into Shuman Canyon (not seen), located to the south and east of the disposal site.

JUNE 18, 1975 PHOTO AREA A (FIGURE 4)

A horizontal tank remains visible in the southwestern portion of the site. An excavation is visible southeast of the horizontal tank along the primary access road. Liquid is visible in an impoundment south of *P14*. One new building (NB) is visible in the northern portion of the site, east of the central access road. Three impoundments with liquid and light- and medium colored material are seen south of *PA*. The impoundments are connected by drainage channels and descend in elevation to the south. A drainage channel enters the northernmost impoundment from a location near *PA*. A drainage channel extends south from the southernmost of these impoundments. Liquid has collected in several places in the southeastern portion of the site. To the east, liquid and staining (ST) are visible south of an access road. A linear area adjacent to this access road, and extending to the primary access road, is also stained. Grading (GR) and ground scars are visible south of the most concentrated area of staining.

JUNE 18, 1975 PHOTO AREA A (FIGURE 4)

Annotation	Description
<i>P1</i>	An excavation remains visible. An impoundment with liquid is seen northwest of <i>P1</i> .
<i>P2</i>	Two ponds containing liquid and separated by a berm remain visible. Turbid liquid is seen in the northern pond. Light-colored fill material and a small amount of liquid are seen in the southern pond. Liquid is impounded in a drainage channel in three areas in the eastern portion of the <i>P2</i> .
<i>P3</i>	The pond contains liquid. A tanker truck is seen backed up to the southwestern portion of the pond. Liquid emanating from the rear of the truck is discharging into the pond.
<i>P10</i>	Liquid is visible in the pond. Drainage channels extend through <i>P10</i> from the north and exit to the southeast.
<i>P13</i>	Liquid is visible in the pond. Drainage channels extend to the pond from the north.

JUNE 18, 1975 PHOTO AREA A (FIGURE 4)

Annotation	Description
<i>P14</i>	Liquid is visible in the pond.
<i>P16</i>	Light- and dark-colored material and liquid are visible in the pond. The northern berm is covered with light- and dark-colored material and staining.
<i>P18</i>	Liquid is visible in an excavated area located within a larger graded area.
<i>PA</i>	Liquid is visible in the pond. Light-colored mounded material is visible in the northwestern portion of the pond.
<i>PB</i>	Liquid is visible in the pond. Staining and dark-colored material are visible on the northern berm of the pond.
<i>PC</i>	Multi-colored material and liquid are visible in the pond. Dark-colored material and staining are visible on the northwestern berm of the pond.
<i>PD</i>	Liquid is visible in the pond. Dark-colored material and staining are visible on the northeastern berm of the pond. Dark-colored mounded material and staining are visible in the pond at the bottom of the berm.
<i>PE</i>	Liquid is visible in the pond.
<i>PJ</i>	Liquid is visible in the pond. A drainage channel extends to the pond from the north.
<i>PL</i>	Liquid is visible in the pond. A drainage channel extends to the pond from the northwest.
<i>PM</i>	A pond containing liquid is bermed and separated from a larger bermed area that contains liquid and multi-colored mounded material. A breach is present in the lower bermed area, allowing liquid to drain to an impoundment to the south. The area south of the pond also contains light-colored mounded material. An additional impoundment containing liquid is seen southeast of <i>PM</i> .
BURIAL CELLS UNIT	Two empty trenches and light-colored graded material are visible at the <i>Burial Cells Unit</i> .

JUNE 18, 1975 PHOTO AREA B (FIGURE 5)

Dark-colored (DC) staining is visible on the eastern portion of the primary access road.

MARCH 14, 1978 PHOTO AREA A (FIGURE 6)

A ground scar is seen west of *P18*. Three light-colored (LC) objects (O) are seen west of the *Burial Cells Unit*. These objects are seen adjacent to a drainage channel and may be related to natural gas or petroleum extraction. North of the *Burial Cells Unit*, two vertical tanks are visible. A ground scar is visible northwest of the *Burial Cells Unit*. An impoundment with turbid brown liquid is visible southeast of the *Burial Cells Unit*. Further to the south, a vertical tank is seen. A new building is seen in the central portion of the site, north of *PR*. A building has also been removed (BR) from this vicinity. Liquid and staining are seen adjacent to a building south of the vertical tank. The liquid and staining are also visible on an access road that leads away from the building and around *PR*. An access road and ground scars are visible in a field east of *PR*. Several other ground scars are visible near this access road farther to the east of the disposal site. A drainage channel, impounded in four locations upstream, flows into *P8*. East of *P11*, graded dark-colored material is visible adjacent to the south side of an access road. Four graders (GA) are seen in this area. Dark-colored material has been graded and mounded near *P11*. An impoundment with turbid brown liquid is seen east of *P10*. In the south central portion of the site, north of *P13*, two trenches filled with liquid are visible. Orange liquid is seen in several areas north and east of the trenches.

MARCH 14, 1978 PHOTO AREA A (FIGURE 6)

Annotation	Description
<i>P1</i>	Two ponds and an impoundment adjacent to <i>P18</i> are visible. The northern pond contains liquid; the southern pond contains turbid liquid. The impoundment also contains liquid.
<i>P2</i>	Two ponds are visible in this location. Drainage channels flow into the northern pond. Drainage also flows into an impounded area on the eastern side of <i>P2</i> . Two pipes extending from the southern pond and a pipe extending from the impoundment discharge into nearby drainage channels. The drainage channels extend southeast from this point.

MARCH 14, 1978 PHOTO AREA A (FIGURE 6)

Annotation	Description
<i>P4</i>	Liquid is visible in two ponds.
<i>P8</i>	Liquid is visible in the pond. Drainage channels from the north extend into <i>P8</i> .
<i>P9</i>	Liquid is visible in the pond. Graded light-colored mounded material forms the southern berm of <i>P9</i> . A pipe extending from near <i>PV</i> discharges into a drainage channel that connects to <i>P9</i> .
<i>P10</i>	The pond contains liquid. <i>P10</i> is probably connected via a pipeline to <i>P8</i> that is located beneath a fill area constructed for an access road.
<i>P11</i>	Turbid dark-colored liquid is visible in the pond. Graded dark-colored material makes up the eastern berm of the pond. Graded medium-colored material makes up the western boundary of the pond.
<i>P13</i>	The pond contains liquid. Drainage channels, originating near pipes from <i>P2</i> , drain into <i>P13</i> . Drainage channels from <i>P4</i> , an impoundment near <i>P2</i> , and trenches east of <i>P4</i> also drain into <i>P13</i> .
<i>P14</i>	The pond contains liquid. Liquid is seen entering the northwestern corner of the pond via a pipe.
<i>P15</i>	The pond contains liquid along with light- and medium-colored material. The light-colored material is concentrated in the center of the pond near the end of a pipe extending from the northeastern corner of the pond. A drainage channel extends from <i>P15</i> to <i>P17</i> . Liquid, along with light- and dark-colored material, is visible in this drainage channel.
<i>P16</i>	The pond contains liquid mixed with light- and dark-colored mounded material. Staining is visible on the northern berm of the pond, in a location that serves as a discharge point to the pond.
<i>P17</i>	<i>P17</i> contains liquid and is connected to <i>P15</i> by a drainage channel. Liquid is also entering the pond through a possible pipe at the southeastern edge of the berm of the pond.
<i>P18</i>	The pond contains liquid.

MARCH 14, 1978 PHOTO AREA A (FIGURE 6)

Annotation	Description
<i>PAD 4A</i>	<i>Pad 4A</i> is mostly vegetated. Drainage channels extend south through this area and discharge into <i>P2</i> and an impoundment in the eastern portion of <i>P2</i> .
<i>PA</i>	Liquid is visible in the pond. Liquid, dark-colored material, and staining are visible on the northern berm of the pond.
<i>PB</i>	Liquid is visible in the pond. Dark-colored material and staining are visible on the northern berm of the pond. Light-colored material is seen on the surface of the southern portion of the pond (possibly floating).
<i>PC</i>	Liquid is visible in the pond. Dark-colored material and staining are visible on the northwestern berm of the pond. Light-colored material is seen on the surface of the southern portion of the pond (possibly floating).
<i>PD</i>	Turbid dark-colored liquid is visible in the pond. Multi-colored material is seen on the northeastern berm of the pond from a location used for discharging into the pond. The material is collected in a mound at the bottom of the berm.
<i>PE</i>	Liquid is visible in the pond. Liquid is seen entering the pond through a possible pipe on the eastern berm.
<i>PJ</i>	Liquid is visible in the pond. A pipe enters this site from the east.
<i>PL</i>	The pond contains liquid. A drainage channel extends from <i>PD</i> to this pond. Light-colored material has collected at the point where this drainage enters the pond. An impoundment containing liquid is visible north of the pond.
<i>PM</i>	Liquid is visible in the pond.
<i>PP</i>	The pond contains liquid. Liquid is also visible entering the pond in the northwestern corner from a probable pipe. The pipe extends westward to <i>PI4</i> and then southwestward to <i>P15</i> .
<i>PR</i>	The pond contains liquid, some of which is turbid. Medium-colored material is visible on the western berm. Dark-colored mounded material (MM) is seen west and south of the pond.

MARCH 14, 1978 PHOTO AREA A (FIGURE 6)

Annotation	Description
<i>PS</i>	Liquid is visible in the pond. A drainage channel is seen entering the pond from the northeast. This drainage channel extends from the vicinity of a vertical tank located to the west. The vertical tank is connected to a pipe that enters the ground just south of <i>PB</i> . A wider pipe connects this vertical tank to two more probable vertical tanks to the west. A light-blue tanker truck surrounded by liquid or staining is seen northwest of <i>PS</i> .
<i>PT</i>	Liquid is visible in the pond.
<i>PV</i>	Liquid is seen in the pond. A pipe is visible near the southwestern corner of this pond. The pipe connects to a drainage channel that is impounded prior to discharging into <i>P9</i> .
<i>BURIAL CELLS UNIT</i>	Two trenches are visible in the <i>Burial Cells Unit</i> . The trenches are partially backfilled and contain liquid.

MARCH 14, 1978 PHOTO AREA B (FIGURE 7)

Aerial photographs for this date were not available for the entire one-mile radius from the center of the disposal site. No significant findings are noted for this date.

AUGUST 25, 1981 PHOTO AREA A (FIGURE 8)

In the southwestern corner of the site, a large trench is visible south of ponds *PA-1* through *PA-5*. Dark-colored material is visible on the surface of a graded fill area adjacent to the southwestern edge of the trench. Ground scars and a cleared area (CA) are also visible in this vicinity.

An excavation is visible west of *P23*. South of *P14*, open storage (OS) of possible pipes is visible. A probable horizontal tank is also visible in this area. To the east of the open storage area a building, seen in 1978, has been removed. East of *PR*, a trailer truck (TL) is backed up to a pad with three light-colored objects. A linear area of medium-colored (MC) material (M) is seen south of the *Pesticides and Solvents Landfill* (LF). Portions of an access road south of *Pad 10C* and surrounding *P19* are heavily stained. Staining is also visible on the primary access road and on an access road that branches from it between *P10* and *P11*. An impoundment containing liquid is visible north of *PV*. An additional impoundment is visible farther to the north. In the southeastern portion of the site, three empty trenches are visible. An excavated and graded area is visible east of the trenches.

AUGUST 25, 1981 PHOTO AREA A (FIGURE 8)

Annotation	Description
<i>P1</i>	One empty pond is visible.
<i>P2</i>	The pond contains liquid. A drainage channel with liquid extends from <i>Pad 4A</i> into the northern end of <i>P2</i> . Both portions of <i>P2</i> are connected.
<i>P3</i>	Liquid is visible in the pond.
<i>P4</i>	Turbid liquid is visible in the pond.
<i>P5</i>	Liquid is visible in the pond.

AUGUST 25, 1981 PHOTO AREA A (FIGURE 8)

Annotation	Description
<i>P6</i>	Turbid dark-colored liquid is visible in the pond. A fill area (FA) is visible northeast of the pond. West of the pond, an impoundment that contains light- and medium-colored mounded material is visible. Impounded areas of liquid are also visible interspersed with the material.
<i>P8</i>	Liquid is visible in the pond.
<i>P9</i>	The majority of the pond contains light-colored turbid liquid. A probable outfall from a pipe is visible in the eastern portion of the pond.
<i>P10</i>	Liquid is visible in the pond.
<i>P11</i>	Liquid is visible in the pond.
<i>P12</i>	Liquid is visible in the pond.
<i>P13</i>	Liquid is visible in the pond. An access road leads to the western edge of the pond.
<i>P14</i>	Slightly turbid liquid is visible in the pond.
<i>P15</i>	The pond contains a small amount of liquid. A probable pipe is visible in the eastern berm of the pond.
<i>P16</i>	The pond contains light-, medium-, and brown-colored sludge and a small amount of liquid. A tanker truck is backed up to the northern edge of the pond. A drainage channel extends from the back of the tanker truck through the material in <i>P16</i> and continues into <i>PD</i> .
<i>P17</i>	Liquid is visible in the pond.
<i>P18</i>	Light-colored graded material and a small area of liquid are visible in the pond.
<i>P19</i>	Liquid is visible in the pond.
<i>P23</i>	An excavation is visible in this location.
<i>PA-1</i>	A small amount of turbid liquid is visible in the pond.

AUGUST 25, 1981 PHOTO AREA A (FIGURE 8)

Annotation	Description
<i>PA-2</i>	A graded area is visible in this location.
<i>PA-3</i>	A graded area and a pit are visible in this location.
<i>PA-4</i>	An empty pond is visible.
<i>PA-5</i>	A drainage channel, ground scars, and fill areas are visible within <i>PA-5</i> .
<i>PA</i>	Liquid is visible in the pond. Liquid is also being released onto the northern berm of the pond from a pipe. Liquid, dark-colored material, and staining are visible on the berm.
<i>PB</i>	Liquid is visible in the pond. Liquid is being released onto the northern berm of the pond from a pipe. Liquid, dark-colored material, and staining are visible on the berm. The berm between <i>PA</i> and <i>PB</i> is narrowed and stained at the southern end.
<i>PC</i>	Liquid is visible in the pond. Liquid is also being released onto the northern berm of the pond from a pipe. Liquid, dark-colored material, and staining are visible on the berm.
<i>PD</i>	Light-colored sludge is visible in the eastern portion of the pond and on the eastern berm of the pond. Liquid is visible in the western portion of the pond. A drainage channel containing liquid extends from <i>P16</i> into the western portion of <i>PD</i> .
<i>PE</i>	Liquid is visible in the pond.
<i>PJ</i>	Liquid is visible in the pond. A drainage channel enters the pond from the north.
<i>PL</i>	Liquid is visible in the pond. A drainage channel extends from <i>PD</i> to <i>PL</i> . Light-colored material is visible where the drainage channel enters <i>PL</i> .
<i>PM</i>	Turbid liquid with an oily sheen is visible in the pond. A graded fill area is seen along the western berm of the pond and extends into the pond.

AUGUST 25, 1981 PHOTO AREA A (FIGURE 8)

Annotation	Description
<i>PP</i>	Liquid is visible in the pond.
<i>PR</i>	Liquid and dark colored material are visible in the pond.
<i>PS</i>	Liquid is visible in the pond. A drainage channel extends from an outfall, most likely originating from <i>PA</i> , and discharges into <i>PS</i> . Liquid and staining are visible around this outfall. Two vertical tanks are visible to the northwest. A pipe connects <i>PB</i> to one of the vertical tanks and to a nearby drainage channel. This drainage channel also extends into <i>P9</i> .
<i>PV</i>	Liquid is visible in the pond. A fill area with brown material extends into the western portion of the pond. A fill area with light-colored material extends into the northern portion of the pond. Liquid is visible in an impounded area, created by the aforementioned fill area.
<i>PAD 4A</i>	An impoundment containing dark-colored material and possible liquid is visible in this location.
<i>PAD 10B</i>	Drainage channels from <i>Pad 10C</i> are visible in this location.
<i>PAD 10C</i>	Liquid is visible on this spray area. Three drainage channels are visible in this vicinity. Liquid from the spray area has collected in two of these drainage channels.
<i>PAD 10E</i>	Liquid is visible in this spray area and within a drainage channel located to the west.
<i>PAD 10F</i>	Staining is visible in this spray area.
<i>PAD 10G</i>	Liquid and staining are visible in this spray area. Liquid is seen in drainage channels to the east and west.
<i>SLI</i>	Three impoundments are visible at descending elevations. Light-colored sludge is visible northeast of the impoundments at a probable discharge point. The two northernmost impoundments are visibly connected by an overflow drainage channel. All three impoundments contain light-colored slurry.

AUGUST 25, 1981 PHOTO AREA A (FIGURE 8)

Annotation	Description
<i>PCB LF</i>	Refuse (R) is seen at a fill face in the southeastern portion of the landfill.
<i>PESTICIDES/ SOLVENTS LF</i>	Probable refuse is visible at a recently graded fill face in the southern portion of the landfill.
<i>HEAVY METALS LF</i>	A recently graded fill face is seen in the southern portion of the landfill. A fill area containing light-colored material is visible north of the landfill.
<i>CAUSTIC/ CYANIDE LF</i>	A fill area containing light-colored material is visible in the northern portion of the landfill. A fill area is also seen east of the landfill.
<i>ACIDS LF</i>	A recently graded fill face, containing light-colored material, is visible in the western portion of the landfill.

AUGUST 25, 1981 PHOTO AREA B (FIGURE 9)

A structure (S) and a building have been constructed adjacent to a dam (not annotated) west of the disposal site. Dark-colored staining is visible on the entire length of the primary access road.

JULY 6, 1984 PHOTO AREA A (FIGURE 10)

Staining is visible surrounding six circular, evenly spaced areas north of *PA-4*. East of *RCRA Canyon*, a fill area is visible. An empty trench is seen to the south of the fill area. A vertical tank and a new building have been added where two vertical tanks were seen in the northwestern portion of the site in 1981. Southwest of *P14*, a new building and six vertical tanks are visible. Staining is visible east of a building near *PR*. Southeast of *PR*, an impoundment containing light-colored material and liquid is visible.

JULY 6, 1984 PHOTO AREA A (FIGURE 10)

Annotation	Description
<i>P1</i>	Liquid is visible in the pond. A pipe connects this pond with <i>P18</i> .
<i>P2</i>	Liquid is visible in the pond.
<i>P3</i>	Liquid is visible in the pond. A drainage channel enters the pond from near <i>PM</i> .
<i>P4</i>	Liquid is visible in the pond.
<i>P5</i>	Liquid is visible in the pond.
<i>P6</i>	Liquid is visible in the pond. An impoundment located to the west contains light-colored material.
<i>P8</i>	Liquid is visible in the pond. Drainage from <i>Pad 7A</i> most likely enters this pond.
<i>P9</i>	Liquid is visible in the pond. Drainage channels extend south from <i>PV</i> and discharge into <i>P9</i> .
<i>P10</i>	Liquid is visible in the pond.
<i>P11</i>	Liquid is visible in the pond.
<i>P12</i>	Liquid is visible in the pond.
<i>P13</i>	Possible liquid is visible in the pond. An access road leads to the western edge of the pond from the northwest. A vehicle is seen at the terminus of the access road.

JULY 6, 1984 PHOTO AREA A (FIGURE 10)

Annotation	Description
<i>P14</i>	Liquid is visible in the pond. The pond also contains orange, brown, and light-colored material. Most of the material is concentrated near the northern berm in a location where materials are disposed into the pond.
<i>P15</i>	The northern portion of <i>P15</i> appears to be partially graded. Liquid is collecting in the southern portion of this area adjacent to <i>P17</i> . This liquid flows into the pond over the northern berm of <i>P17</i> .
<i>P16</i>	A truck is backed up to the pond. Liquid and light-colored sludge are visible in the pond. Liquid is emanating from the vicinity of a truck located on the edge of <i>P16</i> . The liquid extends through the sludge in <i>P16</i> and discharges into <i>PD</i> .
<i>P17</i>	Liquid is visible in the pond. A break in the northern berm of this pond allows liquid and material to flow from <i>P15</i> into <i>P17</i> . A smaller impoundment with liquid is seen to the south.
<i>P18</i>	Light-brown turbid liquid is visible in the pond. Three pipes are seen on the northern berm of <i>P18</i> . Light-colored mounded material is visible at the base of the northern berm. A pipe extending to the south connects this pond to <i>P1</i> .
<i>P19</i>	Liquid is visible in the pond.
<i>P20</i>	Liquid is visible in the pond.
<i>P22</i>	Liquid is visible in the pond. A drainage channel enters <i>P22</i> from <i>Pad 10F</i> and <i>Pad 10G</i> .
<i>P23</i>	Light-gray material is seen in the pond.
<i>PA-1</i>	Liquid is visible in the pond. Staining, visible on the western and southern berms of <i>PA-1</i> , indicates that discharges of liquid and material have likely occurred in these locations.
<i>PA-2</i>	Liquid is visible in the pond. Liquid is being sprayed into the pond adjacent to the southeastern and southwestern berms of <i>PA-2</i> .

JULY 6, 1984 PHOTO AREA A (FIGURE 10)

Annotation	Description
<i>PA-3</i>	Liquid is visible in the pond. A pipe extends into the southern edge of the pond.
<i>PA-4</i>	Liquid is visible in the pond.
<i>PA-5</i>	Liquid is visible in the pond.
<i>PA-6</i>	Liquid is visible in the pond. A probable pipe or hose is visible along the southern berm of <i>PA-4</i> and <i>PA-6</i> .
<i>PA</i>	Liquid is visible in the pond. Dark-colored material, liquid, and staining are visible on the northern berm of this pond. The liquid appears to be emanating from a pipe in this location.
<i>PB</i>	Liquid is visible in the pond. Dark-colored material, liquid, and staining are visible on the northern berm of this pond. The liquid appears to emanate from a pipe in this location.
<i>PC</i>	Liquid and dark-colored mounded material are visible in the pond. Dark-colored material is seen inside the northern berm of the pond. A truck is backed up on top of the berm.
<i>PD</i>	Three trucks are seen backed up on top of the northern berm of <i>PD</i> . Liquid and staining, along with light- and dark-colored sludge, are seen on the top and the interior face of the berm.
<i>PE</i>	Turbid liquid is seen in the pond.
<i>PJ</i>	Liquid is visible in the pond. Probable light-colored material is seen adjacent to the northern berm of the pond beneath shallow liquid.
<i>PL</i>	Liquid is visible in the pond. A drainage channel extends from <i>PD</i> to <i>PL</i> . Light-colored material and sludge are visible in <i>PL</i> near the point of discharge of the drainage channel.
<i>PM</i>	Liquid is visible in the pond. Liquid is seen in a drainage channel entering at the northwestern corner of the pond.
<i>PP</i>	Liquid is visible in the pond.
<i>PR</i>	<i>PR</i> appears to be empty.

JULY 6, 1984 PHOTO AREA A (FIGURE 10)

Annotation	Description
<i>PS</i>	Liquid is seen in the pond. Liquid and staining are visible in a drainage channel that extends to the northern portion of the pond from the vicinity of two vertical tanks to the west. A pipe possibly extends from one of these vertical tanks to <i>PB</i> . Orange liquid is seen on the southern berm of the pond.
<i>PT</i>	<i>PT</i> is currently under construction. Light-colored material is being graded to the west towards <i>PM</i> . Some of this material is inundated by liquid.
<i>PV</i>	Liquid is visible in the pond. An impoundment containing orange liquid is visible north of the pond. A drainage channel extends from this impoundment to <i>PV</i> .
<i>PAD 1A</i>	Staining is visible in this location adjacent to <i>PA-3</i> . This pad appears to drain into <i>PA-3</i> .
<i>PAD 4A</i>	A graded area is visible in this location.
<i>PAD 7A</i>	A spray area, currently in operation, drains into <i>P8</i> .
<i>PAD 8A</i>	A ground scar is visible in this location.
<i>PAD 8B</i>	A ground scar is visible in this location.
<i>PAD 8C</i>	A ground scar is visible in this location.
<i>PAD 10B</i>	Two impoundments containing liquid are visible. Dark-colored material is visible in the northeastern portion of the eastern impoundment.
<i>PAD 10C</i>	A ground scar is seen in this spray area that is currently active. A drainage channel is visible along the southern boundary of <i>Pad 10C</i> .
<i>PAD 10E</i>	An impoundment containing liquid is seen in this location.
<i>PAD 10F</i>	A ground scar is visible in this location. A drainage channel extends from <i>Pad 10F</i> and <i>Pad 10G</i> to <i>P22</i> .
<i>PAD 10G</i>	A ground scar is visible in this location. A drainage channel extends from <i>Pad 10F</i> and <i>Pad 10G</i> to <i>P22</i> .

JULY 6, 1984 PHOTO AREA A (FIGURE 10)

Annotation	Description
<i>PAD 18</i>	A fill area is visible in this location.
<i>SLI</i>	Liquid is visible in the pond. Sludge is visible at the terminus of a drainage channel extending into the pond from the northeast.
<i>RCRA LF</i>	An impoundment and a graded area are visible in the landfill.
<i>RCRA CANYON</i>	A linear stained area is located in the western side of the canyon. Flow-pattern staining leads from this area toward the bottom of the canyon. Three impoundments containing liquid are visible on the western side of the canyon. An additional impoundment containing liquid is visible on the canyon bottom just outside the <i>RCRA Canyon</i> boundary. A drainage channel extends to this impoundment from the north. An empty probable trench is visible east of the <i>RCRA Canyon</i> .
<i>PCB LF</i>	Approximately 30 drums (D) are visible at the northern fill face of the landfill. Probable liquid is visible north of the drums.
<i>PESTICIDES/ SOLVENTS LF</i>	Several hundred drums are visible at the northern fill face of the landfill. The drums appear to be stacked in layers. A grader is seen pushing dark-colored material toward the drums.
<i>HEAVY METALS LF</i>	Several hundred drums, appearing to be stacked in two or three layers, are visible in the central portion of the landfill near the fill face.
<i>CAUSTIC/ CYANIDE LF</i>	Approximately 15 drums are visible in the southern portion of the landfill near the fill face.
<i>ACIDS LF</i>	Approximately 50 drums are visible in the western portion of the landfill near the fill face.

JULY 6, 1984 PHOTO AREA B (FIGURE 11)

A vertical tank is visible west of the disposal site, where a building and structure were seen in 1981. A graded area with light-colored material is also visible west of the disposal site. A ground scar is located north of the disposal site. Probable liquid and/or staining are visible in the southern portion of a disturbed ground (DG) and graded area that extends from the eastern perimeter of the disposal site into Photo Area B. A ground scar is visible farther east of the disposal site. Probable dark-colored staining is visible on the entire length of the primary access road. Four excavations are seen southwest of the disposal site.

APRIL 6, 1987 PHOTO AREA A (FIGURE 12)

An impoundment containing liquid remains visible east of the *RCRA Canyon*. Three vertical tanks remain visible north of the *PCB Landfill*. West of *P14*, a new building is visible. Six vertical tanks remain to the south of *P14*.

APRIL 6, 1987 PHOTO AREA A (FIGURE 12)

Annotation	Description
<i>P1</i>	Liquid is visible in the pond. A possible pipe extends from <i>P18</i> to this pond.
<i>P2</i>	Light-brown turbid liquid is visible in the pond.
<i>P3</i>	Light-green liquid is visible in the pond. Aerators are currently in operation.
<i>P4</i>	Green turbid liquid is visible in the pond. Aerators are currently in operation.
<i>P5</i>	Liquid is visible in the pond.
<i>P6</i>	Liquid is visible in the pond.
<i>P8</i>	Liquid is visible in the pond.
<i>P9</i>	Liquid is visible in the pond.
<i>P10</i>	Liquid is visible in the pond. Aerators are currently in operation.
<i>P11</i>	Liquid is visible in the pond.
<i>P12</i>	Liquid is visible in the pond.
<i>P13</i>	Light-green turbid liquid is visible in the pond. An access road leads to the western edge of the pond from the north.
<i>P14</i>	Orange-brown turbid liquid is visible in the pond.
<i>P15</i>	Liquid is visible in the pond.
<i>P16</i>	The pond contains light-colored sludge and a small amount of turbid liquid.

APRIL 6, 1987 PHOTO AREA A (FIGURE 12)

Annotation	Description
<i>P17</i>	Liquid is visible in the pond.
<i>P18</i>	Liquid is visible in the pond. A possible underground pipe extends from this pond to <i>P1</i> . Drainage enters this pond from the northwest.
<i>P19</i>	The pond contains liquid. <i>P19</i> possibly accepts runoff from <i>Pad 10A</i> . Probable aerators are currently in operation.
<i>P20</i>	This pond contains liquid and possibly accepts runoff from <i>Pad 8A</i> .
<i>P22</i>	This pond contains liquid and probably accepts runoff from <i>Pad 10F</i> and <i>Pad 10G</i> .
<i>P23</i>	Turbid liquid is visible in the pond. Three probable pipes extend into <i>P23</i> .
<i>PA</i>	Liquid is visible in the pond. Multi-colored material and staining are visible on the top and on the interior face of the northern berm.
<i>PB</i>	Liquid is visible in the pond. Multi-colored material and staining are visible on the top and on the interior face of the northern berm.
<i>PC</i>	Liquid is visible in the pond. Multi-colored material and staining are visible on the top and on the interior face of the northern berm. Dark-colored mounded material is also visible in the pond near the northern berm. A crane (CR) is visible on the edge of the berm.
<i>PD</i>	Light-colored sludge and a small amount of liquid are visible in the pond. A vehicle is seen at the northeastern berm near an area used for discharging into the pond.
<i>PE</i>	Liquid is visible in the pond. Light-colored material is visible in the northwestern portion of the pond.
<i>PJ</i>	Liquid is visible in the pond. Brown material mixed with liquid is visible in the northern portion of the pond.
<i>PL</i>	Light- and medium-colored sludge is visible in the pond.

APRIL 6, 1987 PHOTO AREA A (FIGURE 12)

Annotation	Description
<i>PM</i>	Liquid is visible in the pond. The eastern berm of this pond has been constructed from material excavated from <i>PT</i> .
<i>PP</i>	A small amount of light brown turbid liquid is visible in the pond.
<i>PS</i>	Liquid and dark-colored material are visible in the pond.
<i>PT</i>	Graded medium-colored mounded material mixed with liquid is visible. The liquid has a yellow-brown color.
<i>PV</i>	Liquid and possible light-colored sludge are visible in the pond. Drainage channels extend south through the sludge.
<i>PA-1</i>	Liquid is visible in the pond.
<i>PA-2</i>	Liquid is visible in the pond.
<i>PA-3</i>	Liquid is visible in the pond. Liquid is also visible entering the pond through a pipe located in the western edge of the pond.
<i>PA-4</i>	Liquid is visible in the pond.
<i>PA-5</i>	Liquid is visible in the pond.
<i>PA-6</i>	Liquid is visible in the pond.
<i>PAD 1A</i>	A ground scar is visible in this location.
<i>PAD 4A</i>	Probable light-colored sludge is visible in this location.
<i>PAD 7A</i>	This spray area appears to drain into <i>P8</i> .
<i>PAD 8A</i>	A ground scar is visible in this location.
<i>PAD 8B</i>	A ground scar is visible in this location.
<i>PAD 8C</i>	A ground scar is visible in this location.
<i>PAD 9A</i>	Light-colored material and possible liquid are visible in this location.
<i>PAD 9B</i>	An impoundment containing turbid light-brown liquid is visible in this location.

APRIL 6, 1987 PHOTO AREA A (FIGURE 12)

Annotation	Description
<i>PAD 10A</i>	Light-colored material with surface drainage patterns is visible in this location.
<i>PAD 10B</i>	Light-colored material is visible in this location. A pipe located in the eastern edge of the area appears to extend to <i>PAD 10C</i> .
<i>PAD 10C</i>	The pad contains graded brown material.
<i>PAD 10E</i>	Liquid is visible in an impoundment. A spray area is visible on the northern berm.
<i>PAD 10F</i>	Light-colored material is visible in this location.
<i>PAD 10G</i>	A graded area is visible in this location.
<i>SL1</i>	Light-colored mounded material and graded material are visible in this location. Equipment (E) is visible along a stained access road.
<i>SL2</i>	Liquid and probable dark-colored sludge are visible. This is the first activity noted in this location during this analysis.
<i>RCRA LF</i>	An impoundment containing turbid brown liquid is visible in the <i>RCRA Landfill</i> .
<i>RCRA CANYON</i>	No activity is noted at this time.
<i>PCB LF</i>	Probable vegetation is visible on the surface of the <i>PCB Landfill</i> .
<i>PESTICIDES/ SOLVENTS LF</i>	Drums are visible near the fill face in the northern portion of the landfill. Dark-colored material is also visible near two trailer trucks in the southern portion of the landfill.
<i>HEAVY METALS LF</i>	A vehicle is visible at the landfill.
<i>CAUSTIC CYANIDE LF</i>	No activity is noted at this time.
<i>ACIDS LF</i>	No activity is noted at this time.

APRIL 6, 1987 PHOTO AREA B (FIGURE 13)

Graded areas and a probable trench are visible west of the disposal site. The disturbed ground and graded area seen east of the disposal site on the 1984 photography is beginning to vegetate; however, ground scars remain visible in this location.

JULY 6, 1989 PHOTO AREA A (FIGURE 14)

Remediation activity is observed throughout the disposal site on this date of photography. An empty trench is visible west of *Pad 1A*. An impoundment containing liquid remains visible east of the *RCRA Canyon*. Four vertical tanks remain visible north of the *PCB Landfill*. West and southwest of *P14*, one building remains visible. Two vertical tanks have been removed and seven have been added near the southernmost building. Six vertical tanks were visible in this location in 1987. A new building is visible east of *PP*, and a new building is visible east of *PR*. Staining is visible on an access road that connects to the primary access road near the southeastern entrance of the site. Staining is visible along most of the access road along the eastern and northern boundaries of the site. An empty excavation is seen north of *SL2*. A ground scar is visible east of the site near *SL1*. One new building has been constructed near *P12*, and two buildings remain.

JULY 6, 1989 PHOTO AREA A (FIGURE 14)

Annotation	Description
<i>P1</i>	<i>P1</i> has been filled.
<i>P2</i>	The contents and structure of the pond have been removed. A trench with a pit on both ends is visible. An additional pit is visible to the northwest of <i>P12</i> . Graded dark-colored material is visible along a road in this area.
<i>P3</i>	The contents and structure of the pond have been removed.
<i>P4</i>	The contents and structure of the pond have been removed.
<i>P5</i>	The contents and structure of the pond have been removed. An access road is presently seen in this location.
<i>P6</i>	The contents and structure of the pond have been removed. An access road is presently seen in this location.
<i>P8</i>	The contents and structure of the pond have been removed.

JULY 6, 1989 PHOTO AREA A (FIGURE 14)

Annotation	Description
<i>P11</i>	The contents and structure of the pond have been removed. Blue-gray material is visible in the graded material.
<i>P12</i>	<i>P12</i> has been filled. A heavily stained parking area containing three tank trucks and one trailer truck is visible in this location.
<i>P13</i>	The pond contains a small amount of liquid and/or staining.
<i>P14</i>	The contents and structure of the pond have been removed.
<i>P15</i>	The contents and structure of the pond have been removed.
<i>P16</i>	The contents and structure of the pond have been removed.
<i>P17</i>	The contents and structure of the pond have been removed.
<i>P18</i>	The contents and structure of the pond have been removed. A small amount of dark-colored mounded material is seen in the southern portion of the pond.
<i>P19</i>	The contents and structure of the pond have been removed.
<i>P20</i>	Vegetation is seen in the bottom of the pond.
<i>P22</i>	The contents and structure of the pond have been removed.
<i>P23</i>	The pond is filled and graded.
<i>PA</i>	The contents and structure of the pond have been removed.
<i>PB</i>	The contents and structure of the pond have been removed. Three empty trenches are visible in <i>PB</i> .
<i>PC</i>	The pond is partially graded. Nine trenches are visible in <i>PC</i> .
<i>PD</i>	The contents and structure of the pond have been removed.
<i>PE</i>	The contents and structure of the pond have been removed.
<i>PJ</i>	The contents and structure of the pond have been removed.
<i>PL</i>	The contents and structure of the pond have been removed.

JULY 6, 1989 PHOTO AREA A (FIGURE 14)

Annotation	Description
<i>PM</i>	The contents and structure of the pond have been removed.
<i>PP</i>	The contents and structure of the pond have been removed.
<i>PR</i>	The contents and structure of the pond have been removed.
<i>PS</i>	The contents and structure of the pond have been removed.
<i>PT</i>	The contents and structure of the pond have been removed. Dark- and light-colored material are visible in the graded material.
<i>PV</i>	The contents and structure of the pond have been removed.
<i>PA-1</i>	The contents and structure of the pond have been removed. A pit with liquid is visible in the location of the pond. A trench is located nearby.
<i>PA-2</i>	The contents and structure of the pond have been removed. Blue-gray material is visible in the graded material.
<i>PA-3</i>	The contents and structure of the pond have been removed. A small amount of liquid is visible in the pond.
<i>PA-4</i>	The contents and structure of the pond have been removed. Blue-gray material is seen within the graded material east of the pond.
<i>PA-5</i>	The pond contains dark-colored sludge, light-colored material, and liquid. Drainage channels extend to this pond from an impoundment located to the north that likely transports the above-mentioned materials from the impoundment to the north.
<i>PA-6</i>	The contents and structure of the pond have been removed.
<i>PAD 1A</i>	<i>Pad 1A</i> is graded.
<i>PAD 4A</i>	<i>Pad 4A</i> is graded.
<i>PAD 7A</i>	<i>Pad 7A</i> is graded.
<i>PAD 8A</i>	A ground scar is visible on <i>Pad 8A</i> .

JULY 6, 1989 PHOTO AREA A (FIGURE 14)

Annotation	Description
<i>PAD 8B</i>	An access road is visible in this area.
<i>PAD 8C</i>	A heavily-stained parking lot is visible in this location.
<i>PAD 9A</i>	<i>Pad 9A</i> is graded.
<i>PAD 9B</i>	Three linear areas of light-colored mounded material are visible. These areas may cover pipes in this location. Light-colored material is visible surrounding the excavation. Objects covered with light-colored material are seen to the east of the excavated area.
<i>PAD 10A</i>	<i>Pad 10A</i> is graded.
<i>PAD 10B</i>	<i>Pad 10B</i> is graded.
<i>PAD 10C</i>	<i>Pad 10C</i> is graded. A small amount of blue-gray material is visible in the graded material. East of <i>Pad 10C</i> , graded dark-colored material is visible on a berm. An earth-moving (EM) vehicle is visible in this location.
<i>PAD 10E</i>	<i>Pad 10E</i> is graded.
<i>PAD 10F</i>	<i>Pad 10F</i> is graded. A small amount of blue-gray material is visible in the graded area.
<i>PAD 10G</i>	<i>Pad 10G</i> is graded. A small amount of blue-gray material is visible in the graded area.
<i>SL1</i>	<i>SL1</i> is covered and graded.
<i>SL2</i>	<i>SL2</i> is covered and graded.
<i>RCRA LF</i>	A graded area is visible in the <i>RCRA Landfill</i> .
<i>PCB LF</i>	The surface of the landfill is graded and the landfill appears to be inactive.

JULY 6, 1989 PHOTO AREA A (FIGURE 14)

Annotation	Description
<i>PESTICIDES/ SOLVENTS LF</i>	Probable drums are visible in the central portion of the landfill. An excavation is visible in the northern portion of the landfill. Two trailer trucks and two other vehicles are seen in this location. Liquid or staining is visible at the rear of one of the trucks and extends into the excavation. Multi-colored mounded material is visible in the southern portion of the fill area.
<i>HEAVY METALS LF</i>	The landfill has been graded with dark-colored material. Two graders, currently in operation, and a vehicle are visible on the surface of the landfill.
<i>CAUSTIC/ CYANIDE LF</i>	The surface of the landfill is graded.
<i>ACIDS LF</i>	The surface of the landfill is graded.

JULY 6, 1989 PHOTO AREA B (FIGURE 15)

West of the disposal site, a trench, disturbed ground, light-colored material, and a ground scar are visible. Northeast of the disposal site, a ground scar, an excavation, and an excavation or road cut (RC) are visible. An erosion scar from liquid runoff (RO) extends south from the road cut. East of the disposal site, an excavation and an excavation and graded area are seen. Continued activity in the vicinity of the ground scars, seen east of the disposal site on the 1987 photography, has resulted in additional ground scars. Blue-gray (BG) material and light-colored staining are visible southeast of the disposal site. A graded area with disturbed ground extends from the southern portion of the disposal site into Photo Area B. Blue-gray material, light-colored staining, mounded material, disturbed ground, light-colored material, and two trenches are visible south of the disposal site. Possible dark-colored staining is visible on a road south of the disposal site.

GLOSSARY

Access Road - A paved or unpaved route of vehicular access.

Berm – An embankment of either natural or man-made material that impounds liquids, solids, or other materials, or controls flood waters.

Blue-Gray (BG) – A combination of the colors blue and gray.

Building (B) - A relatively permanent, essentially boxlike construction having a roof. (NB) Building added since last photo coverage. (BR) Building removed since the last photo coverage.

Cleared Area (CA) – An area from which man has removed trees, shrubs, or other natural vegetative cover.

Crane (CR) – A device for moving and lifting heavy objects.

Dark, Medium, Light-Colored (DC, MC, LC) - Colors of features in question are compared with the darkest and lightest tones of color (if using color photography) on the print.

Dark, Medium, Light-Toned (DK, MT, LT) - Tones of features in question are compared with the darkest and lightest tones of gray (if using B&W photography) on the print.

Disturbed Ground (DG) - A rough area where the ground surface has been dug up or overturned.

Drainage - A natural, man-made, or altered draining route.

Drums (D) - Metal cylinders used for the storage, transportation, or disposal of materials.

Earth Mover (EM) - Equipment used to excavate, pile, or move earth materials.

Equipment (E) – Any object provided for a specific purpose or use.

Excavation (EX) - An area where earth or other material is being removed in order to alter the ground level (e.g., building construction).

Face - The wall or slope of a mine, extraction, excavation, landfill, or fill area at which work is progressing (i.e., working face, fill face).

Feature Boundary - Used to delineate the extent of a feature or area (e.g., tank farm, trench, large stain, open storage area).

Fill Area (FA) - An area where material is being deposited to fill a depression, or an area where materials have been added, altering the elevation of the ground surface.

Graded Area (GR) - An area where the surface of the ground has been leveled or altered by a vehicle pulling or pushing a wide blade.

Grader (GA) - A vehicle used to level or alter the surface of the ground by pulling or pushing a blade.

Ground Scar (GS) - An area of bare soil, apparently the result of human activity.

Horizontal Tank (HT) - see Tanks.

Impoundment (IM) - A liquid containment area that appears to be related to activity on a site.

Landfill (LF) - A disposal facility that intermittently employs a cover material.

Liquid (LQ) - Used when discussing impoundments, lagoons, catchment basins, features, or areas that contain a liquid or when discussing discharge from outfalls, at storm drains, or from tank trucks.

Material (M) - Raw or waste materials on or in the vicinity of the site.

Mounded Material (MM) - Piles of raw or waste materials on or in the vicinity of the site.

Object (O) - Anything that is visible or tangible and is stable in form.

Open Storage Area (OS) - An area of open-air (outdoor) storage of containerized raw or waste materials, within industrial or manufacturing sites.

Pipe - A hollow cylinder of metal, wood, or other material that is used for the conveyance of water, gas, steam, etc.

Pond (P) - A liquid containment area that is apparently used for waste storage, disposal, and/or treatment, and may have an artificial barrier or liner to prevent migration of waste material into the soil.

Refuse (R) - Non-liquid waste materials or discarded items.

Road Cut (RC) – An area excavated during road construction activities.

Run Off (RO) – The flow of liquid across a surface.

Sludge (SL) – Any semi-solid waste generated by an industry.

Slurry – A watery mixture of insoluble matter.

Stain (ST) – A residue or discoloration resulting from a spill, discharge, or removed/dispersed materials.

Structure (S) – Something that is constructed.

Tanker Truck (TT) – A truck with a tanker vehicle attached to it.

Tanks – Vertical tanks (VT), horizontal tanks (HT), pressure tanks, tank farms, and solid waste management units. A large receptacle, container, or structure for holding liquid or gases.

Trailer Truck (TL) – Truck with a large van-type vehicle attached to it.

Trench (TR) – A long, narrow excavation in the ground.

Vehicle (V) – A conveyance moving on wheels, runners, etc.

Vehicle and Equipment Storage (V & E) – An area of open-air (outdoor) storage of vehicles and associated equipment.

Vertical Tank (VT) – see Tanks.

REFERENCES

AERIAL PHOTOGRAPHS

Photo Source	Figure	Date of Acquisition	Original Scale	Film Type*	Photo I.D.	Source Frame #
UCSB ¹	2,3	05-20-74	1:14,400	B&W	AF 74-9	203-206,278- 282,798-802
PWAS ²	4,5	06-18-75	1:24,000	CC	5048-4	4,5
PWAS	6,7	03-14-78	1:12,000	CC	7301-1	1,2
PWAS	8,9	08-25-81	1:24,000	CC	SM3	107-109
PWAS	10,11	07-06-84	1:12,000	CC	8505	1
PWAS	12,13	04-06-87	1:24,000	CC	26570	9
PWAS	14,15	07-06-89	1:24,000	CC	SB 7	328,329

*Film type identification: B&W: Black-and-White, CC: Conventional Color

¹ University of California at Santa Barbara, CA.

² Pacific Western Aerial Surveys, Santa Barbara, CA.

REFERENCES *CONTINUED*

MAPS

Source	Figure	Name	Scale	Date
USGS ³	1	Casmalia, California	1:24,000	1982
USGS	1	Guadalupe, California	1:24,000	1982
CH2MHill ⁴	-	Waste Disposal Management Units – Casmalia Disposal Site	1:7,200	2000
CH2MHill	-	Current Site Layout – Casmalia Disposal Site	1:7,200	2000

³ United States Geological Survey, Department of the Interior.

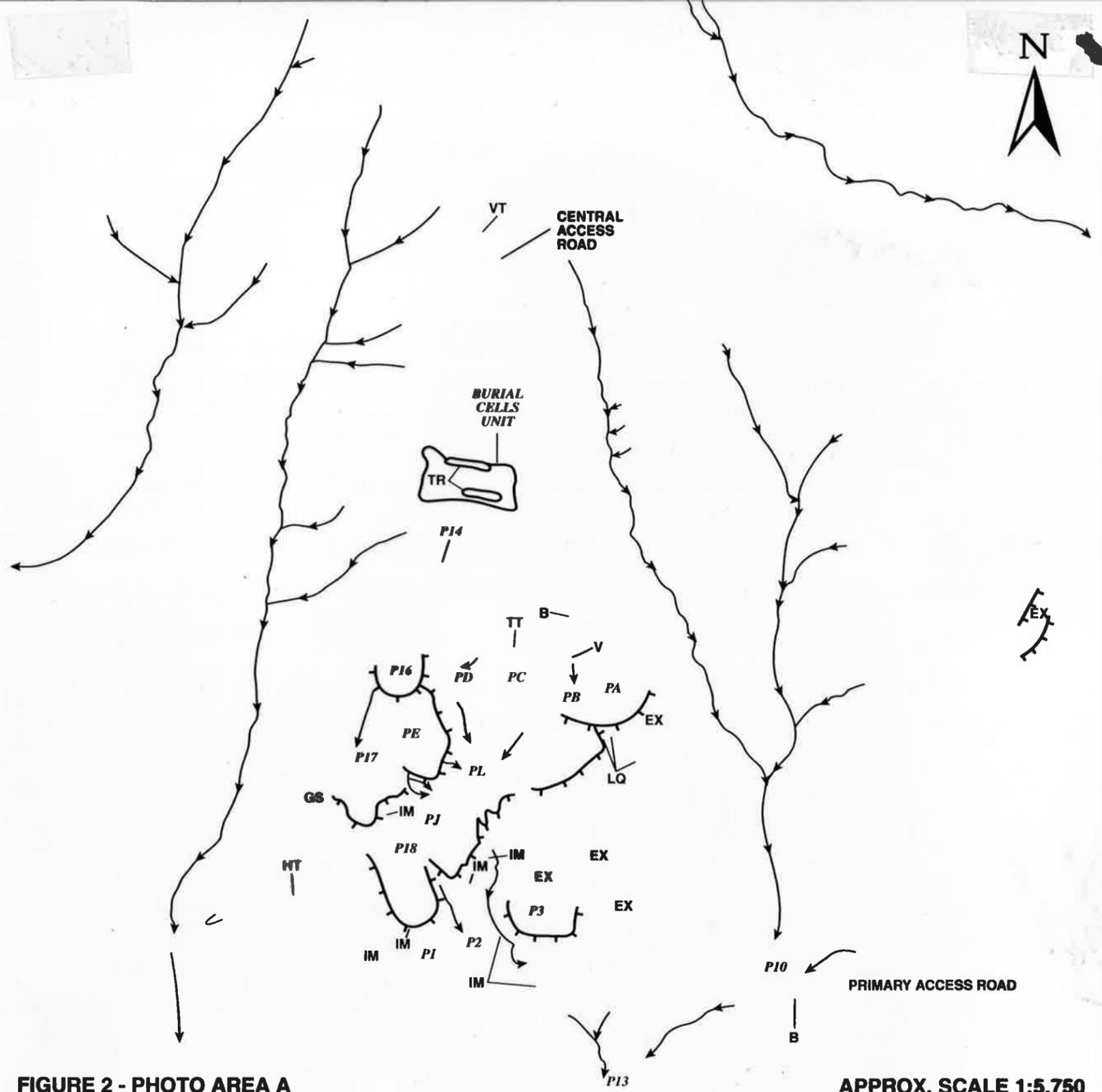
⁴ CH2MHill, Thousand Oaks, CA.



FIGURE 2 - PHOTO AREA A
CASIMALIA DISPOSAL SITE

MAY 20, 1974

APPROX. SCALE 1:15,000
1"=400'

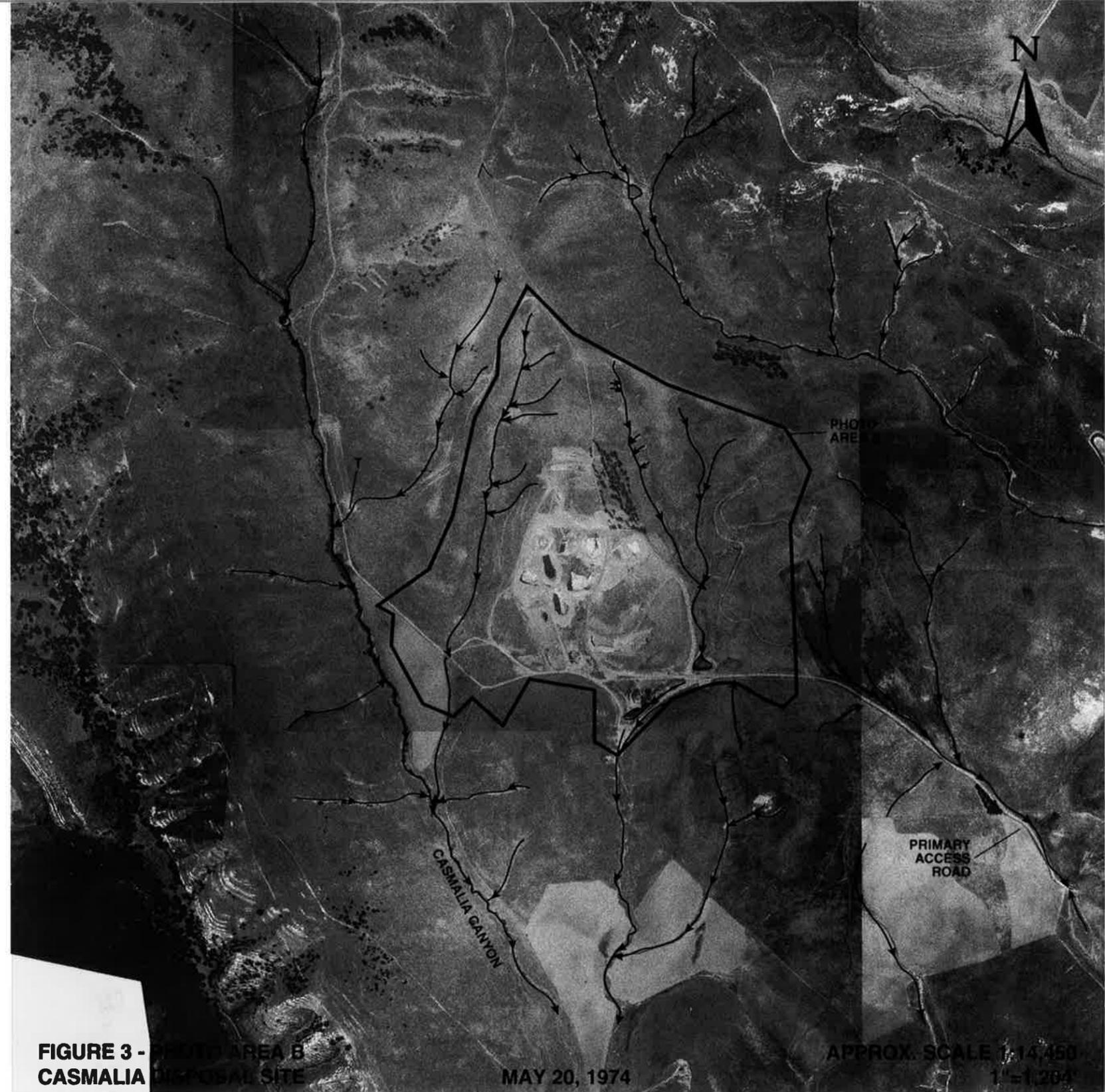


**FIGURE 2 - PHOTO AREA A
CASMALIA DISPOSAL SITE**

MAY 20, 1974

**APPROX. SCALE 1:5,750
1"=480'**







**FIGURE 3 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

MAY 20, 1974

**APPROX. SCALE 1:14,450
1"=1,204'**

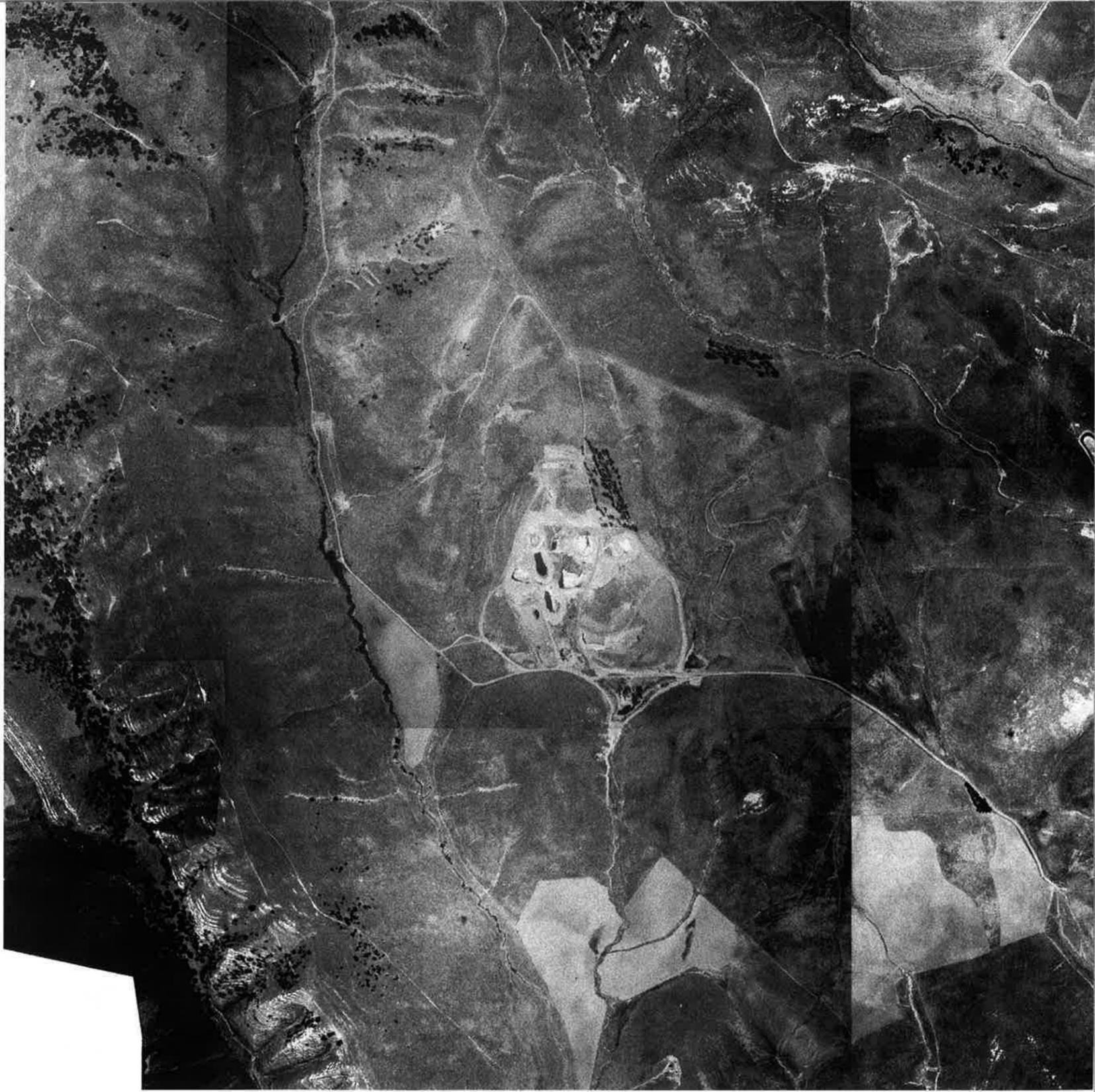




FIGURE 4 PHOTO AREA A
CASWELLIA DISPOSAL SITE

JUNE 18, 1975

APPROX. SCALE 1"=6670'
1"=180'

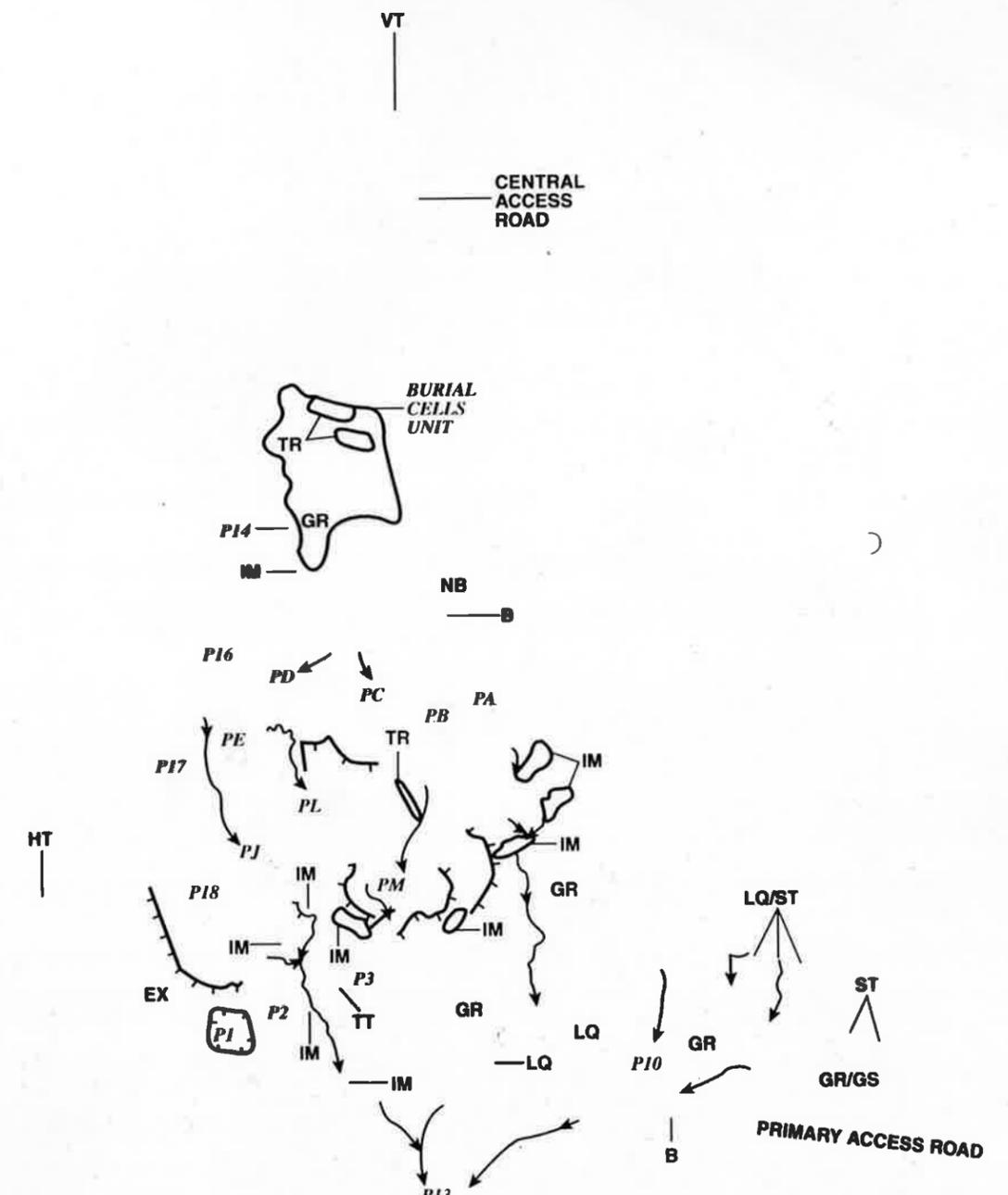


FIGURE 4 - PHOTO AREA A
CASMALIA DISPOSAL SITE

JUNE 18, 1975

APPROX. SCALE 1:6,670
1"=560'





PHOTO AREA B
LANDFILL DISPOSAL SITE

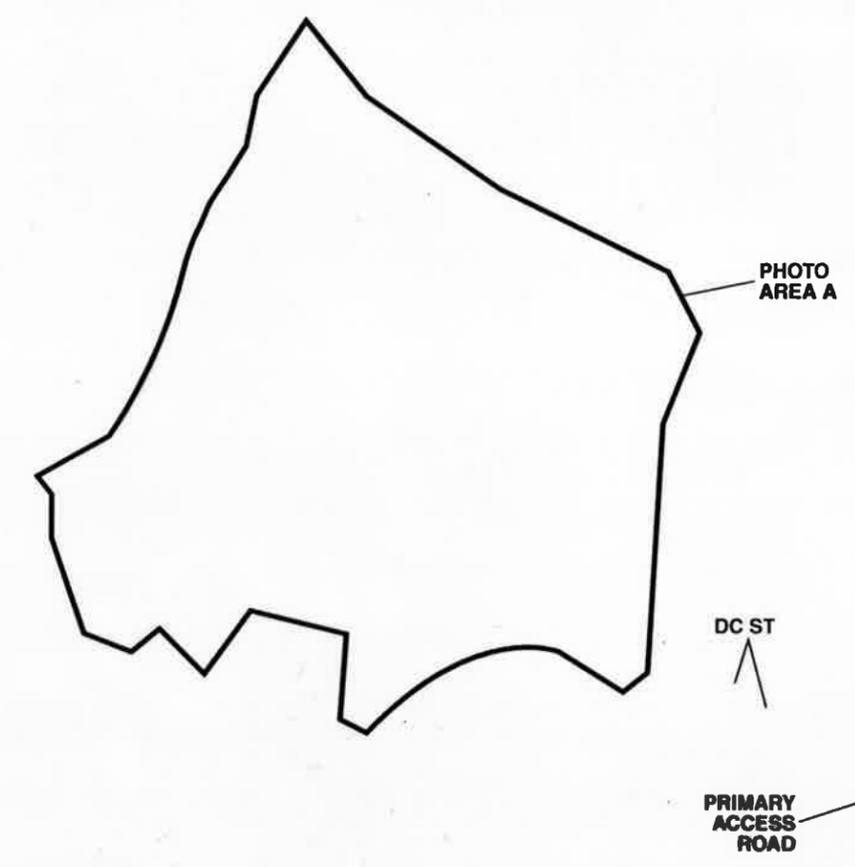
JUNE 18, 1975

PHOTO
AREA A

DC ST

PRIMARY
ACCESS
ROAD

APPROX. SCALE 1:14,590
1"=1,216'



**FIGURE 5 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

JUNE 18, 1975

**APPROX. SCALE 1:14,590
1"=1,216'**

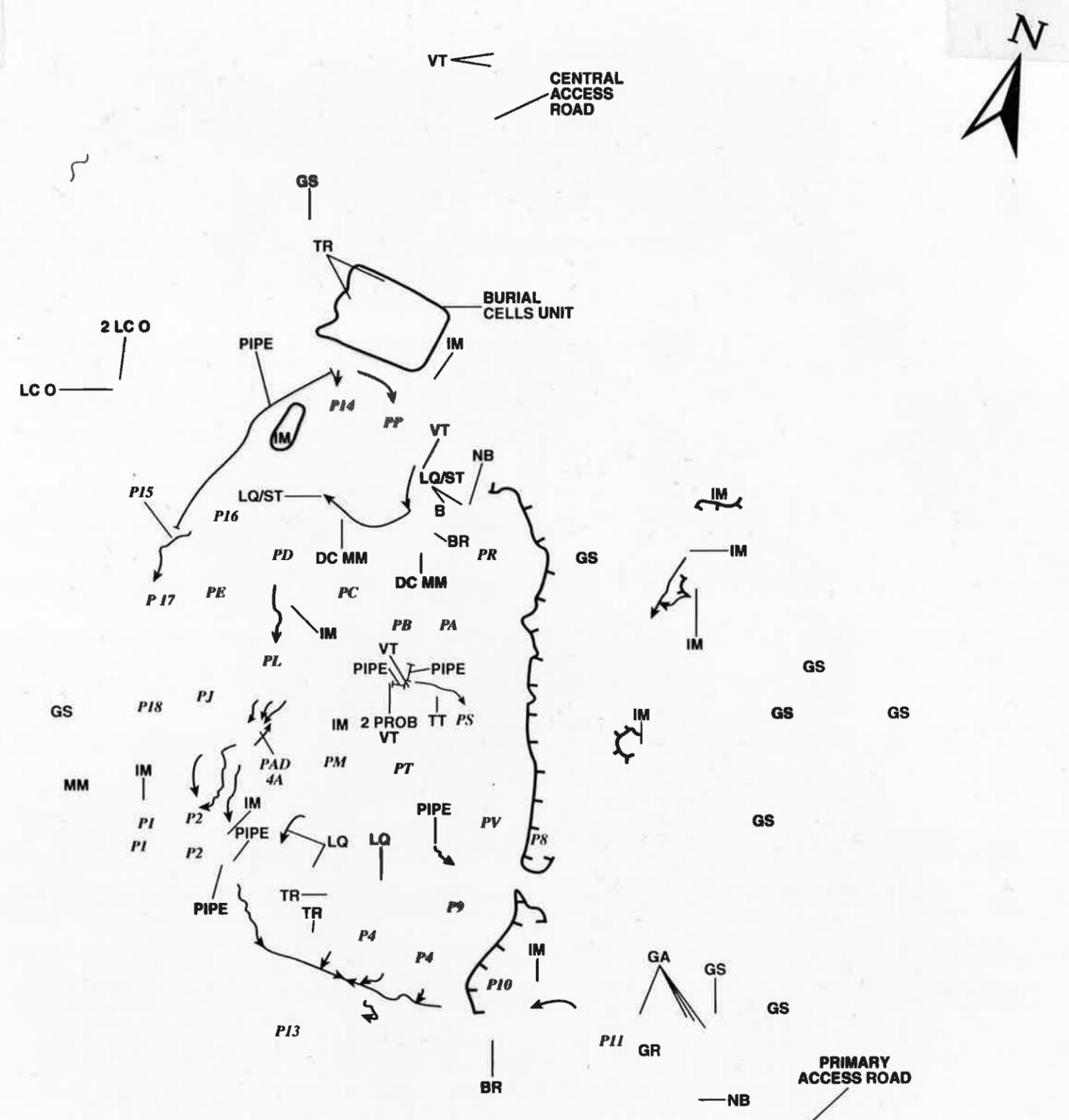




FIGURE 6 - PHOTO AREA A
GASMALIA DISPOSAL SITE

MARCH 14, 1978

APPROX. SCALE 1:5,580
1"=465'



**FIGURE 6 - PHOTO AREA A
CASMALIA DISPOSAL SITE**

MARCH 14, 1978

**APPROX. SCALE 1:5,580
1"=465'**





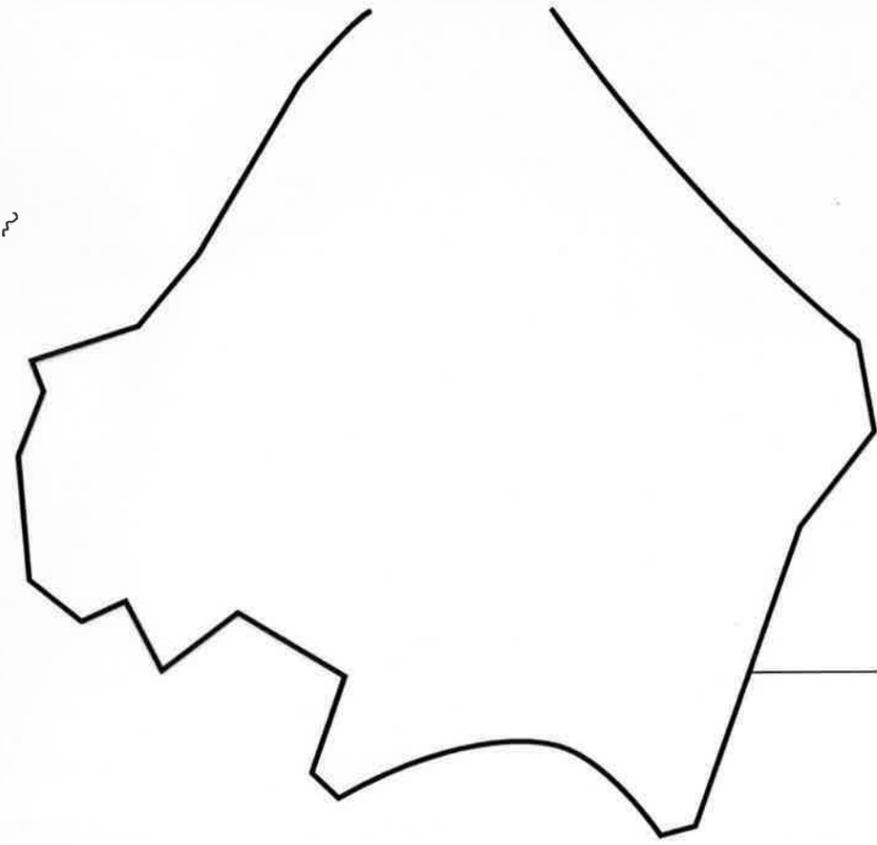


PHOTO AREA A

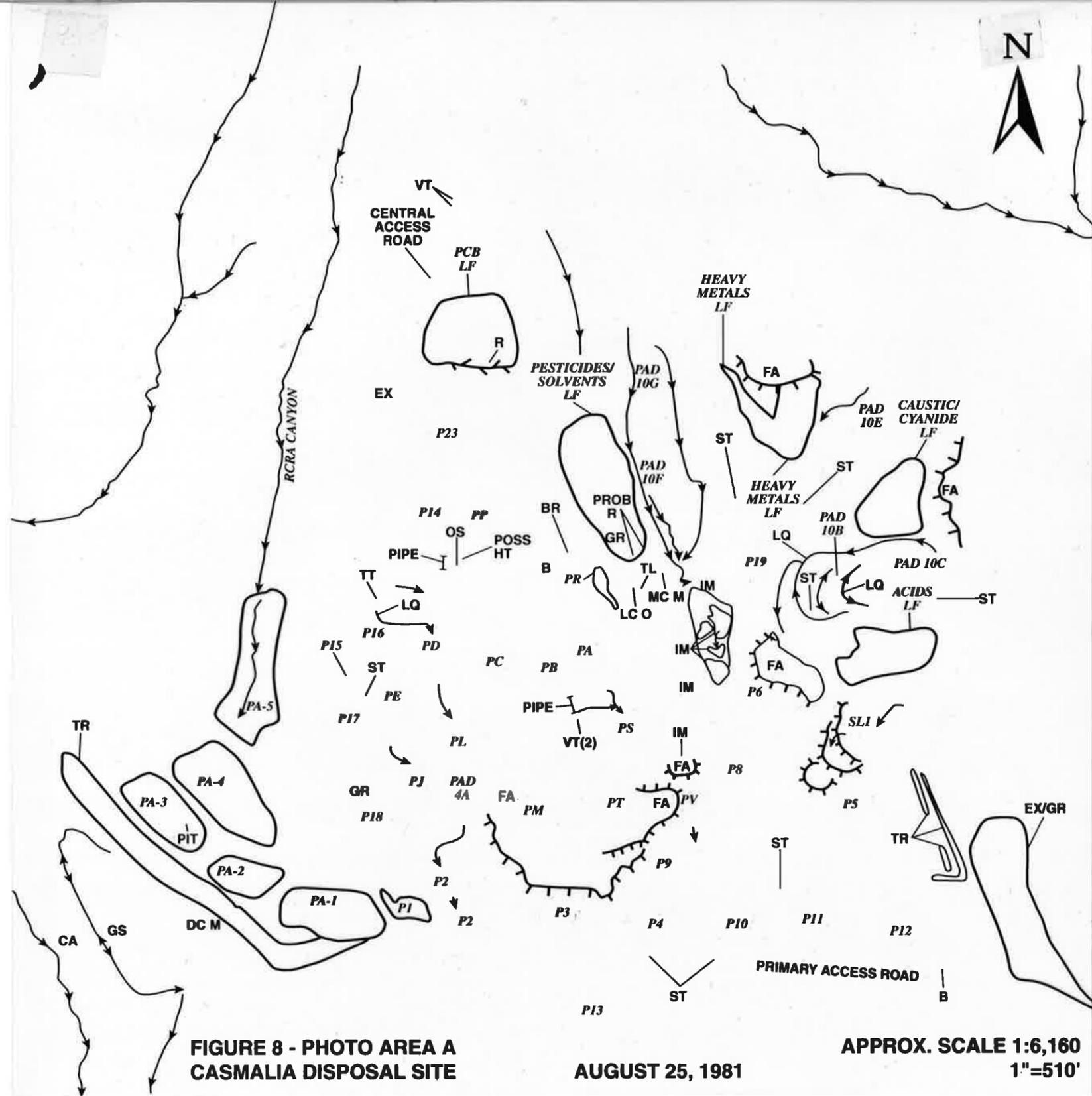
PRIMARY
ACCESS
ROAD

**FIGURE 7 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

MARCH 14, 1978

**APPROX. SCALE 1:11,360
1"=947'**





**FIGURE 8 - PHOTO AREA A
CASMALIA DISPOSAL SITE**

AUGUST 25, 1981

**APPROX. SCALE 1:6,160
1"=510'**



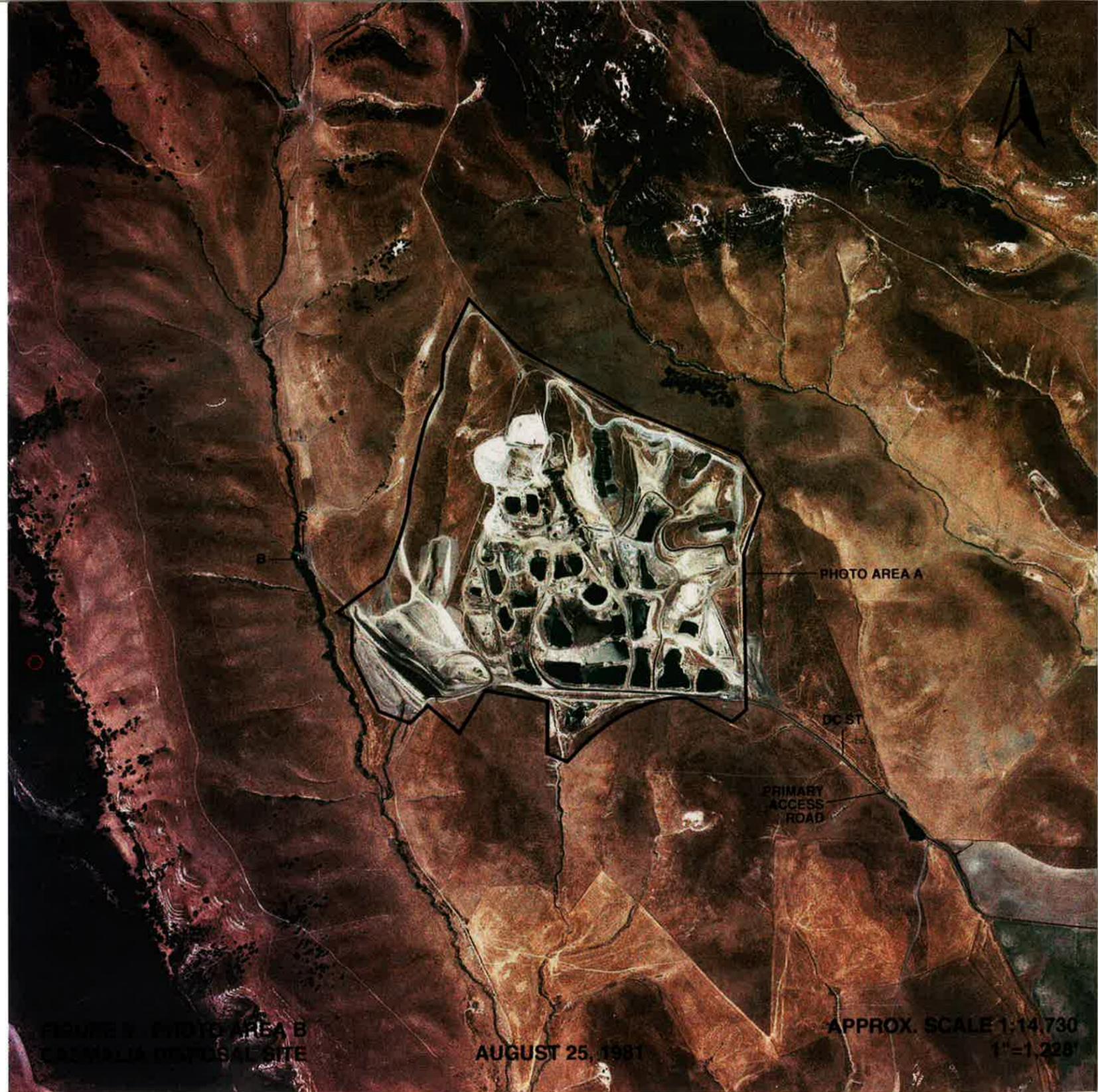


PHOTO AREA A

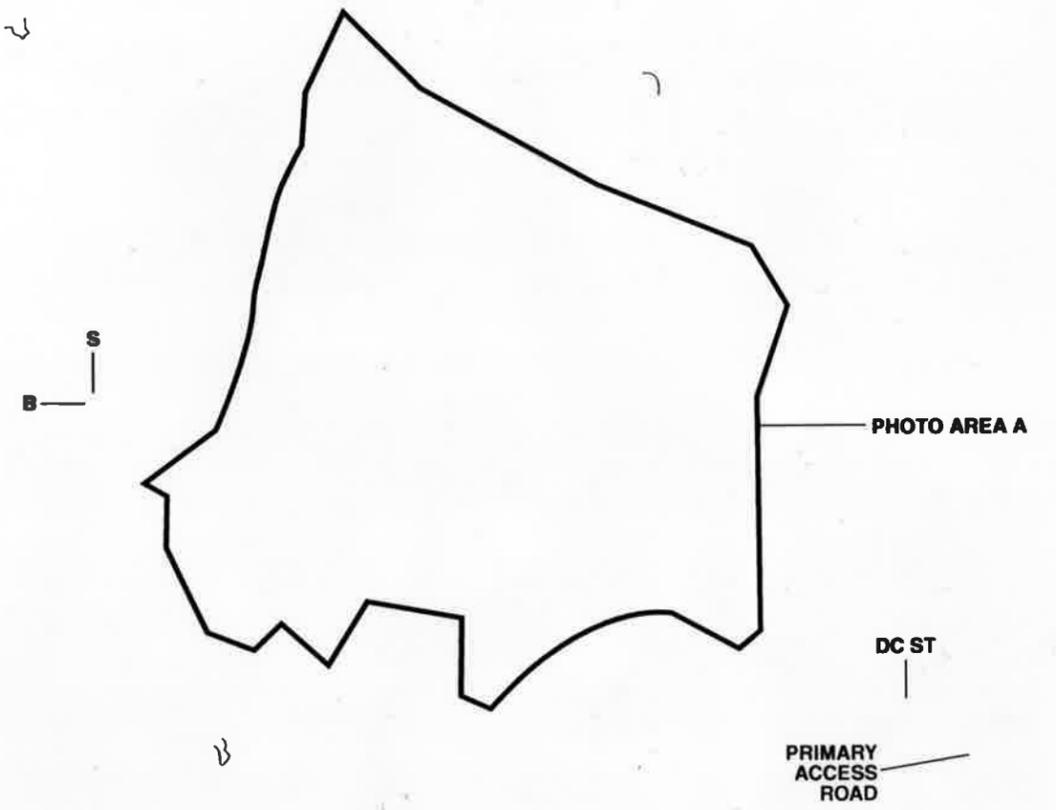
DC ST

PRIMARY
ACCESS
ROAD

AREA B
SAL SITE

AUGUST 25, 1981

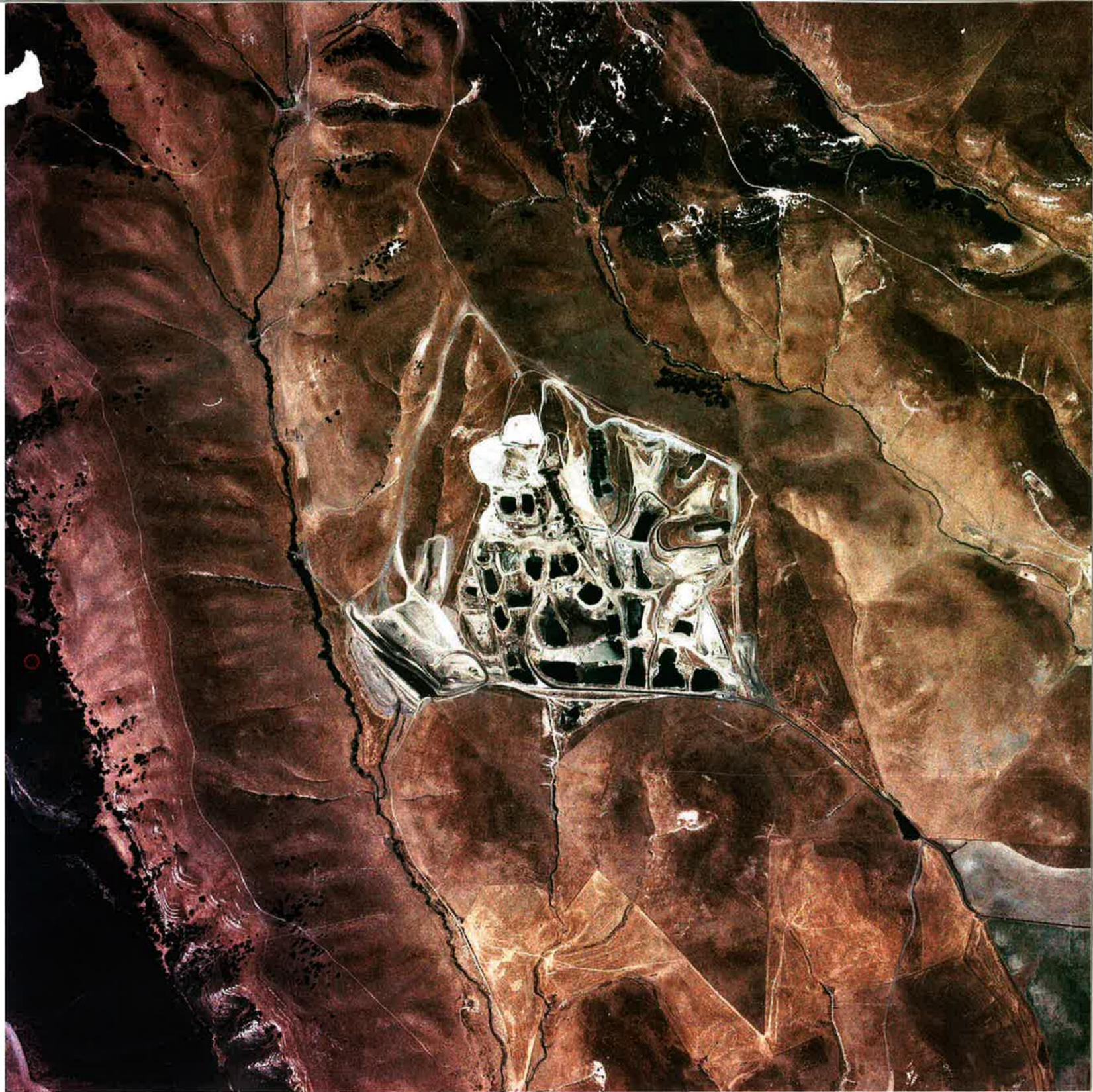
APPROX. SCALE 1:14,730
1"=1,228'



**FIGURE 9 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

AUGUST 25, 1981

**APPROX. SCALE 1:14,730
1"=1,228'**







7-6-84

PW18505-1



PHOTO AREA A

GR/CM

VT

DG/GR

GS

PROB LOST

PRIMARY ACCESS ROAD

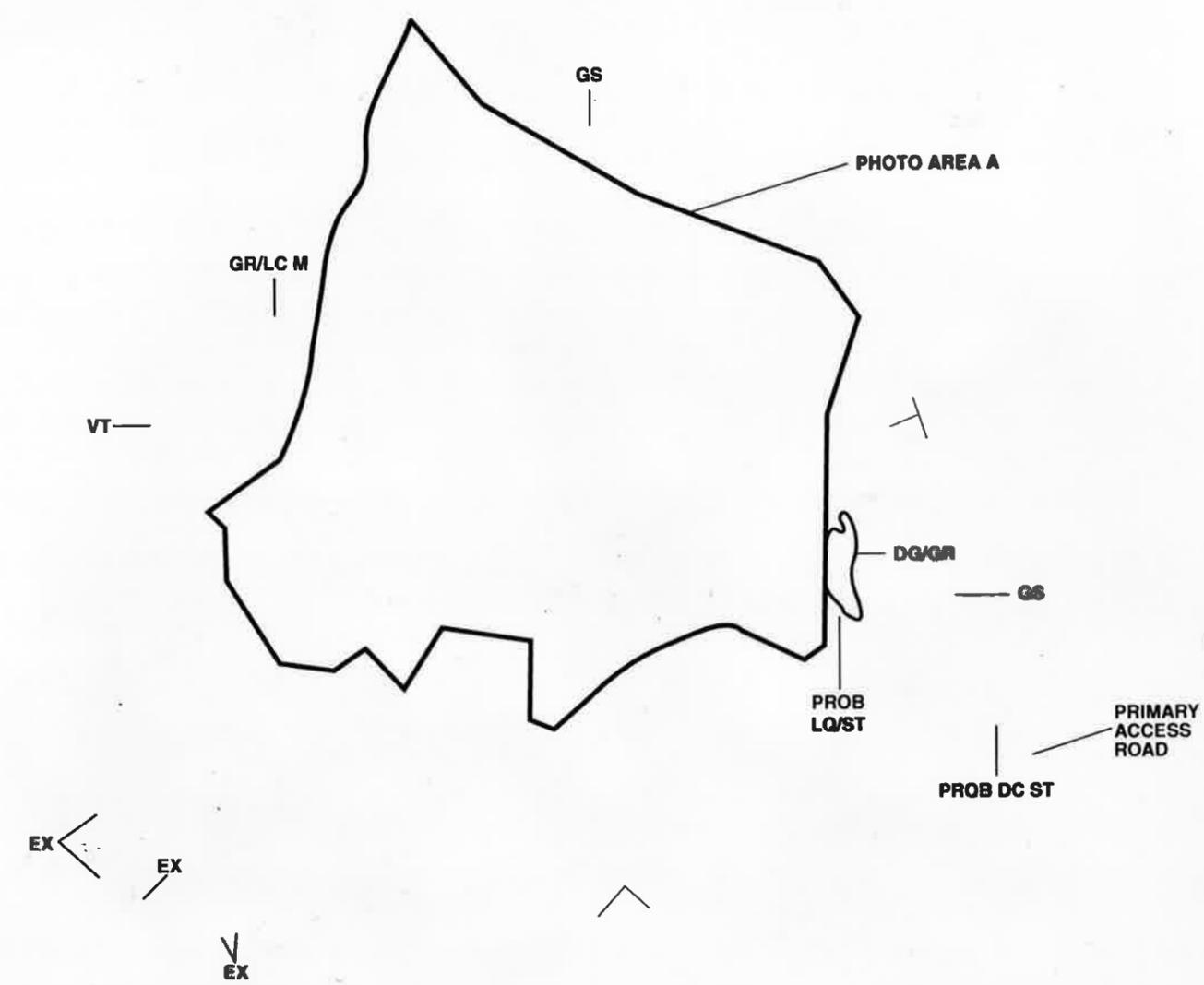
PROB DC ST

EX

EX

JULY 6, 1984

APPROX. SCALE 1:14,000



**FIGURE 11 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

JULY 6, 1984

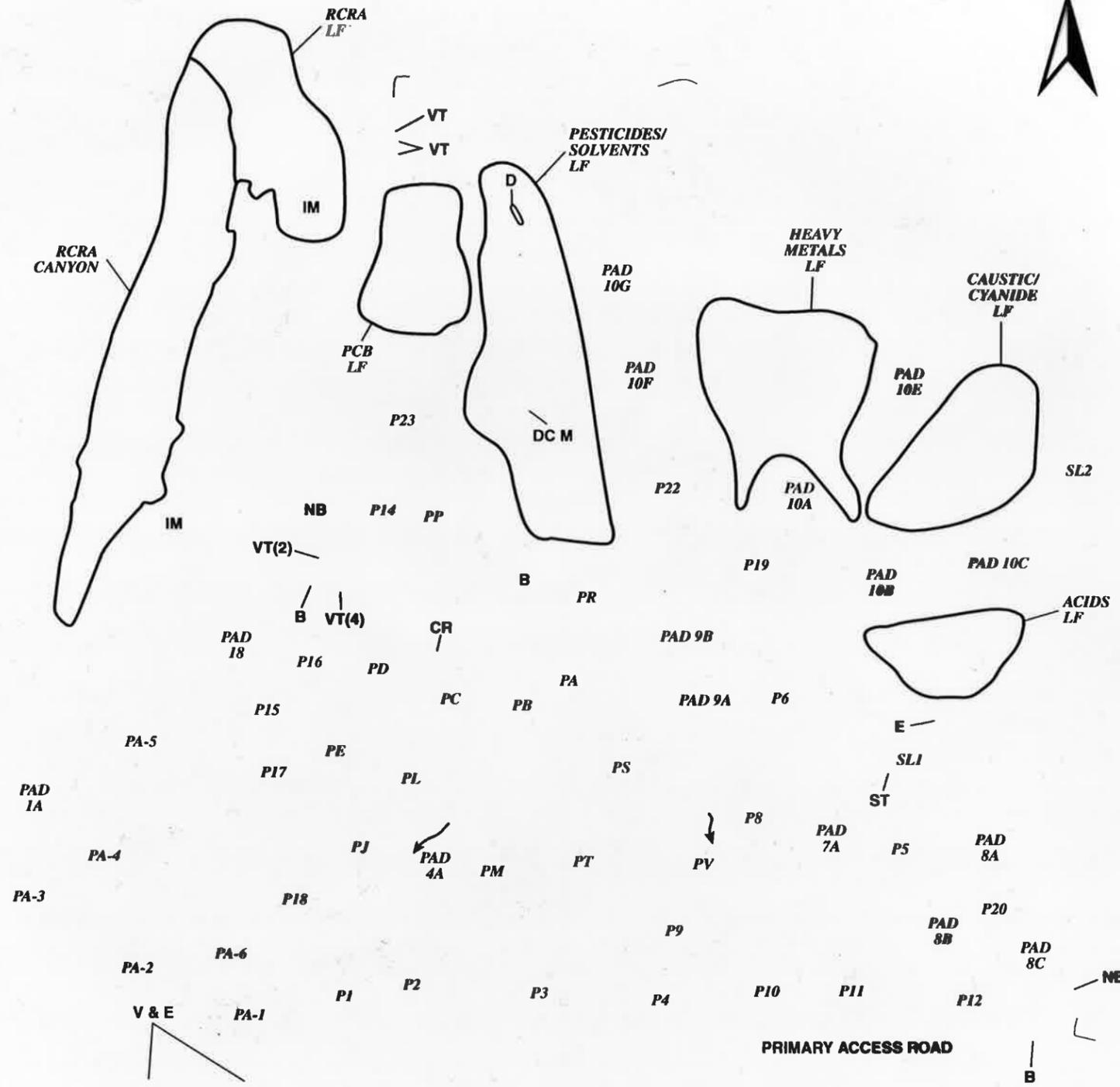
**APPROX. SCALE 1:14,040
1"=1,170'**

7-6-84

PW18505-1







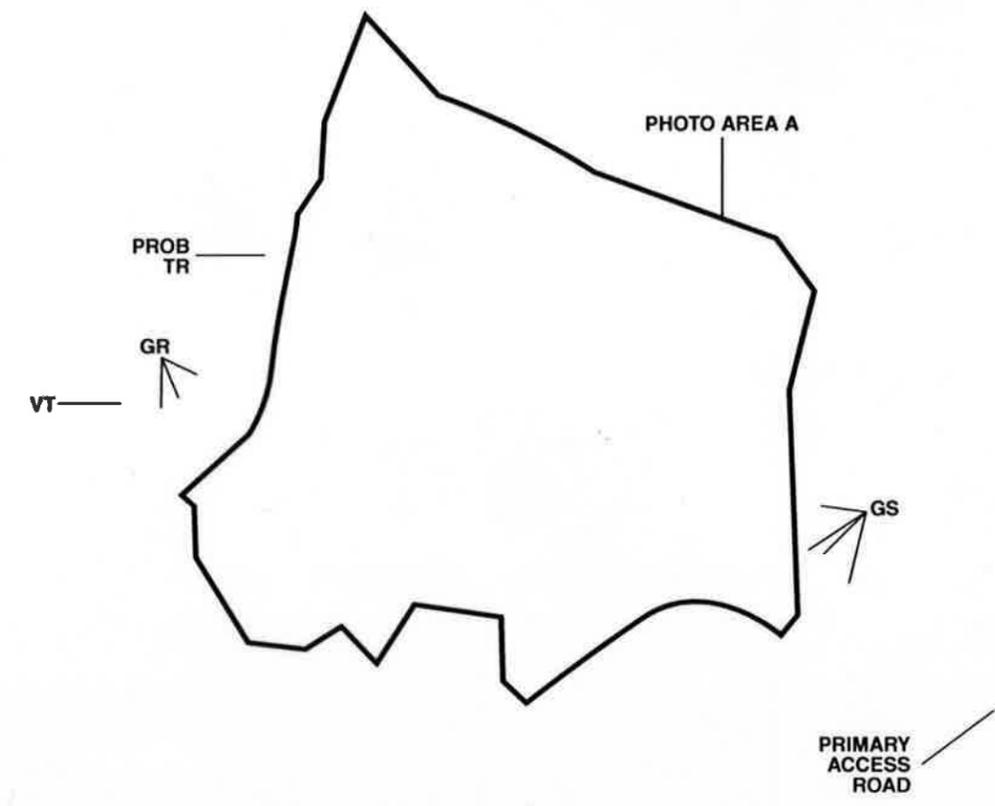
**FIGURE 12 - PHOTO AREA A
CASMALIA DISPOSAL SITE**

APRIL 6, 1987

**APPROX. SCALE 1:5,670
1"=475'**







**FIGURE 13 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

APRIL 6, 1987

**APPROX. SCALE 1:14,880
1"=1,240'**

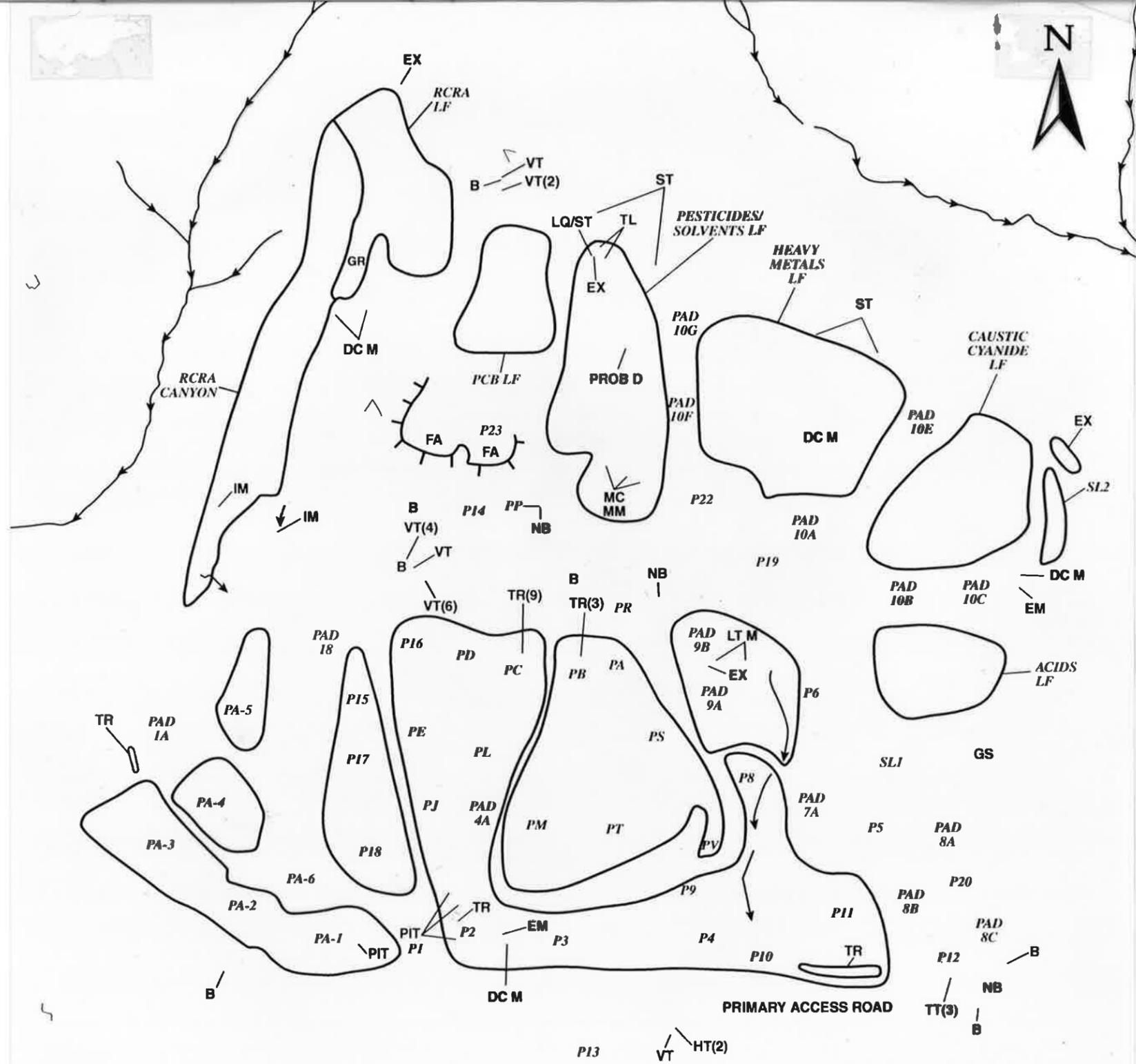




FIGURE 14 - PHOTO AREA
CASMALIA DISPOSAL SITE

JULY 6, 1989

APPROX SCALE 1:5,760
1" = 480'



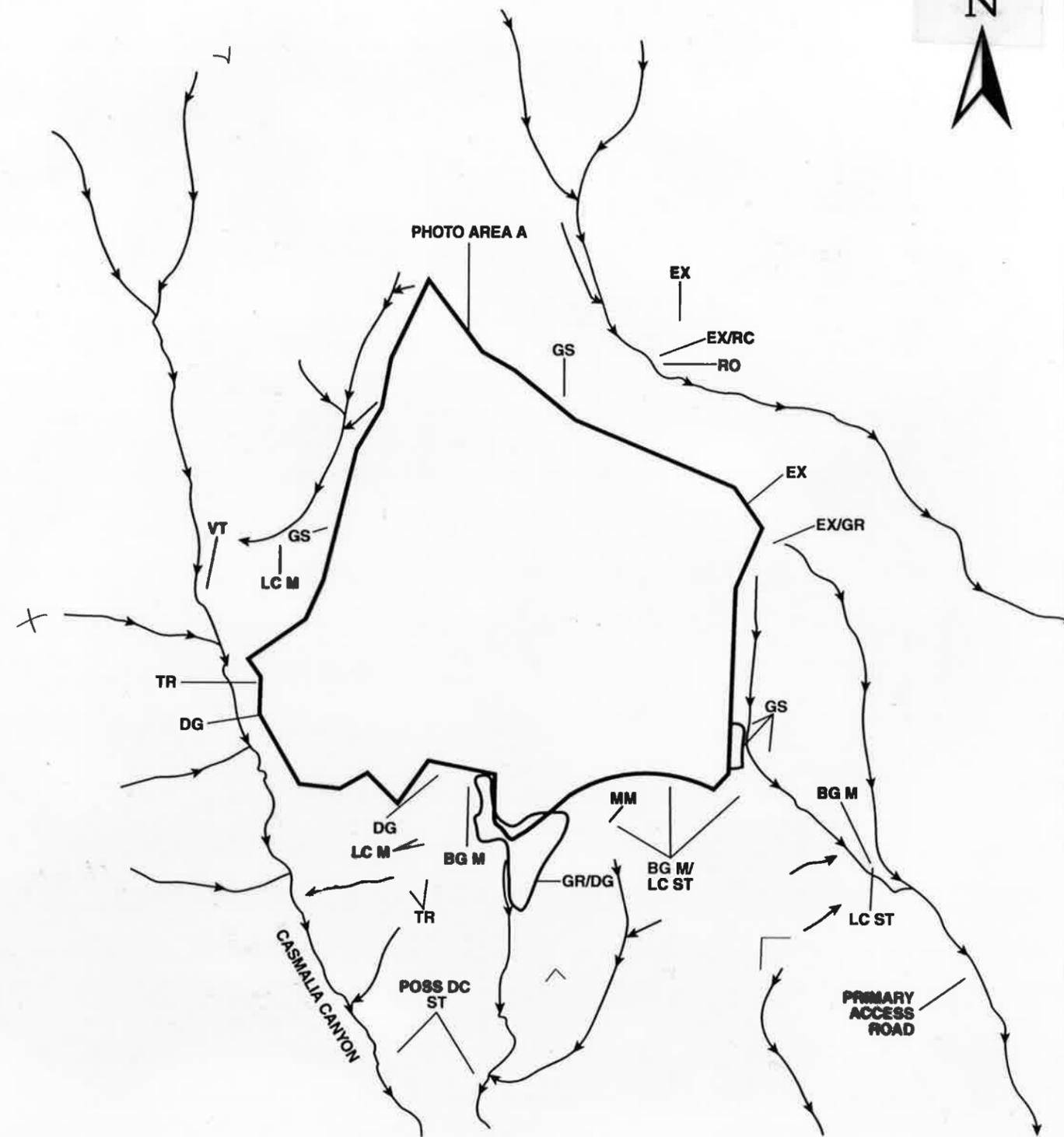
**FIGURE 14 - PHOTO AREA A
CASMALIA DISPOSAL SITE**

JULY 6, 1989

**APPROX. SCALE 1:5,760
1"=480'**







**FIGURE 15 - PHOTO AREA B
CASMALIA DISPOSAL SITE**

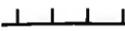
JULY 6, 1989

**APPROX. SCALE 1:14,880
1"=1,240'**



FOLD-OUT LEGEND

**LEGEND OF SYMBOLS
CASMALIA DISPOSAL SITE**

- B - BUILDING
 - BG - BLUE-GRAY
 - BR - BUILDING REMOVED
 - CA - CLEARED AREA
 - CR - CRANE
 - D - DRUMS
 - DC - DARK-COLORED
 - DG - DISTURBED GROUND
 - E - EQUIPMENT
 - EM - EARTH MOVER
 - EX - EXCAVATION
 - FA - FILL AREA
 - GA - GRADER
 - GR - GRADED AREA
 - GS - GROUND SCAR
 - HT - HORIZONTAL TANK
 - IM - IMPOUNDMENT
 - LC - LIGHT-COLORED
 - LF - LANDFILL
 - LQ - LIQUID
 - M - MATERIAL
 - MC - MEDIUM-COLORED
 - MM - MOUNDED MATERIAL
 - NB - NEW BUILDING
 - O - OBJECT
 - OS - OPEN STORAGE
 - P - POND
 - R - REFUSE
 - RC - ROAD CUT
 - RO - RUNOFF
 - S - STRUCTURE
 - SL - SLUDGE
 - ST - STAIN
 - T - TANK
 - TL - TRAILER TRUCK
 - TR - TRENCH
 - TT - TANKER TRUCK
 - V - VEHICLE
 - VT - VERTICAL TANK
-
-  BERM
 -  DRAINAGE
 -  EDGE OF SLOPE
 -  FEATURE BOUNDARY
 -  INDETERMINATE DRAINAGE
 -  PIPE