LAND RECLAMATION COMMISSION

STATE OF MISSOURI
P.O. BOX 176
JEFFERSON CITY, MISSOURI 65102
573-751-4041

Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO
HOLCIM (US), INC.

Pursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements In the application, a permit is hereby granted to engage in surface mining of limestone & shale in the state of Missouri. The extent of the Proposed mining operation(s) will be on 111 acres, more or less.
The locations of the operation(s) under this permit is/are as follows: Amendment

County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
Pike	13, 14, 18, 23, 24	53N	01W, 01E	0	111	369	Clarksville	1399

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 8th day of July 2004

DIRECTOR OF STAFF
Land Reclamation Commission

Permit No. 0498 A-1
Effective Date 07/08/2004
Expiration Date 03/27/2005

MO 780-1122 (6-95)

RECEIVED

MAY 2 4 2004

MISSOURI LAND RECLAMATION COMMISSION

MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL			DATE	
HOLCIM (US) INC			May 20, 2004	
ADDRESS	CITY		STATE	ZIP CODE
14738 HWY 79	CLARKSVILLE		MO	63336
CONTACT PERSON			TELEPHONE NUMBER	
LARRY SCALES			573-242-3571	

CHECK ANY THAT APPLY:

☐ New Permit ☒ Permit Amendment ☐ Permit Revision ☐ Permit Expansion

SITE NAME OR NUMBER	ACREAGE	LOCATION: COUNTY, SECTION, TOWNSHIP, RANGE (EAST OR WEST)
1. 0498	111	Pike, Sections 13 and 18, Township 53N Range 1W & 1E (Approx 15 acres in Section 18)
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		

ATTACH ADDITIONAL SHEETS IF NECESSARY

SIGNATURE OF APPLICANT	TITLE	DATE
Larry D. Scales	Quarry & Raw Materials Coordinator	May 20, 2004

Appeared before me this 20th day of May, 20 04, Larry D. Scales to me personally known, who executed the above as their free acts and deeds.

NOTARY PUBLIC EMBOSSER	STATE	COUNTY (OR CITY OF ST. LOUIS)
	Missouri	Pike
	SUBSCRIBED AND SWORN BEFORE ME, THIS 20th DAY OF May YEAR 2004	USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE: June A. Lovell	MY COMMISSION EXPIRES: 5/4/2007
	NOTARY PUBLIC NAME (TYPED OR PRINTED): June A. Lovell	JUNE A. LOVELL Notary Public-Notary Seal State of Missouri Pike County My Commission Expires May 4, 2007

FOR DEPARTMENT USE ONLY: APPROVED BY	DATE APPROVED	PERMIT NUMBER	EXPIRATION DATE
[signature]	7-2-04	0498	3-27-05

MO 780-1067 (12-02) ATTACH FEES AND BONDING WORKSHEET.

LAND RECLAMATION COMMISSION

STATE OF MISSOURI
P.O. BOX 176
JEFFERSON CITY, MISSOURI 65102
573-751-4041

Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

ISSUES TO

HOLCIM (US), INC.

Pursuant to "The Land Reclamation Act," RSMo. 2001, and on conformity with the statements In the application, a permit is hereby granted to engage in surface mining of limestone & shale in the state of Missouri. The extent of the Proposed mining operation(s) will be on 258 acres, more or less.

The locations of the operation(s) under this permit is/are as follows: Renewal

County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
Pike	13, 14, 18, 23, 24	53N	01W, 01E	258	0	258	Clarksville	1399

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 4th day of March 2004

DIRECTOR OF STAFF
Land Reclamation Commission

Permit No. 0498
Effective Date 03/28/2004
Expiration Date 03/27/2005

MO 780-1122 (6-95)

RECEIVED

MAR 1 2004

MISSOURI LAND RECLAMATION COMMISSION

MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION

PERMIT RENEWAL FOR INDUSTRIAL MINERAL MINES

P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL			DATE
HOLCIM (US) INC			
ADDRESS: 14738 HWY 79	CITY: CLARKSVILLE	STATE: MO	ZIP CODE: 63336
CONTACT PERSON: Larry D. Scales - Quarry & Raw Materials Coordinator			TELEPHONE NUMBER: (573) 242-3571 ext. 1113

FEES: COMPLETE SECTION I OR SECTION II

SECTION I. Fees: Open pit operators and those mining more than 5,000 tons of sand and/or gravel:

1. To compute the site fee complete the information below:

SITE NAME OR NUMBER (add a separate sheet for additional sites)	Mark each month that the site will be operated during the permit year	For sites operated less than six months per permit year pay $150 For sites operated six months or more per permit year pay $300
1. 0498	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$ 300
2.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
3.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
4.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
5.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
6.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
7.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
8.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
9.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
10.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	$
TOTAL SITE FEE →		$ 300

2. Acreage Fee $5 X 258 number of acres bonded ..... $ 1290

3. Annual Permit Fee ..... $ 500

4. Total Fee (Add totals from 1, 2 and 3) ..... $ 2090

NOTE: If Total Fee exceeds $2,500.00 then pay only ..... $ 2,500

SECTION II. FEES: Sand or gravel operators mining less than 5,000 tons per year:

1. Annual Permit Fee ..... $ 300

SIGNATURE OF APPLICANT	TITLE	DATE
Larry D Scales	Quarry & Raw Materials Coordinator	2-27-04

Appeared before me this 27th day of February, 20 04, Larry D. Scales to me personally known, who executed the above as their free acts and deeds.

NOTARY PUBLIC EMBOSSER SEAL	STATE OF: Missouri	COUNTY (OR CITY OF ST. LOUIS): Pike
	SUBSCRIBED AND SWORN BEFORE ME, THIS: 27th DAY OF Feb. YEAR 2004	USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE: June A. Lovell	MY COMMISSION EXPIRES: May 4, 2007
	NOTARY PUBLIC NAME (TYPED OR PRINTED): June A. Lovell	JUNE A. LOVELL Notary Public-Notary Seal State of Missouri Pike County My Commission Expires May 4, 2007

FOR DEPARTMENT USE ONLY: APPROVED BY	DATE APPROVED	PERMIT NUMBER	EXPIRATION DATE
[illegible]	3-2-04	498	

MO 788-1780 (12-02)

MISSOURI DEPARTMENT OF NATURAL RESOURCES
LAND RECLAMATION COMMISSION

SITE INFORMATION FORM

RECEIVED
OCT 19 2000
MISSOURI LAND RECLAMATION COMMISSION

To be completed for each separate area of disturbance associated with mining operations.

SITE NAME OR NUMBER	PERMIT NUMBER
HOLNAM INC.	0498

COMPANY NAME
HOLNAM INC.

COUNTY	1/4 SECTION	SECTION
PIKE	N/A	13,14,18,23,24
TOWNSHIP	**RANGE**	**ACRES**
53N	R1W & R1E	1060

RIVER OR STREAM NAME (FOR IN-STREAM ACRES)
N/A

MINERAL COMMODITY	ESTIMATED TONS/YEAR (FOR GRAVEL SITES)
LIMESTONE / SHALE	N/A

NAME OF LANDOWNER (ATTACH LIST IF MORE THAN ONE)
HOLNAM INC.

ADDRESS
P. O. BOX 67, HWY 79 NORTH

CITY	STATE	ZIP CODE
CLARKSVILLE	MO	63336

SOURCE OF RIGHT TO MINE (CHECK ONE):

- [ ] MINERAL DEED
- [ ] LEASE
- [x] WARRANTY DEED
- [ ] VERBAL AGREEMENT
- [ ] OTHER (DESCRIBE):

DATE OF AGREEMENT

MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)
SAME AS ABOVE

ADDRESS

CITY	STATE	ZIP CODE

SOURCE OF RIGHT TO MINE (CHECK ONE):

- [ ] MINERAL DEED
- [ ] LEASE
- [ ] WARRANTY DEED
- [ ] VERBAL AGREEMENT
- [ ] OTHER (DESCRIBE):

DATE OF AGREEMENT

NOTE: Each site must be shown on a map and be included in a public notice and an approved mine plan.

MO 780-1036 (12-91)

MISSOURI DEPARTMENT O ATURAL RESOURCES
LAND RECLAMATION COMMISSION
MINE PLAN

RECEIVED
OCT 1 9 2000
MISSOURI LAND RECLAMATION COMMISSION

P.O. BOX 176
JEFFERSON CITY, MO 65102

TYPE OF PLAN (CHECK ONE):
☐ SHORT TERM, FOR ONE PERMIT YEAR
☒ LONG TERM, FOR PERIOD THROUGH DATE: 11/1/2075 (75 years)

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.

HOLNAM QUARRY
This plan covers an area of approximately 1060 acres which will be mined in the next 75 years. This quarry lies to the north of Route N and gently slopes to the south. Topsoil is abundant and the land is presently used for pasture and farming.

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

A. TOPSOIL

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING: 12 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? ☐ YES OR ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

After the trees are removed by dozers, the topsoil will be removed and either, stockpiled for later use, or utilized for on-going reclamation. Topsoil removal and stripping, will mainly be done during fair weather months. All topsoil removal will be done well ahead of any stripping, or stripping deposition, if applicable.

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

As necessary, scrapers will stockpile the topsoil. All stockpiles will be graded and seeded to prevent wind or water erosion.

B. SPOIL

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

The majority of the overburden will be deposited in the mined out quarry. However, as the topography dictates, valleys and drainage areas will be filled to prevent water inflow into the quarry.

RECEIVED
OCT 19 2000
MISSOURI LAND
RECLAMATION COMMISSION

C. ACID MATERIALS

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

NONE

D. PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

The present quarry covers approximately 1060 acres and will advance in a southwesterly direction using approximately 2,200,000 tons of limestone and shale per year along a face of a northwest-southeast direction of approximately 2500 feet in length.

YES	NO	
☐	☒	Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?
☐	☒	Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)
☐	☒	Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)

RECEIVED

OCT 1 9 2000

RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2.

A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
#1	PASTURE	Spring (3/15 - 5/30) or Fall (9/15 - 10/15)

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Following completion of topsoil replacement procedures, planting dates and weather permitting, the seed bed will be prepared by Holnam's farming operation and seeded with a Brillion seeder. Fertilization and reseeding will be done on a timely basis as or if needed.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Annual Rye Grass	6#		
Kentucky 31 Tall Fescue	15#		
Lespedeza	10#		
(Occasionally Alfalfa)	10#		

REVEGETATION MIX #2	PURPOSE OR LAND USE	B. SEEDING OR PLANTING TIME
#2	INDUSTRIAl/RECREATION	SPRING OR FALL

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Because of the scope of our mining activity, the entire 200 foot deep quarry will never be filled completely with overburden.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
N/A			

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

All slopes will be graded such that farm machinery will traverse them safely at a 4.1 grade or less. The mined out quary is about 200 feet deep and is presently dewatered of precipitation by pumping. Some of this quarry will eventually be filled with overburden to the original surface elevation and then covered with topsoil and seeded.

However, much of the mined out quarry will eventually be filled with water and have an end use of water impoundment.

The border of the entire quarry will have an end use of development.

RECEIVED
OCT 19 2000
MISSOURI LAND
RECLAMATION COMMISSION

C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be accomplished as the stripping is done. Final grading will be done as the desired finished elevation is reached.

REPLACEMENT OF TOPSOIL

Topsoil will be spread on the finished fill areas as it is completed, this is dependent on the fill height which in the mined out quarry is nearly 200 feet.

REVEGETATION

Seeding will be done following topsoil replacement on a timely basis depending on time of year, weather, etc.

AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

12 inches

D. USE OF LAND WHEN RECLAIMED

Estimate acreage of each land use below, after reclamation	ESTIMATED ACRES:
Wildlife (forest or other habitat with livestock excluded)	0
Agricultural (pasture, cropland, and horticultural)	0
Development (residential, industrial, and recreational)	106
Water impoundments (for wildlife, agricultural, or development)	954

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.

2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.

3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.

4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

RECEIVED

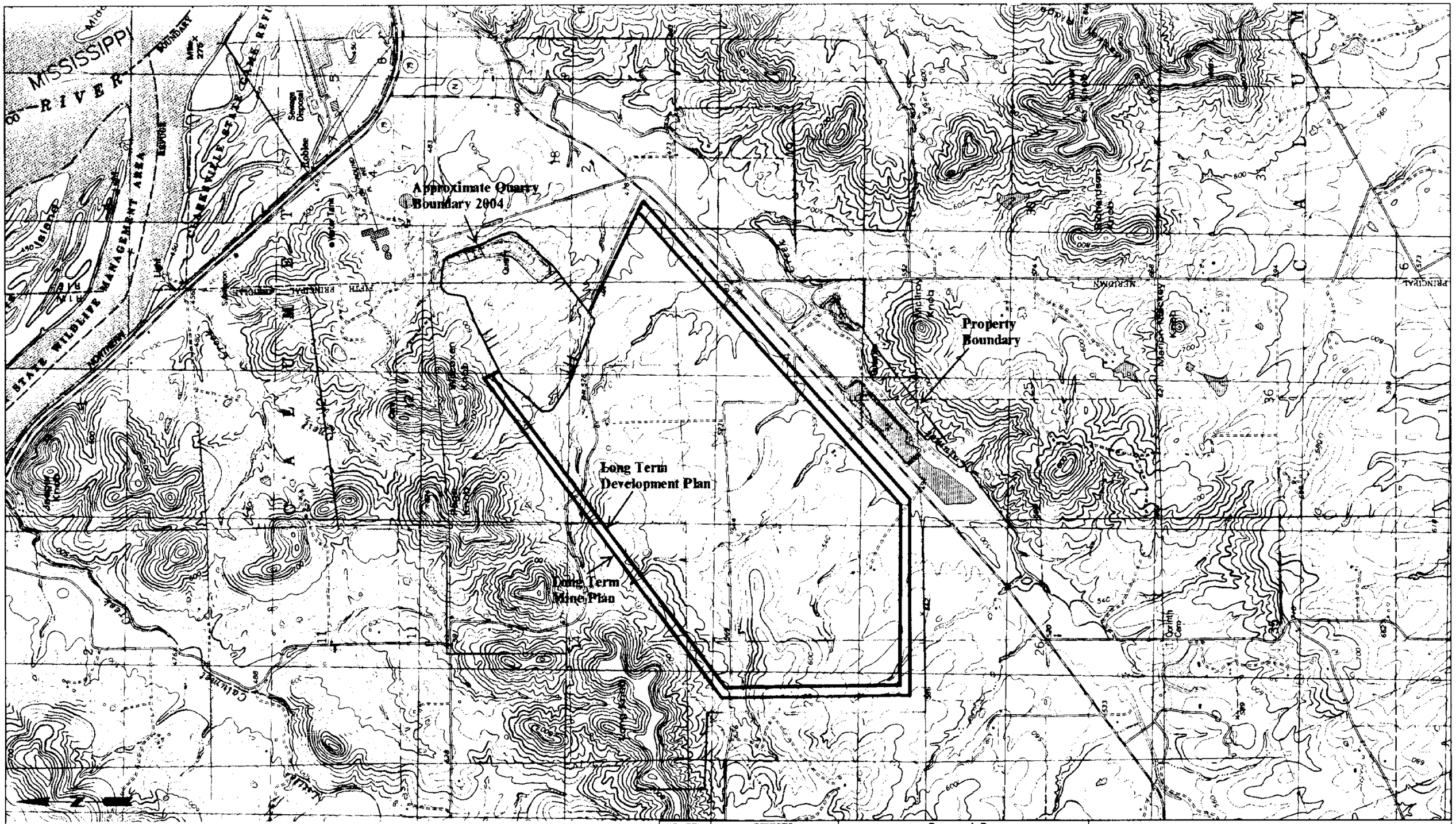
OCT 19 2000

MISSOURI LAND RECLAMATION COMMISSION

SIGNATURE OF APPLICANT	TITLE	DATE
	PLANT MANAGER	10-17-00

NOTARY PUBLIC EMBOSSER SEAL	STATE	COUNTY (OR CITY OF ST. LOUIS)
	MISSOURI	PIKE
	SUBSCRIBED AND SWORN BEFORE ME, THIS 17th DAY OF October ~~19~~ 2000	USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE: Laura M. Robinson — MY COMMISSION EXPIRES: 4-10-03	
	NOTARY PUBLIC NAME (TYPED OR PRINTED): Laura M. Robinson	

APPROVED BY (DIRECTOR'S REPRESENTATIVE)	DATE APPROVED	PERMIT NUMBER
	1-2-01	0498



PROPERTY LINE
LONG TERM MINE PLAN
LONG TERM DEVELOPMENT PLAN
APPROXIMATE QUARRY BOUNDARY 2004
1 NPDES MONITORING OUTFALL

SOURCE: USGS CLARKSVILLE QUADRANGLE MO-IL 7.5 MINUTE SERIES AND USGS PLEASANT HILL WEST QUADRANGLE IL-MO 7.5 MINUTE SERIES

QUADRANGLES LOCATION

SCALE 1:24,000

0 2000

SCALE IN FEET

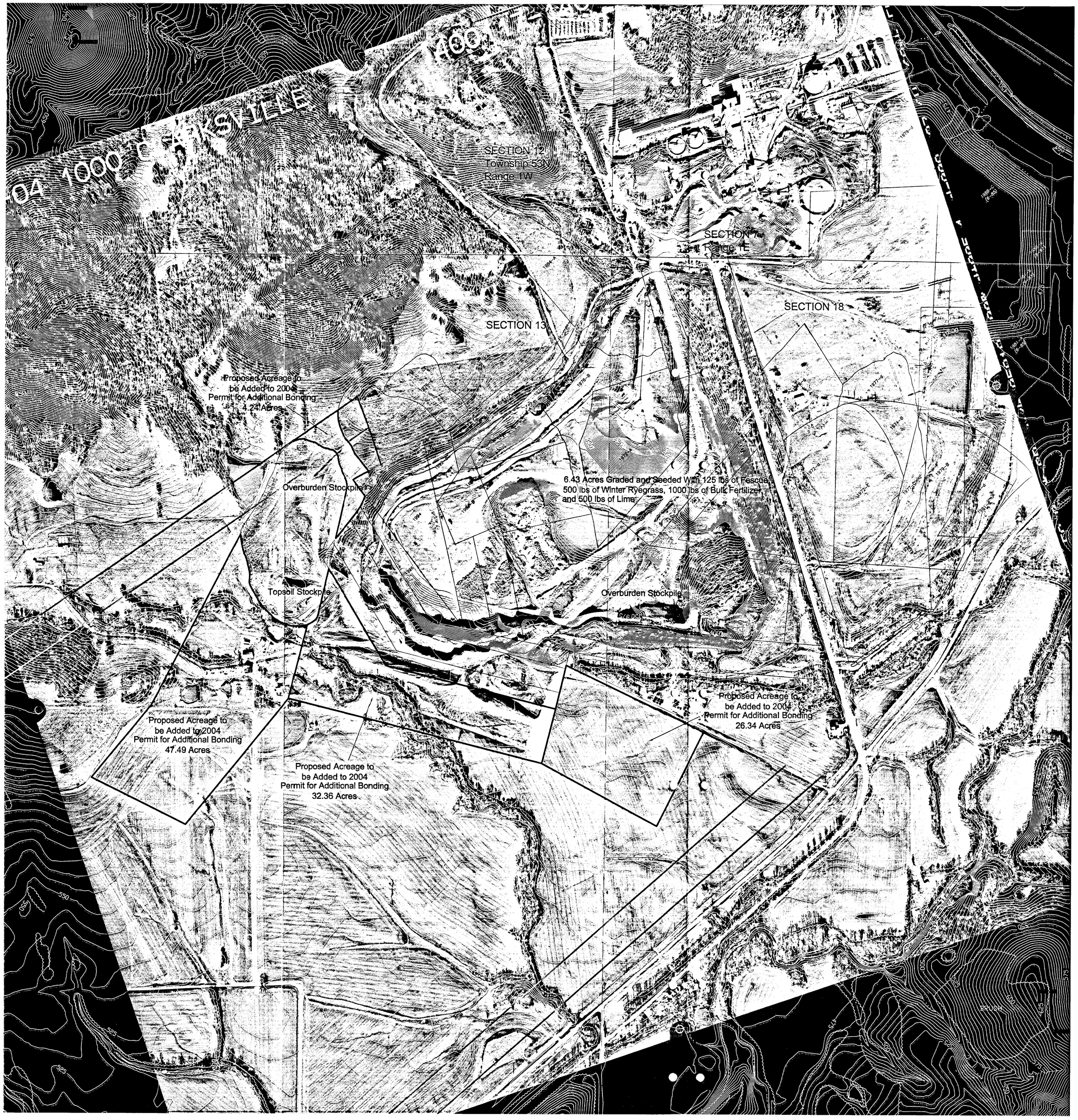
DATE	REVISED
3/15/04	ORIGINAL
4/15/04	JLBOGNAR:DS

Prepared By:
LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Ground-Water and Environmental Engineering Services
4850 Lemay Ferry Road, Suite 205
St. Louis, MO 63129
(314) 845-0535

HOLCIM (US) INC. – LAND RECLAMATION PERMIT NO. 0498
CLARKSVILLE PLANT
CLARKSVILLE, MISSOURI – PIKE COUNTY

VICINITY MAP, APPROXIMATE PROPERTY BOUNDARY AND LONG TERM MINE AND DEVELOPMENT PLAN

FILE: 1203STMWTRLTMP.dwg | *DATE:* 4/2004 | *FIGURE:* 1



N

LEGEND

- LONG TERM MINE PLAN
- LONG TERM DEVELOP PLAN
- CURRENT PERMITTED AREA AND NOT RELEASED
- QUARRY ADVANCEMENT
- STREAMS
- 5TH PRIME MERIDIAN
- (3) OUTFALL NUMBER AND LOCATION
- 1981-A YEAR PERMITTED / YEAR RELEASED

YEAR PERMITTED (New Acres Only)	YEAR RELEASED
1972-A	–
1972-B	–
1972-C	–
1972-D	6-85
1972-E	6-85
1973 (NONE)	1973
1974-A	–
1974-B	6-85
1974-C	6-85
1974-D	9-91
1974-E	9-91
1975 (NONE)	1975
1976-A	–
1976-B	–
1976-C	–
1976-D	6-85
1976-E	9-83
1977-A	–
1977-B	6-85
1977-C	6-85
1977-D	6-85
1978-A	–
1978-B	–
1978-C	6-85
1978-D	9-91
1979-A	6-85
1979-B	6-85
1979-C	9-91
1979-D	6-85
1979-E	9-91
1980-A	9-91
1980-B	6-85
1980-C	6-85
1980-D	9-91
1981-A	6-85
1981-B	9-91
1981-C	9-91
1981-D	9-91
1982 (NONE)	1982
1983 (NONE)	1983
1984-A (13.0 ACRES)	3-97
1985 (NONE)	1985
1986 (NONE)	1986
1987 (NONE)	1987
1988 (NONE)	1988
1989 (NONE)	1989
1990 (NONE)	1990
1991-A	–
1991-B	–
1992-A (10.0 ACRES)	3-97
1992-B (3.0 ACRES)	–
1992-C (5.0 ACRES)	–
1993 (NONE)	1993
1994 (13.0 ACRES)	–
1995 (NONE)	1995
1996 (4.0 ACRES)	–
1998 (8.0 ACRES)	–
2001 (25.0 ACRES)	–
2000B (12.0 ACRES)	–
2002 (16.0 ACRES)	–

REFERENCES: "YEAR 2003 – 2007 PERMANENT QUARRY STRIPPING AND DEPOSITIONAL AREAS", HOLCIM JANUARY 22, 2003.
"PERMANENT QUARRY PERMIT AREAS", HOLCIM 1990, REVISED SEPTEMBER 2000.
"QUARRY PLANNING MAP", HOLCIM AUGUST 2001.
"HOLCIM (US) INC. SITE MAP AND FLOW DIRECTION – FIGURE 3 – PLAN & LAYOUT", FEBRUARY 2004.
"HOLNAM PROPERTY LINE, LONG TERM MINE AND DEVELOPMENT PLAN AND PERMITTED AREA MAP (HAND DRAWN ON 7.5' TOPOGRAPHIC MAP), DECEMBER 2001.

NOTES: DUE TO DISTORTION OF AERIAL PHOTOGRAPH, WORK AREAS ARE MOST ACCURATE IN THE CENTER OF THE PHOTOGRAPH, AND LEAST ACCURATE IN THE NORTHWEST QUADRANT.
NO PERSON OR BUSINESS HAS ANY SURFACE OR SUBSURFACE INTEREST IN THE LAND TO BE BIND. OTHER THAN HOLCIM (US) INC.

300 0 300 600 900

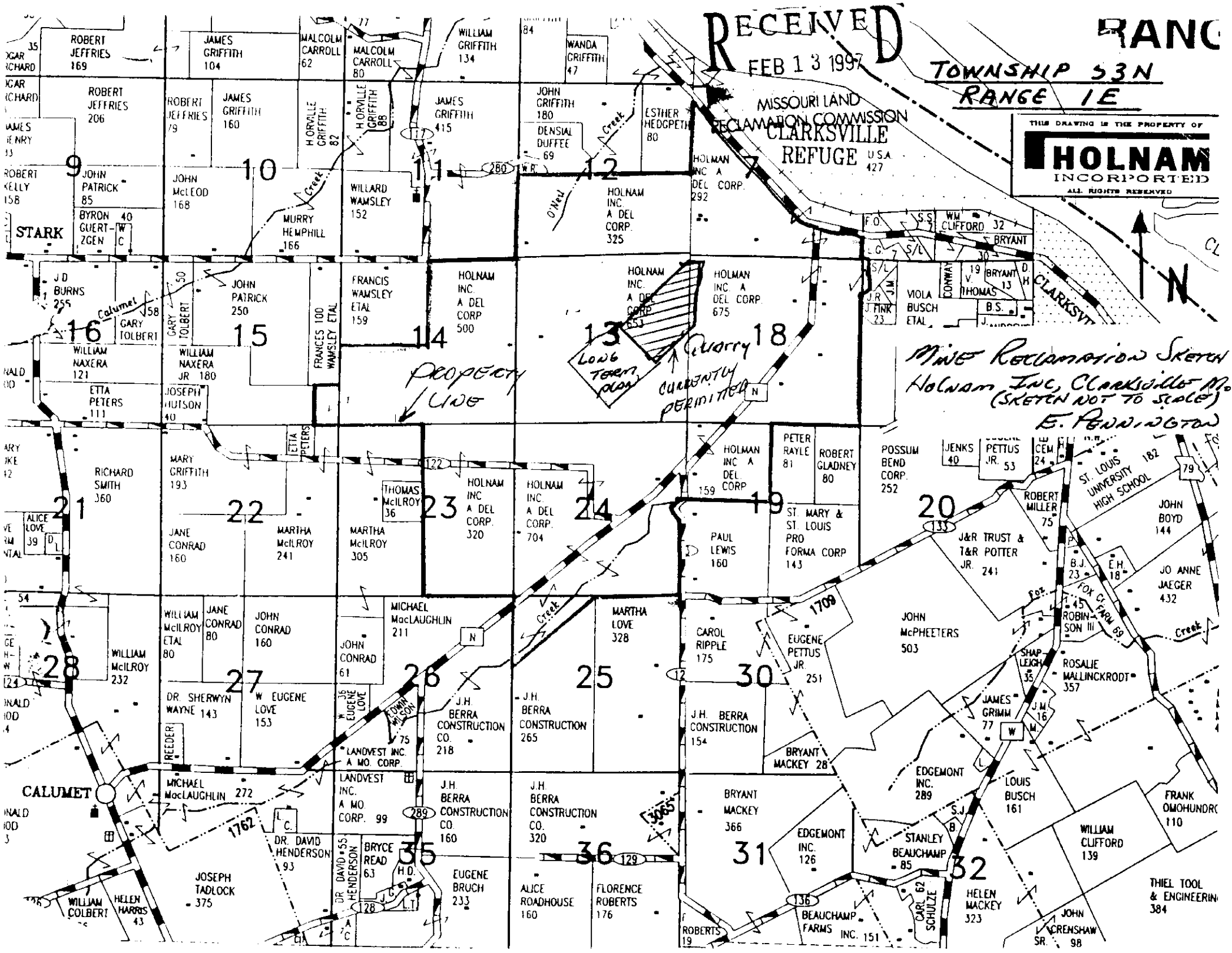
RECEIVED
JUL - 6 2004
MISSOURI LAND RECLAMATION COMMISSION

Holcim

HOLCIM (US) INC.
MISSOURI LAND RECLAMATION PERMIT No. 0498
CLARKSVILLE PLANT
CLARKSVILLE, MISSOURI (PIKE COUNTY)

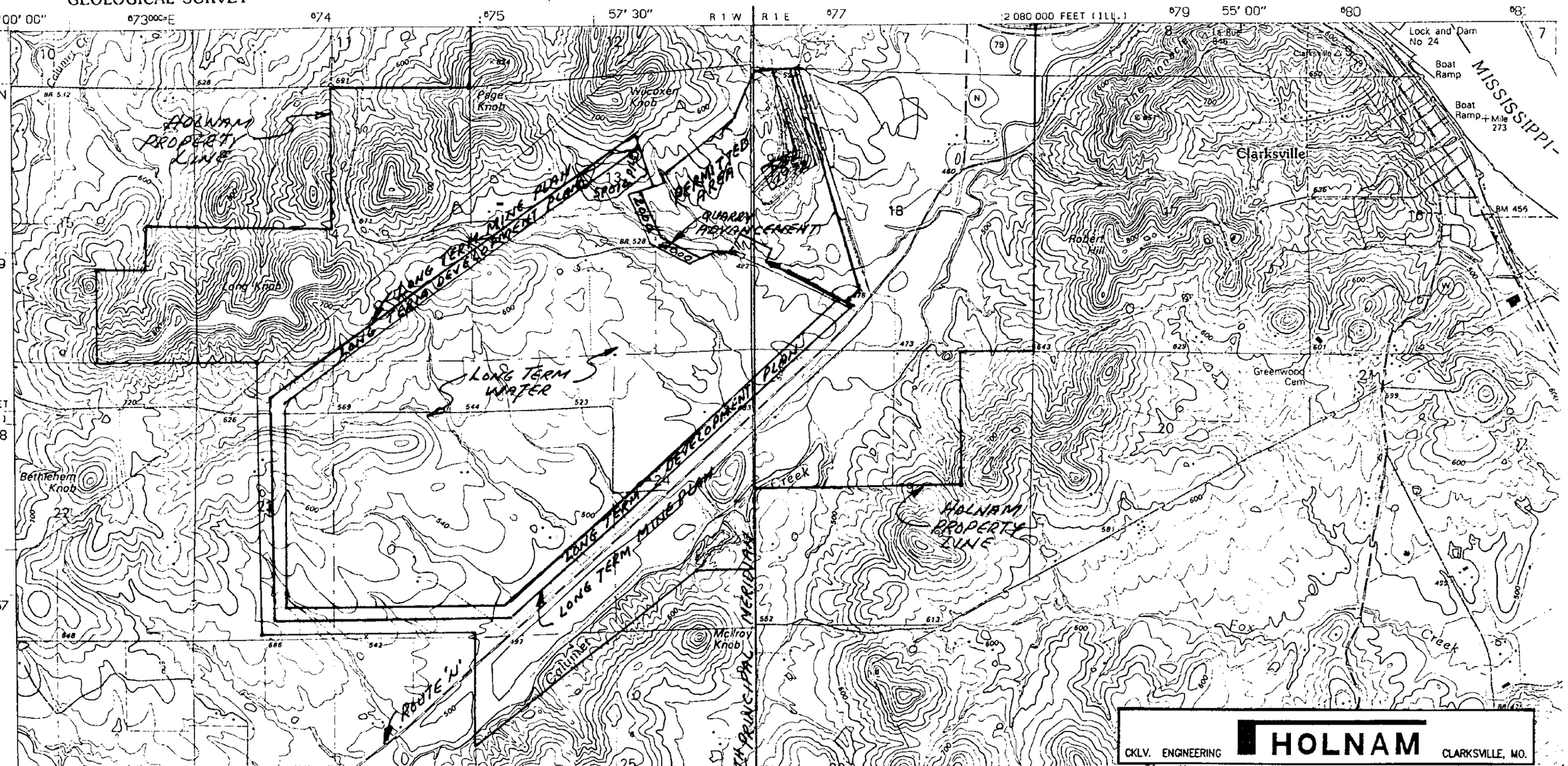
LAND RECLAMATION BONDING STATUS MAP

DATE	REVISED	PREPARED BY:
		LEGGETTE, BRASHEARS & GRAHAM, INC. Professional Ground-Water and Environmental Engineering Services 4850 Lemay Ferry Road Suite 205 St. Louis, MO 63129 (314) 845-0535


RECEIVED
FEB 13 1997
MISSOURI LAND RECLAMATION COMMISSION
TOWNSHIP 53N
RANGE 1E
THIS DRAWING IS THE PROPERTY OF
HOLNAM
INCORPORATED
ALL RIGHTS RESERVED
CLARKSVILLE REFUGE U.S.A. 427
STARK
CALUMET
Calumet
Creek
O'Neil Creek
Fox Creek
Fox Creek Farm Rd
CLARKSVILLE
N
Mine Reclamation Sketch
Holnam Inc, Clarksville Mo
(Sketch not to scale)
E. Pennington
Property Line
Long Term Plan
Quarry
Currently Permitted
ROBERT JEFFRIES 169
JAMES GRIFFITH 104
MALCOLM CARROLL 62
MALCOLM CARROLL 80
WILLIAM GRIFFITH 134
WANDA GRIFFITH 47
ROBERT JEFFRIES 206
ROBERT JEFFRIES 79
JAMES GRIFFITH 160
H ORVILLE GRIFFITH 82
H ORVILLE GRIFFITH 88
JAMES GRIFFITH 415
JOHN GRIFFITH 180
DENSIAL DUFFEE 69
ESTHER HEDGPETH 80
HOLMAN INC A DEL CORP. 292
JOHN PATRICK 85
JOHN McLEOD 168
WILLARD WAMSLEY 152
MURRY HEMPHILL 166
HOLNAM INC. A DEL CORP. 325
BYRON GUERTZGEN 40
J D BURNS 255
JOHN PATRICK 250
FRANCIS WAMSLEY ETAL 159
HOLNAM INC. A DEL CORP 500
HOLNAM INC. A DEL CORP. 653
HOLMAN INC. A DEL CORP. 675
GARY TOLBERT 50
GARY TOLBERT 58
WILLIAM NAXERA 121
WILLIAM NAXERA JR 180
FRANCES WAMSLEY ETAL 100
ETTA PETERS 111
JOSEPH HUTSON 40
ETTA PETERS
VIOLA BUSCH ETAL
WM CLIFFORD 32
BRYANT 30
BRYANT 13
THOMAS 19
RICHARD SMITH 360
MARY GRIFFITH 193
THOMAS McILROY 36
HOLNAM INC A DEL CORP. 320
HOLNAM INC. A DEL CORP. 704
HOLMAN INC A DEL CORP 159
PETER RAYLE 81
ROBERT GLADNEY 80
POSSUM BEND CORP. 252
JENKS 40
PETTUS JR. 53
ST. LOUIS UNIVERSITY HIGH SCHOOL 182
ALICE LOVE 39
JANE CONRAD 160
MARTHA McILROY 241
MARTHA McILROY 305
PAUL LEWIS 160
ST. MARY & ST. LOUIS PRO FORMA CORP 143
J&R TRUST & T&R POTTER JR. 241
ROBERT MILLER 75
JOHN BOYD 144
JO ANNE JAEGER 432
ROBINSON III 45
WILLIAM McILROY 232
WILLIAM McILROY ETAL 80
JANE CONRAD 80
JOHN CONRAD 160
JOHN CONRAD 61
MICHAEL MacLAUGHLIN 211
MARTHA LOVE 328
CAROL RIPPLE 175
EUGENE PETTUS JR. 251
JOHN McPHEETERS 503
SHAPLEIGH 35
ROSALIE MALLINCKRODT 357
DR. SHERWYN WAYNE 143
W EUGENE LOVE 153
W EUGENE LOVE 36
EDWIN WILSON 75
J.H. BERRA CONSTRUCTION CO. 218
J.H. BERRA CONSTRUCTION 265
J.H. BERRA CONSTRUCTION 154
JAMES GRIMM 77
J.M. 16
REEDER
LANDVEST INC. A MO. CORP.
BRYANT MACKEY 28
EDGEMONT INC. 289
LOUIS BUSCH 161
MICHAEL MacLAUGHLIN 272
LANDVEST INC. A MO. CORP. 99
J.H. BERRA CONSTRUCTION CO. 160
J.H. BERRA CONSTRUCTION CO. 320
BRYANT MACKEY 366
FRANK OMOHUNDRO 110
DR. DAVID HENDERSON 93
DR. DAVID HENDERSON 55
BRYCE READ 63
EDGEMONT INC. 126
STANLEY BEAUCHAMP 85
WILLIAM CLIFFORD 139
JOSEPH TADLOCK 375
EUGENE BRUCH 233
ALICE ROADHOUSE 160
FLORENCE ROBERTS 176
BEAUCHAMP FARMS INC. 151
CARL SCHULZE 62
HELEN MACKEY 323
THIEL TOOL & ENGINEERING 384
WILLIAM COLBERT
HELEN HARRIS 43
ROBERTS 19
JOHN CRENSHAW SR. 98
9
10
11
12
13
14
15
16
18
19
20
21
22
23
24
25
26
27
28
30
31
32
35
36

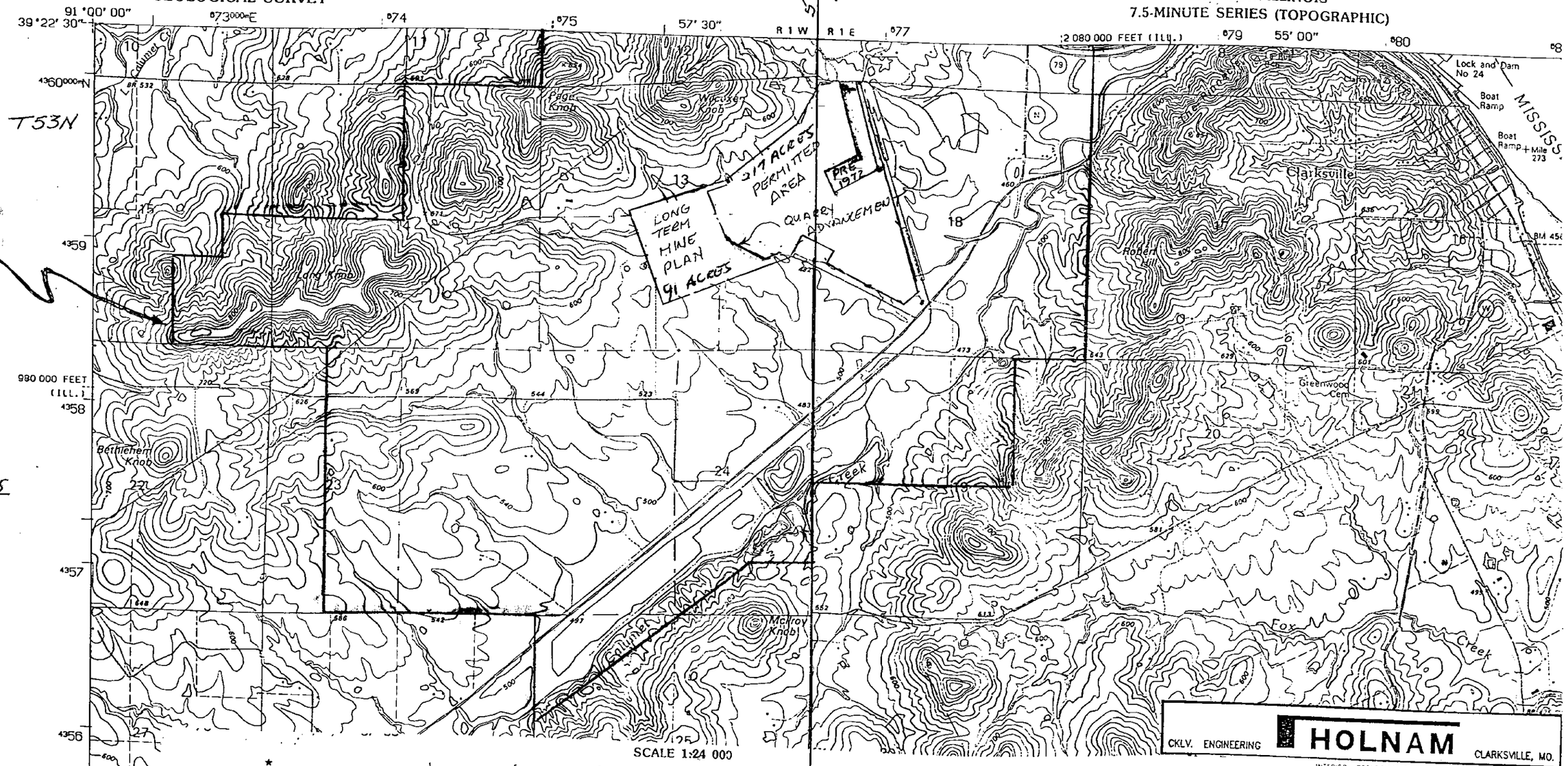
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CLARKSVILLE QUADRANGLE
MISSOURI-ILLINOIS
7.5-MINUTE SERIES (TOPOGRAPHIC)



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CLARKSVILLE QUADRANGLE
MISSOURI-ILLINOIS
7.5-MINUTE SERIES (TOPOGRAPHIC)



SCALE 1:24 000

KILOMETERS
METERS
MILES
FEET

MN
GN
1°
18 MILS
1°18'
23 MILS

UTM GRID AND 1996 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

CONTOUR INTERVAL 5 AND 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
DIVISION OF GEOLOGY AND LAND SURVEY
MISSOURI DEPARTMENT OF NATURAL RESOURCES, ROLLA, MISSOURI 65401
AND ILLINOIS GEOLOGICAL SURVEY, CHAMPAIGN, ILLINOIS 61820
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

5 FEET
20 FEET
CONTOUR INTERVAL

MISSOURI
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Louisiana
2 Pleasant Hill West
3 Pleasant Hill East
4 Cyrene
5 Annada
6 Eolia
7 Auburn
8 Elsberry

INTERIOR - GEOLOGICAL SURVEY, RESTON, VIRGINIA - 1996

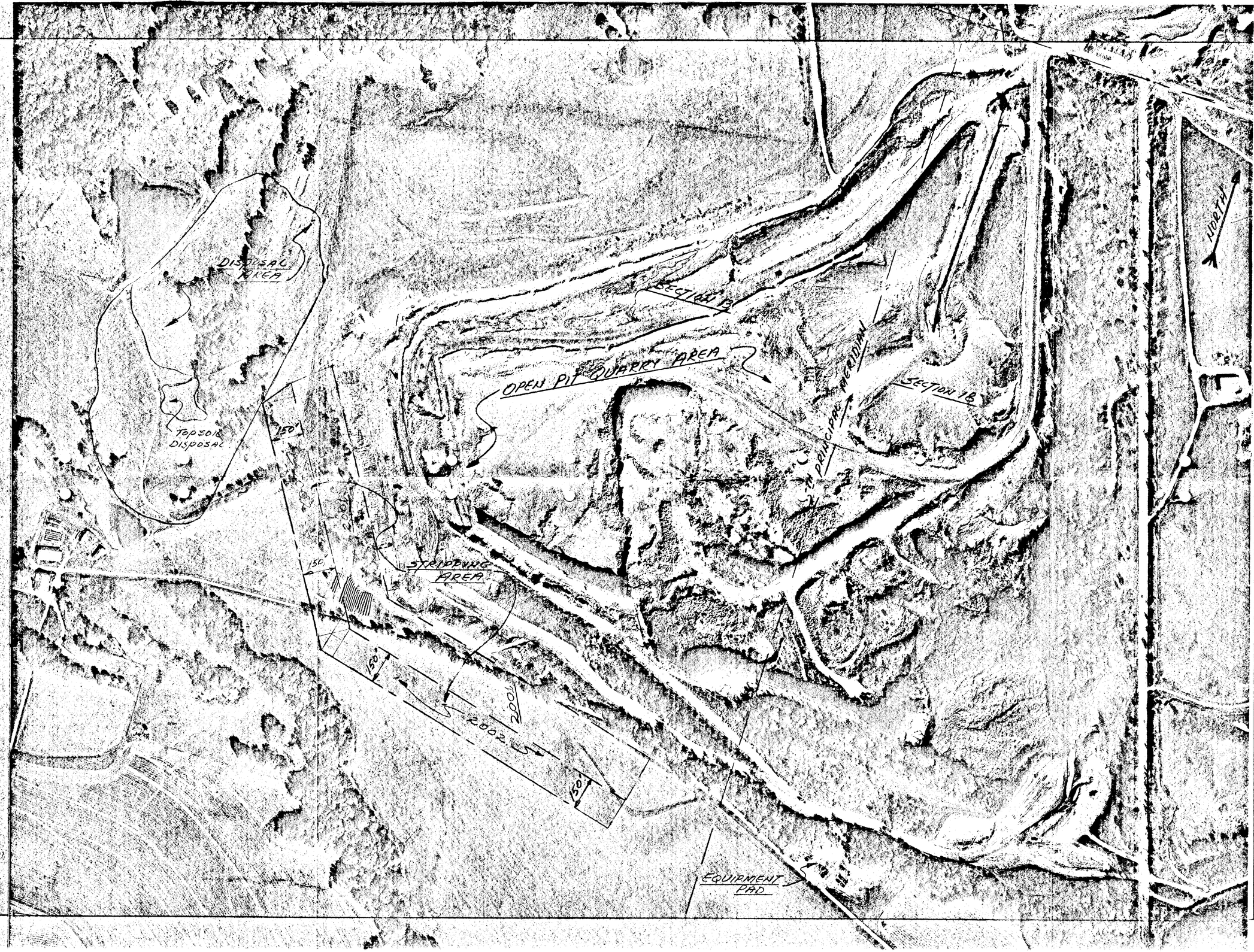
ROAD CLASSIFICATION

Primary highway hard surface ..... Light-duty road, hard or improved surface .....
Secondary highway hard surface ..... Unimproved road .....

Interstate Route U.S. Route State Route

RECEIVED
JUN - 7 2000
MISSOURI LAND RECLAMATION COMMISSION

CLARKSVILLE, MO-I
39090-C8-TF-024
1993



RECEIVED
JAN 22 2002
DIVISION OF OIL, GAS AND MINING
RECLAMATION COMMISSION

REVISION		
NO.	DATE	REMARKS
1	1 12 02 FBR	WEST STRIPPING AREA FOR 2002 ENLARGED FROM 50' TO 150' WIDE

DRAWING NO	TITLE
REFERENCE DRAWING	

DATE	BY	ISSUE FOR

CLARKSVILLE PLANT

2002 PERMANENT QUARRY STRIPPING AND DEPOSITIONAL AREAS

DRN FBR DATE 07-25-01
CKD
APP

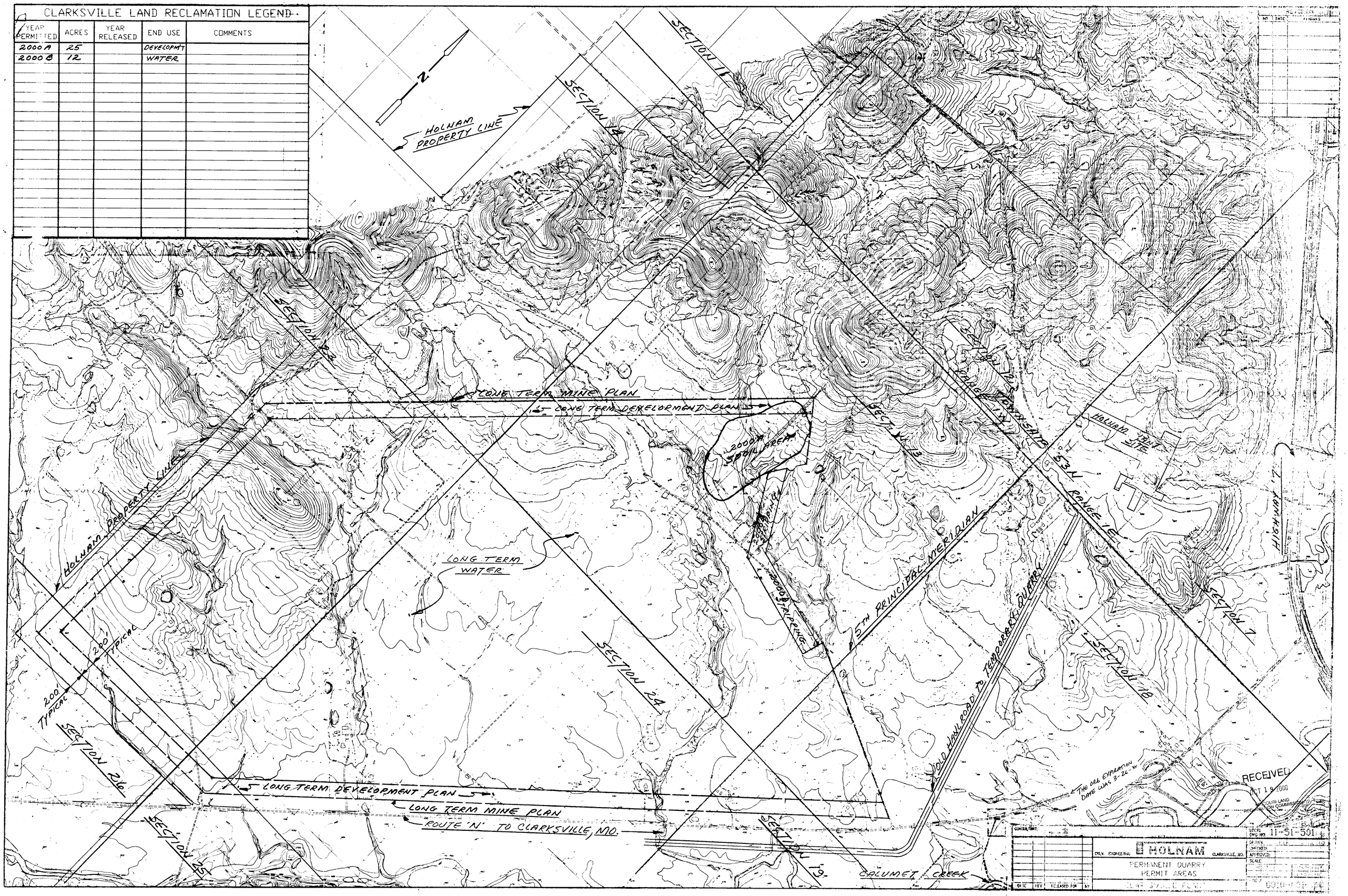
SCALE: 1" = 200'

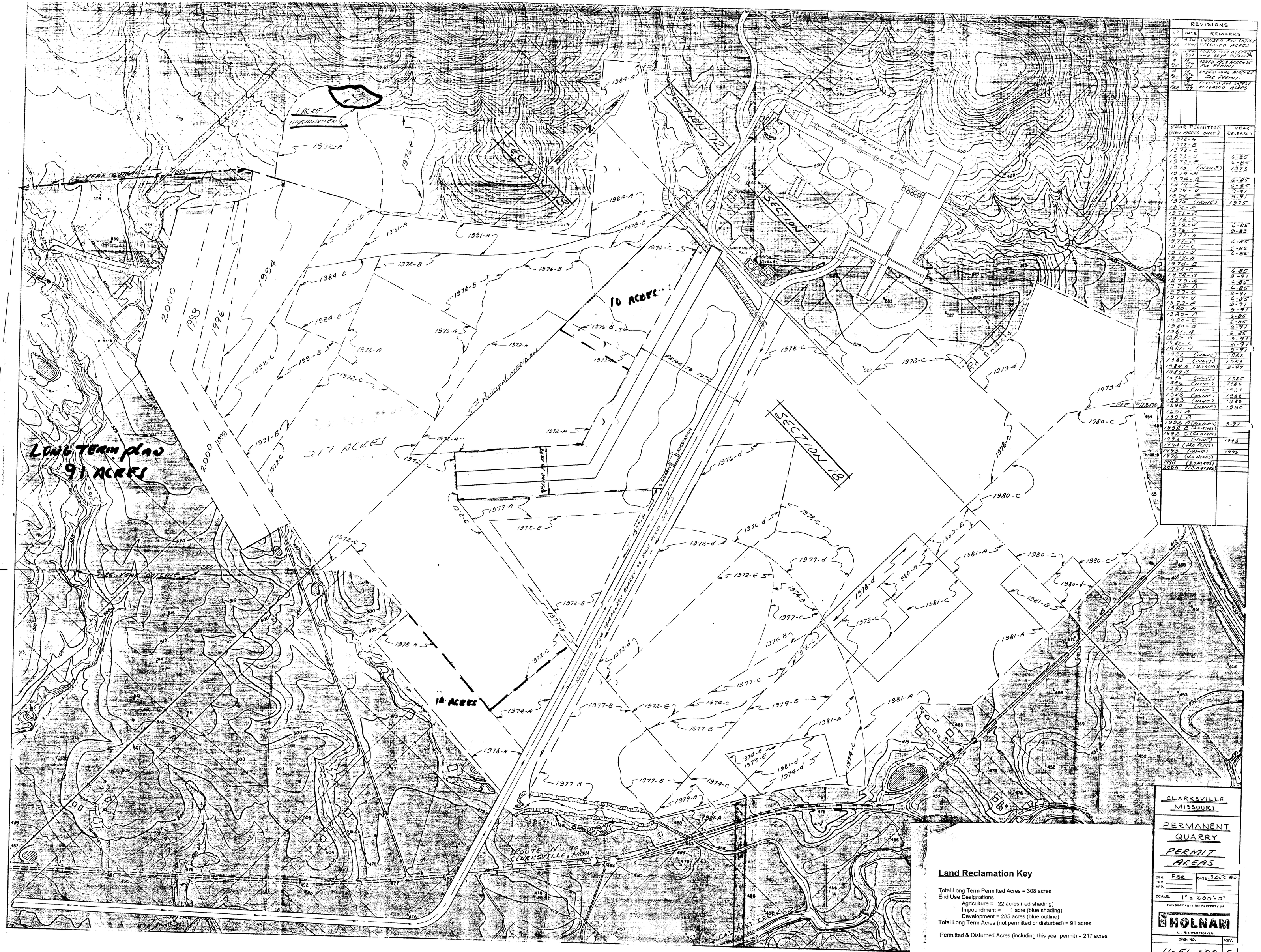
THIS DRAWING IS THE PROPERTY OF
HOLNAM
ALL RIGHTS RESERVED

DRAWING NO.	REV
11-12-510	1

CLARKSVILLE LAND RECLAMATION LEGEND

YEAR PERMITTED	ACRES	YEAR RELEASED	END USE	COMMENTS
2000A	25		DEVELOPMT	
2000B	12		WATER	





YEAR PERMITTED (NEW ACRES ONLY)	YEAR RELEASED
1972-A	
1972-B	
1972-C	
1972-D	6-85
1972-E	6-85
1973 (NONE)	1973
1974-A	
1974-B	6-85
1974-C	6-85
1974-D	9-91
1974-E	9-91
1975 (NONE)	1975
1976-A	
1976-B	
1976-C	
1976-D	6-85
1976-E	9-83
1977-A	
1977-B	6-85
1977-C	6-85
1977-D	6-85
1978-A	
1978-B	
1978-C	6-85
1978-D	9-91
1979-A	6-85
1979-B	6-85
1979-C	9-91
1979-D	6-85
1979-E	9-91
1980-A	9-91
1980-B	6-85
1980-C	6-85
1980-D	9-91
1981-A	6-85
1981-B	9-91
1981-C	9-91
1981-D	9-91
1982 (NONE)	1982
1983 (NONE)	1983
1984 A (18.0 ACRES)	3-97
1984 B	
1985 (NONE)	1985
1986 (NONE)	1986
1987 (NONE)	1987
1988 (NONE)	1988
1989 (NONE)	1989
1990 (NONE)	1990
1991 A	
1991 B	
1992 A (100 ACRES)	3-97
1992 B (30 ACRES)	
1992 C (60 ACRES)	
1993 (NONE)	1993
1994 (120 ACRES)	
1995 (NONE)	1995
1996 (40 ACRES)	
1998 (8.0 ACRES)	
2000 (12.0 ACRES)	

Land Reclamation Key

Total Long Term Permitted Acres = 308 acres
End Use Designations
Agriculture = 22 acres (red shading)
Impoundment = 1 acre (blue shading)
Development = 285 acres (blue outline)
Total Long Term Acres (not permitted or disturbed) = 91 acres

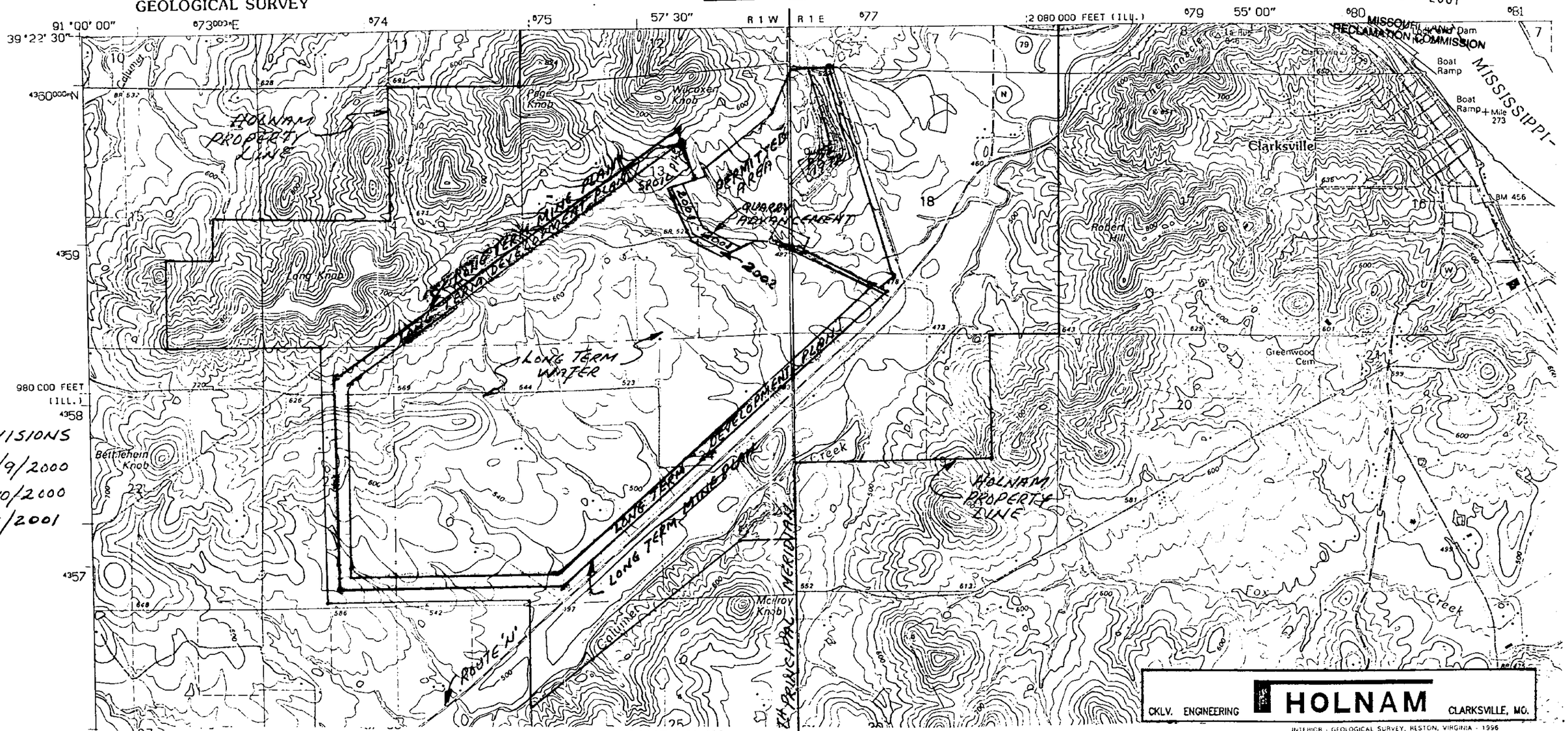
Permitted & Disturbed Acres (including this year permit) = 217 acres

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CLARKSVILLE QUADRANGLE
MISSOURI-ILLINOIS
7.5-MINUTE SERIES (TOPOGRAPHIC)

RECEIVED
DEC 10 2001

TOWNSHIP 53N



REVISIONS
5/9/2000
10/10/2000
12/7/2001

CKLV. ENGINEERING **HOLNAM** CLARKSVILLE, MO.

INTERIOR - GEOLOGICAL SURVEY, RESTON, VIRGINIA - 1996

SCALE 1:24 000

UTM GRID AND 1996 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN GN
1° 18 MILS
1°18' 23 MILS

KILOMETERS
METERS
MILES
FEET

CONTOUR INTERVAL 5 AND 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
DIVISION OF GEOLOGY AND LAND SURVEY
MISSOURI DEPARTMENT OF NATURAL RESOURCES, ROLLA, MISSOURI 65401
AND ILLINOIS GEOLOGICAL SURVEY, CHAMPAIGN, ILLINOIS 61820
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

5 FEET
20 FEET
CONTOUR INTERVAL

MISSOURI
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Louisiana
2 Pleasant Hill West
3 Pleasant Hill East
4 Cyrene
5 Annada
6 Eolia
7 Auburn
8 Elsberry

ADJOINING 7.5' QUADRANGLE NAMES

ROAD CLASSIFICATION

Primary highway hard surface
Secondary highway hard surface
Light-duty road, hard or improved surface
Unimproved road

Interstate Route
U.S. Route
State Route

CLARKSVILLE, MO-IL
39090-C8-TF-024
1993

DMA 7862 IV SW-SERIES V879