2-404.43

Department of Energy

Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

--2695

27 DEC 1999

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V, SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0263-00

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF THE NOVEMBER-DECEMBER 1999 MONTHLY REPORT FOR IMPACTED MATERIAL PLACEMENT AT THE ON-SITE DISPOSAL FACILITY

Enclosed for your information is the November-December 1999 Monthly Report for Impacted Material Placement at the On-Site Disposal Facility (OSDF). The following information is included:

- Air monitoring sampling data – November 1999 readings from the OSDF and Southern Waste Units (SWUs)

- Placement graphs:
  - Daily Soil to Debris Ratio
  - November - December Cat 1 Soil Placement versus Projected Placement
  - November - December Debris Placement versus Projected Placement
  - November - December Total Placement versus Projected Placement
  - November - December Above-Grade Debris Placement versus Projected Placement
  - November - December At- or Below-Grade Debris Placement versus Projected Placement
  - Projected Optimization Plan Banked/Bulked Cubic Yards versus Manifest Actual Quantities
  - Projected Optimization Plan In-Place Cubic Yards versus Estimated Actual Quantities

Recycled and Recyclable

1

- Current surface plan views – Cell 1, Cell 2, and Cell 3 plan views showing the current lift of impacted material as of December 14, 1999.

- OSDF cross sections – Selected cross sections looking north and west showing placement progress and projections.

Summary:

Approximately 227,600 in-place cubic yards of impacted material were placed from June 8, 1999 through December 9, 1999. This quantity is based on surveyed quantities. Approximately 33,500 in-place cubic yards (icy) of this total was placed as protective cover and select impacted material in Cell 3 from October through November.

The attached graphs reflect estimated in-place quantities based on shrinkage factors for compaction and bulking factors. The estimated total impacted quantity placed shown in the "Total Soil and Debris Placement (icy)" graph is 238,507 icy. Comparing this estimated quantity with the surveyed quantity reveals a 4.6 percent difference between estimated and surveyed values.

Placement within Cells 1, 2, and 3 was completed on December 9, 1999 for the current construction season. Cell 1 has approximately reached 80 percent of its impacted material storage capacity. Cell 2 has approximately reached 45 percent of its impacted material storage capacity. Cell 3 has approximately reached 10 percent of its impacted material storage capacity. Approximately 438,788 icy have been placed since the start of waste placement activities in December 1997.

The current surface plans for Cell 1, Cell 2, and Cell 3 show the category of impacted material placed at each grid. The latest lift is noted on the grid along with the quantity of that lift and the date it was placed. Grids with the same lift number will not necessarily contain the same category of material.

Impacted material was placed in accordance with the Impacted Material Placement Plan in Cells 1, 2, and 3. Category 5 material was placed in trenches in Cell 2. A Category 5 placement location is shown on Cross Sections 8-8'. Category 3 material was placed in Cell 3 in grid H-12 as shown in Cross Section 12-12'. Also, placement of Category 1 material continued between the intercell berm separating Cell 1 and Cell 2, and the impacted material sideslope in Cell 1. This placement is shown in Cross Section D-D', F-F' and G-G'. Placement in the Cell 1 catchment area continued.

Some of the projected elevations for November were not achieved due to inclement weather conditions in December. It is anticipated that placement of impacted material will resume in the spring of 2000.

If you have any questions or concerns regarding this document, please contact Jay Jalovec at (513) 648-3122.

Sincerely,

Johnny Reising

FEMP:Jalovec

Johnny W. Reising
Fernald Remedial Action
Project Manager

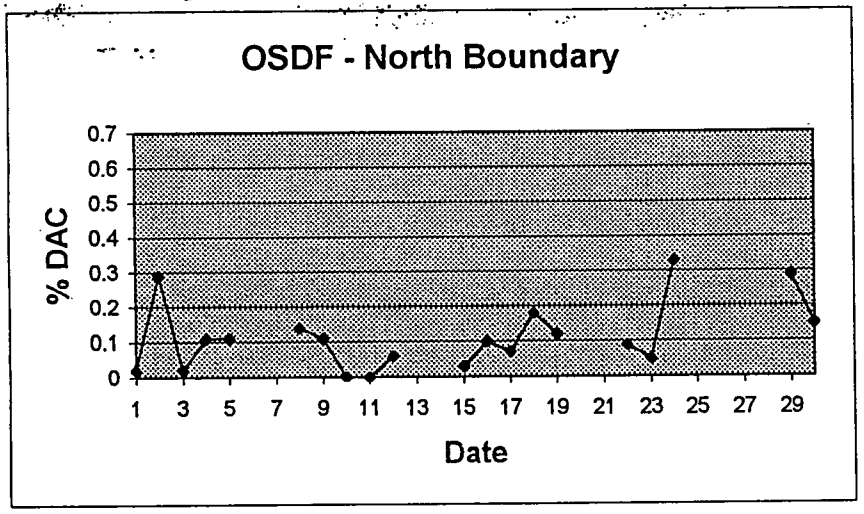
Enclosure

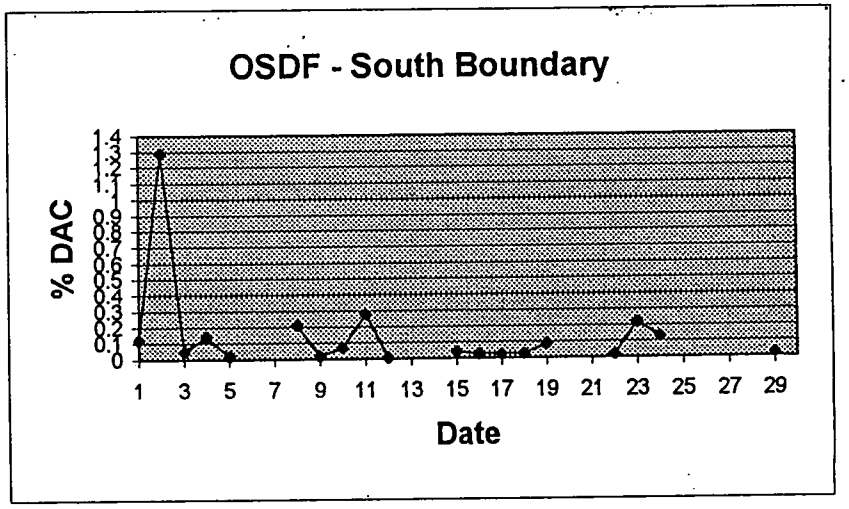
cc w/enclosure:
N. Hallein, EM-42/CLOV
G. Jablonowski, USEPA-V, SRF-5J
T. Schneider, OEPA - Dayton (three copies of enclosure)
F. Bell, ATSDR
M. Schupe, HSI GeoTrans
R. Vandegrift, ODH
F. Barker, Tetra Tech
AR Coordinator, FDF/78

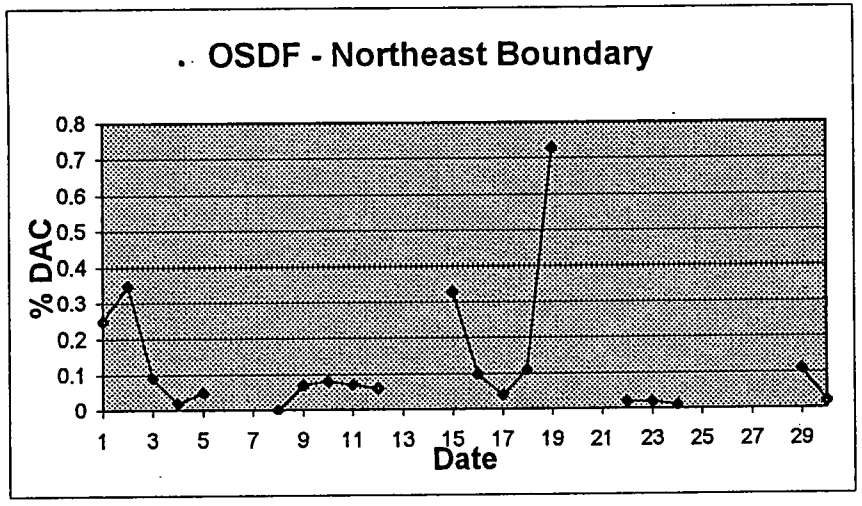
cc w/o enclosure:
R. J. Janke, OH/FEMP
J. Reising, OH/FEMP
A. Tanner, OH/FEMP
D. Carr, FDF/52-2
J. Chiou, FDF/52-0
T. Hagen, FDF/65-2
J. Harmon, FDF/90
R. Heck, FDF/2
S. Hinnefeld, FDF/31
A. Klimek, FDF/64
U. Kumthekar, FDF/64
C. VanArsdale, FDF/64
T. Walsh, FDF/65-2
ECDC, FDF/52-7

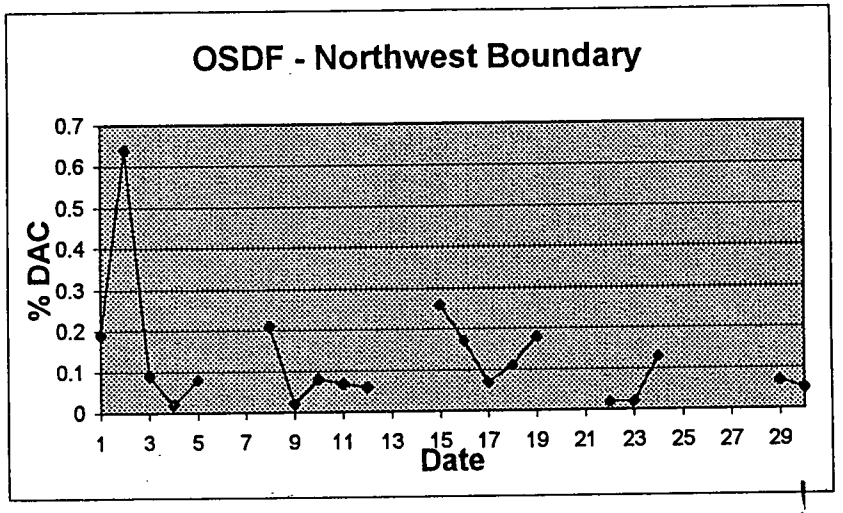
OSDF BOUNDARY AIR SAMPLES - NOVEMBER 1999

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
N. BNDY	0.02	0.29	0.02	0.11	0.11			0.14	0.11	0	0	0.06			0.03	0.1	0.07	0.18	0.12			0.09	0.05	0.33					0.29	0.15
S. BNDY	0.12	1.29	0.05	0.14	0.02			0.21	0.02	0.07	0.28	0.01			0.04	0.03	0.03	0.03	0.09			0.02	0.22	0.13					0.03	
NE. BNDY	0.25	0.35	0.09	0.02	0.05			0	0.07	0.08	0.07	0.06			0.33	0.1	0.04	0.11	0.73			0.02	0.02	0.01					0.11	0.02
NW. BND	0.19	0.64	0.09	0.02	0.08			0.21	0.02	0.08	0.07	0.06			0.26	0.17	0.07	0.11	0.18			0.02	0.02	0.13					0.07	0.05
SE. BNDY	0.18	0.08	0.02	0.08	0.11			0.07	0.16	0.14	0.07	0.08			0.18	0.03	0.05	0.02	0.05			0.12	0.22	0.01					0.38	0.02
SW. BND	0.19	0.32	0.09	0.02	0.05			0	0.02	0.28	0.21	0.08			0.11	0.37	0.04	0.11	0.32			0.2	0.15	0.33					0.16	0.05



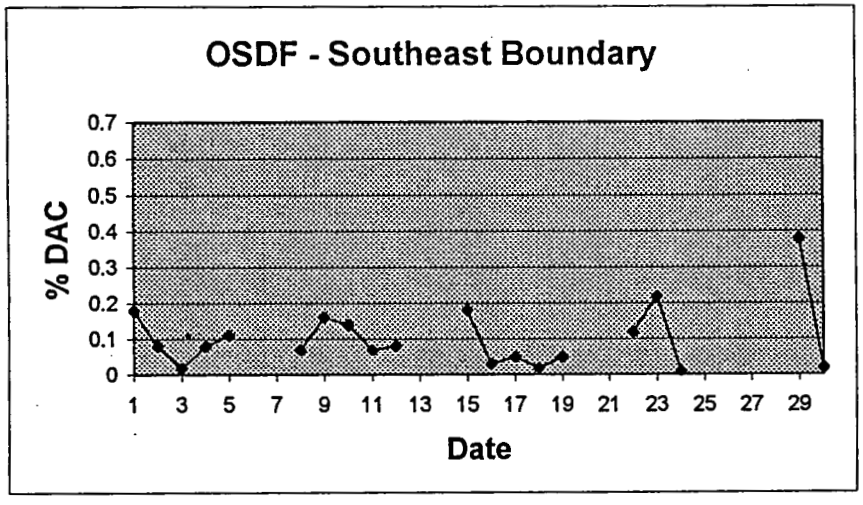


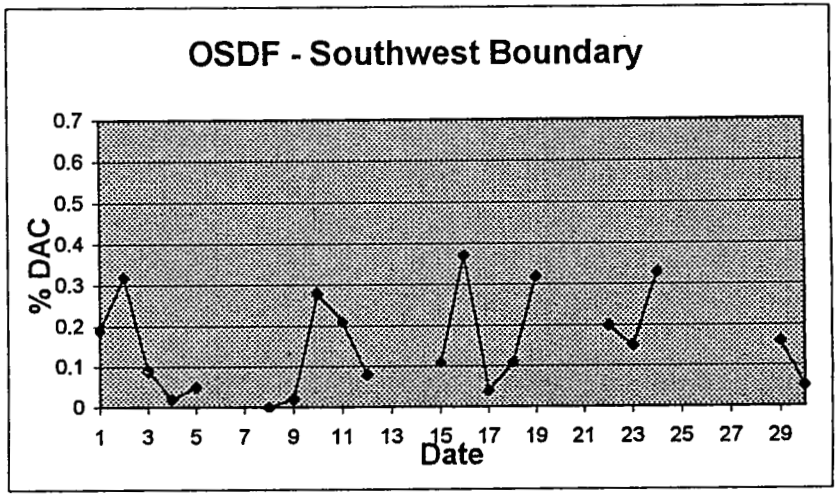




Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.

2695





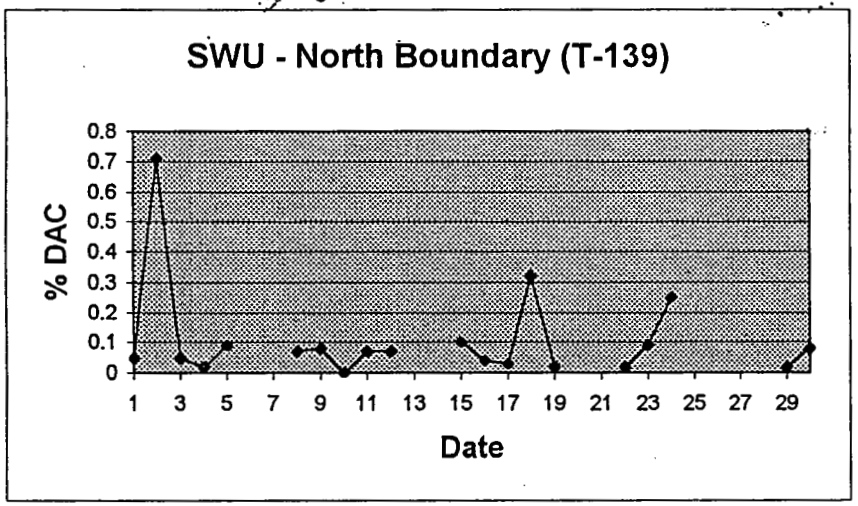
5

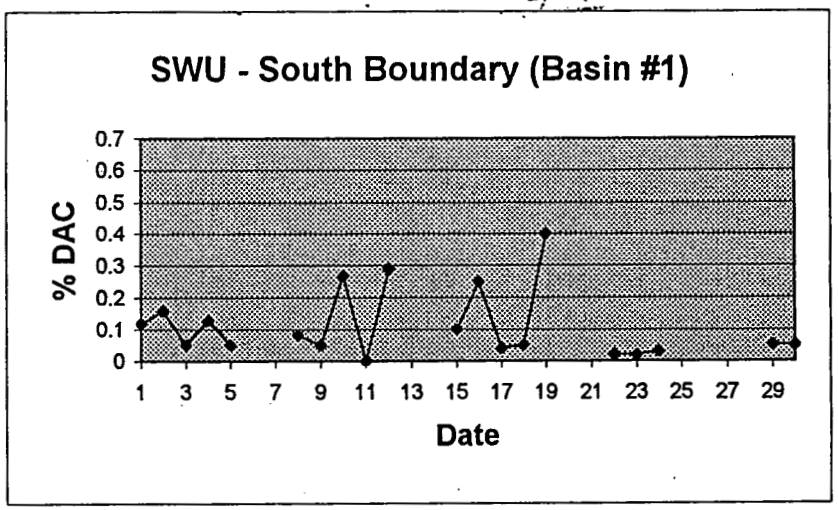
2695

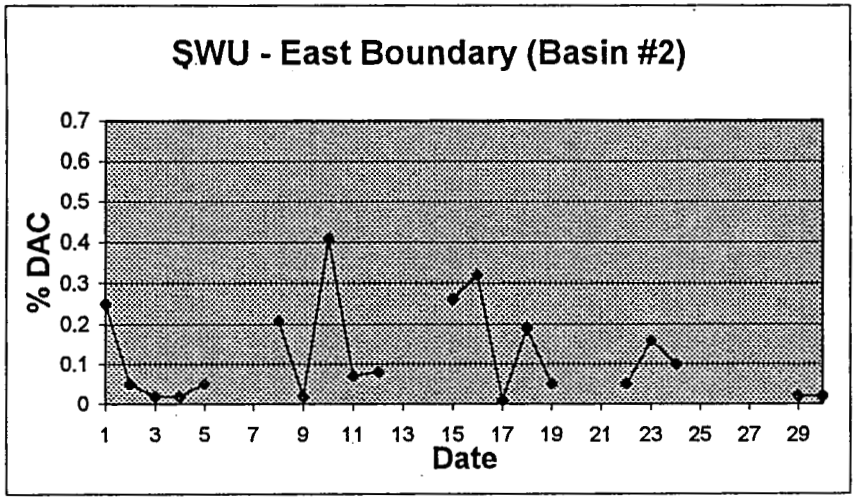
Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.

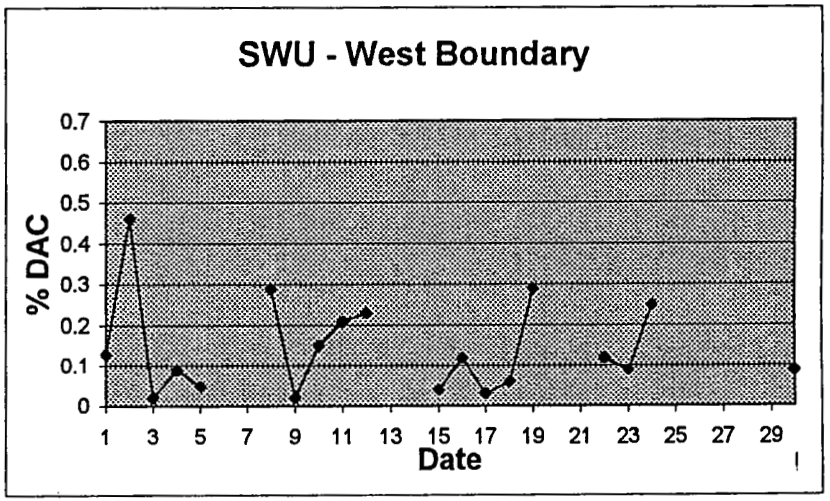
SWU BOUNDARY AIR SAMPLES - NOVEMBER 1999

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
N. BNDY	0.05	0.71	0.05	0.02	0.09			0.07	0.08	0	0.07	0.07			0.1	0.04	0.03	0.32	0.02			0.02	0.09	0.25					0.02	0.08
S. BNDY	0.12	0.16	0.05	0.13	0.05			0.08	0.05	0.27	0	0.29			0.1	0.25	0.04	0.05	0.4			0.02	0.02	0.03					0.05	0.05
E. BNDY	0.25	0.05	0.02	0.02	0.05			0.21	0.02	0.41	0.07	0.08			0.26	0.32	0.01	0.19	0.05			0.05	0.16	0.1					0.02	0.02
W. BNDY	0.13	0.46	0.02	0.09	0.05			0.29	0.02	0.15	0.21	0.23			0.04	0.12	0.03	0.06	0.29			0.12	0.09	0.25						0.09
AFP	0.05	0.12	0.29	0.33	0.09			0.14	0.02	0.23	0.41							0.05	0.2			0.02	0.43							0.08
BASIN #3	0.08	0.36	0.02	0.02	0.12			0.21	0.02	0.2	0.07				0.19	0.43	0.04	0.02	0.26			0.12	0.09						0.3	0.02



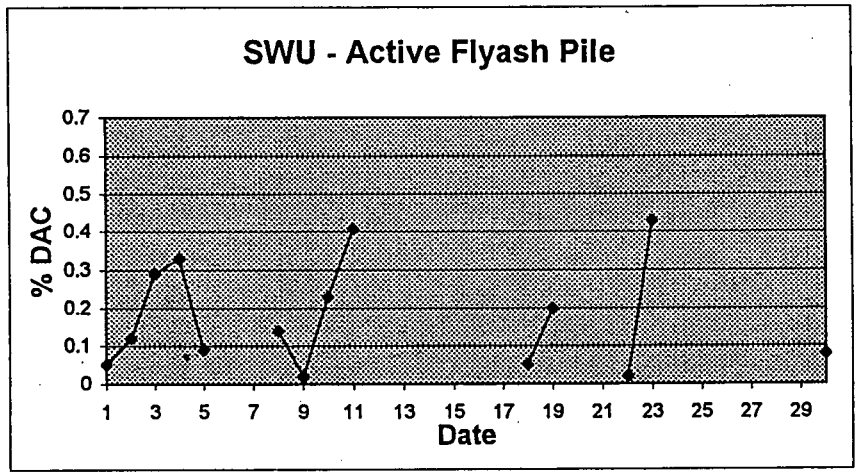


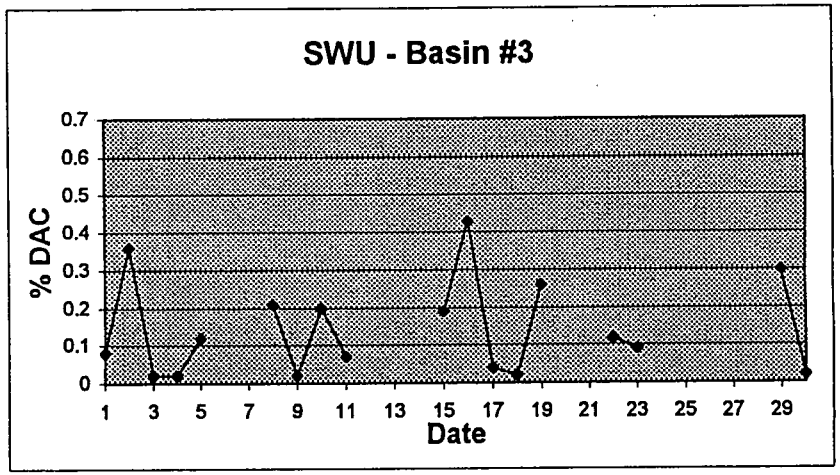




2695

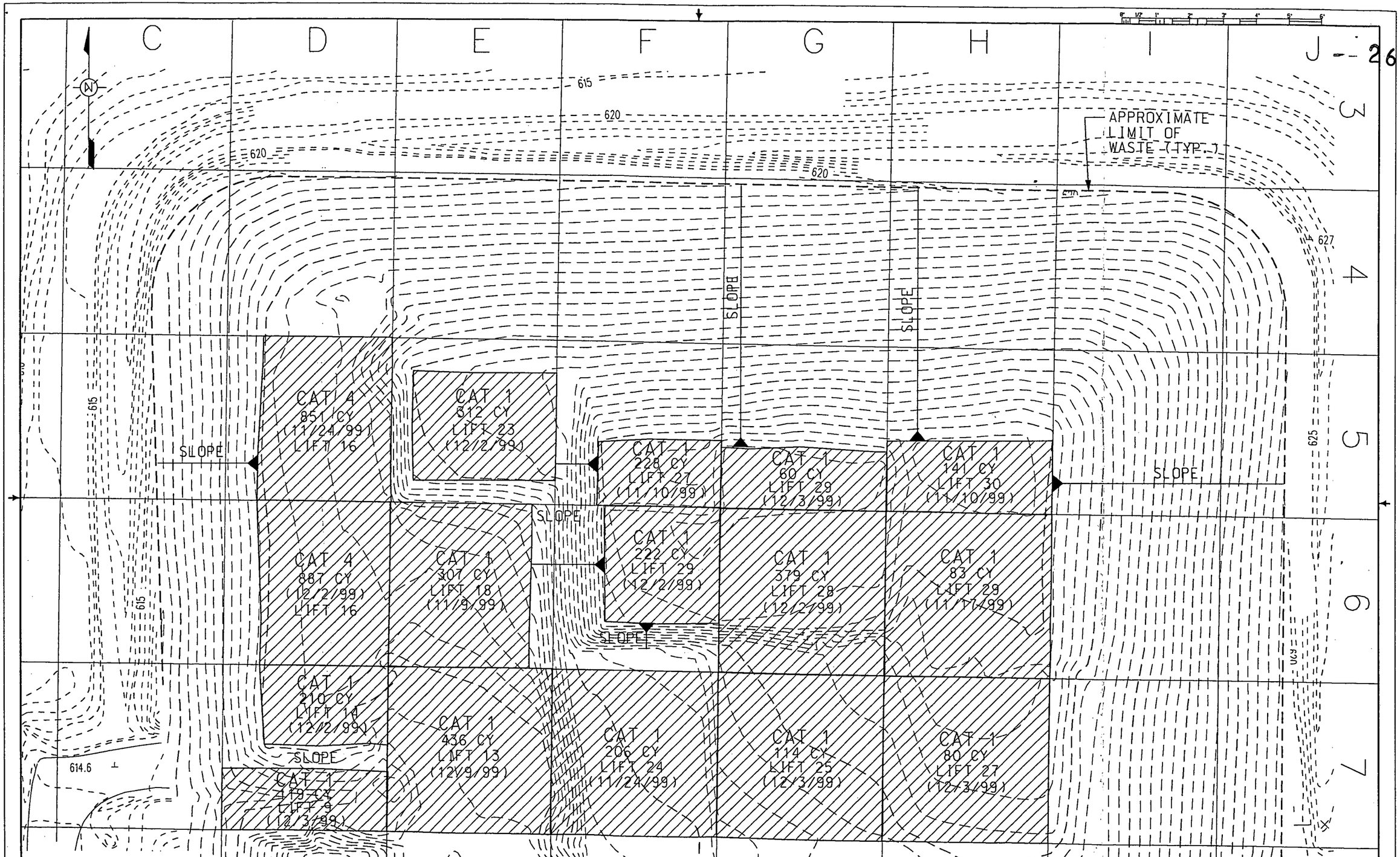
Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.





Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.

J-2695



LEGEND:

SURVEYED AREAS

CELL 1 CURRENT SURFACE PLAN AS OF 12/14/99

8

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.

NOTE: FLUOR DANIEL FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT	
INSTRUMENT		WASTE MANAGE	
MECHANICAL		SECURITY	
		PROJECTS	
CHECKED			
APPROVED			

Fernald Environmental Management Project

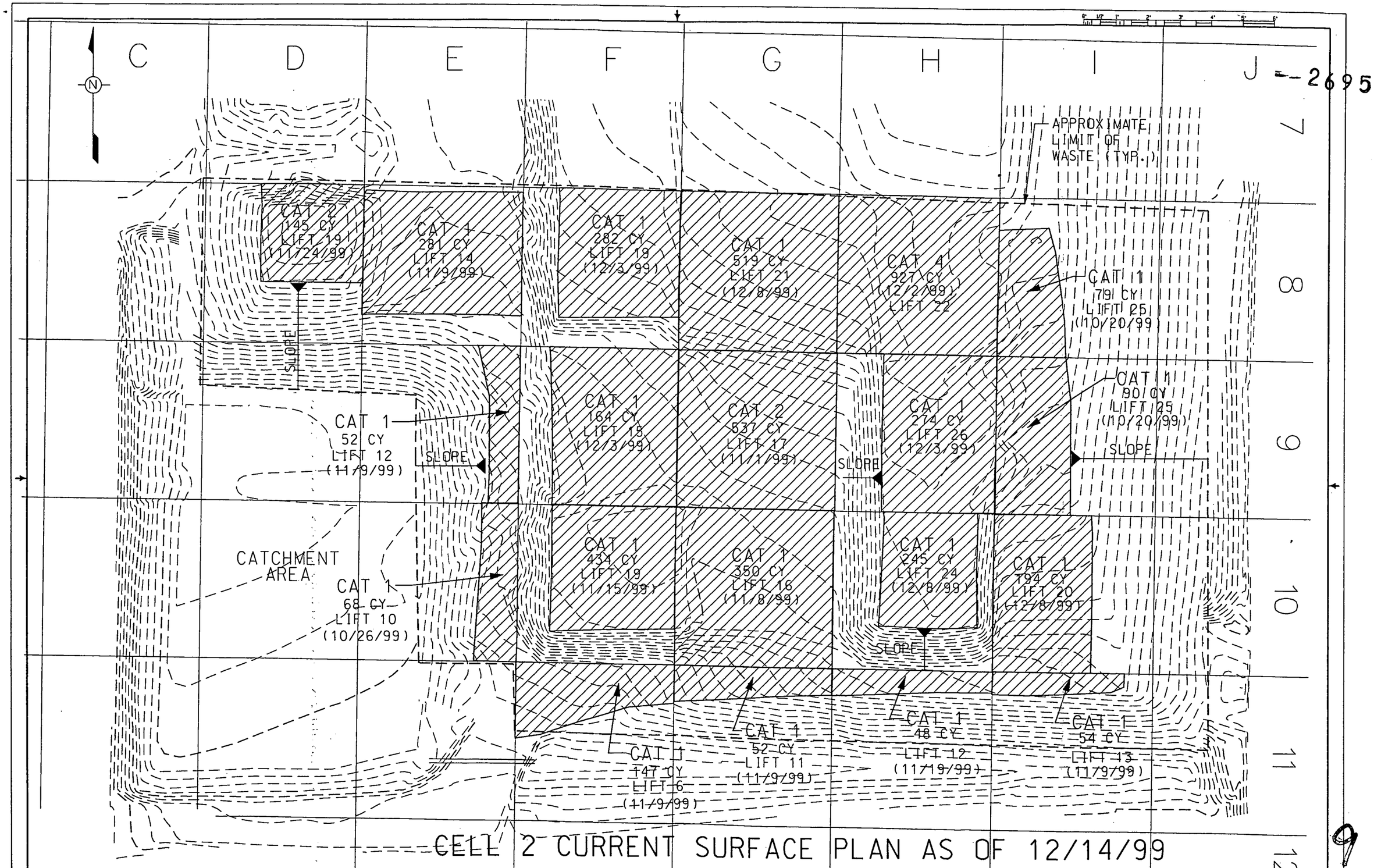
FLUOR DANIEL FERNALD

U.S. DEPARTMENT OF ENERGY

CELL 1
TOP LIFT PLAN
CATEGORY PLACEMENT

DATE 12/21/99
DRAWN DRF

FORMAT REVISED 11/3/98 FDFS.DGN
FORMAT REVISED 6/29/98



CELL 2 CURRENT SURFACE PLAN AS OF 12/14/99

LEGEND:

SURVEYED AREAS

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.

NOTE: FLUOR DANIEL FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAGE.	
MECHANICAL		SECURITY	
		PROJECTS	
CHECKED			
APPROVED			

Fernald Environmental Management Project

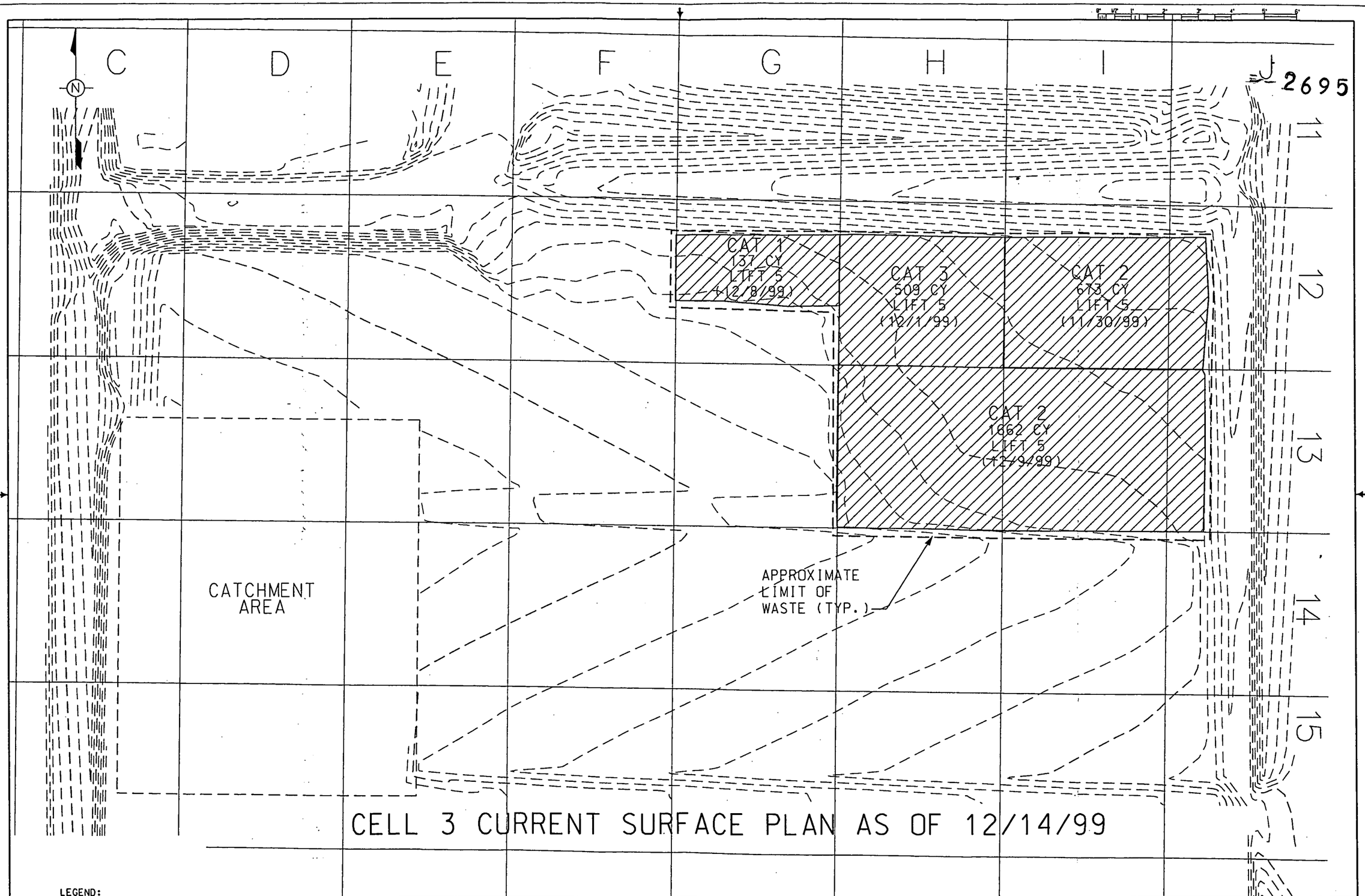
FLUOR DANIEL FERNALD

U.S. DEPARTMENT OF ENERGY

CELL 2
TOP LIFT PLAN
CATEGORY PLACEMENT

DATE 12/21/99
DRAWN DRF

FORMAT REVISED 1/5/98 FDFS.DGN
FORMAT REVISED 6/29/98



10

LEGEND:

SURVEYED AREAS

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.

NOTE: FLUOR DANIEL FERNALD CADD DRAWING. DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT.	
INSTRUMENT		WASTE MANAGE	
MECHANICAL		SECURITY	
		PROJECTS	
CHECKED			
APPROVED			

Fernald Environmental Management Project

FLUOR DANIEL FERNALD

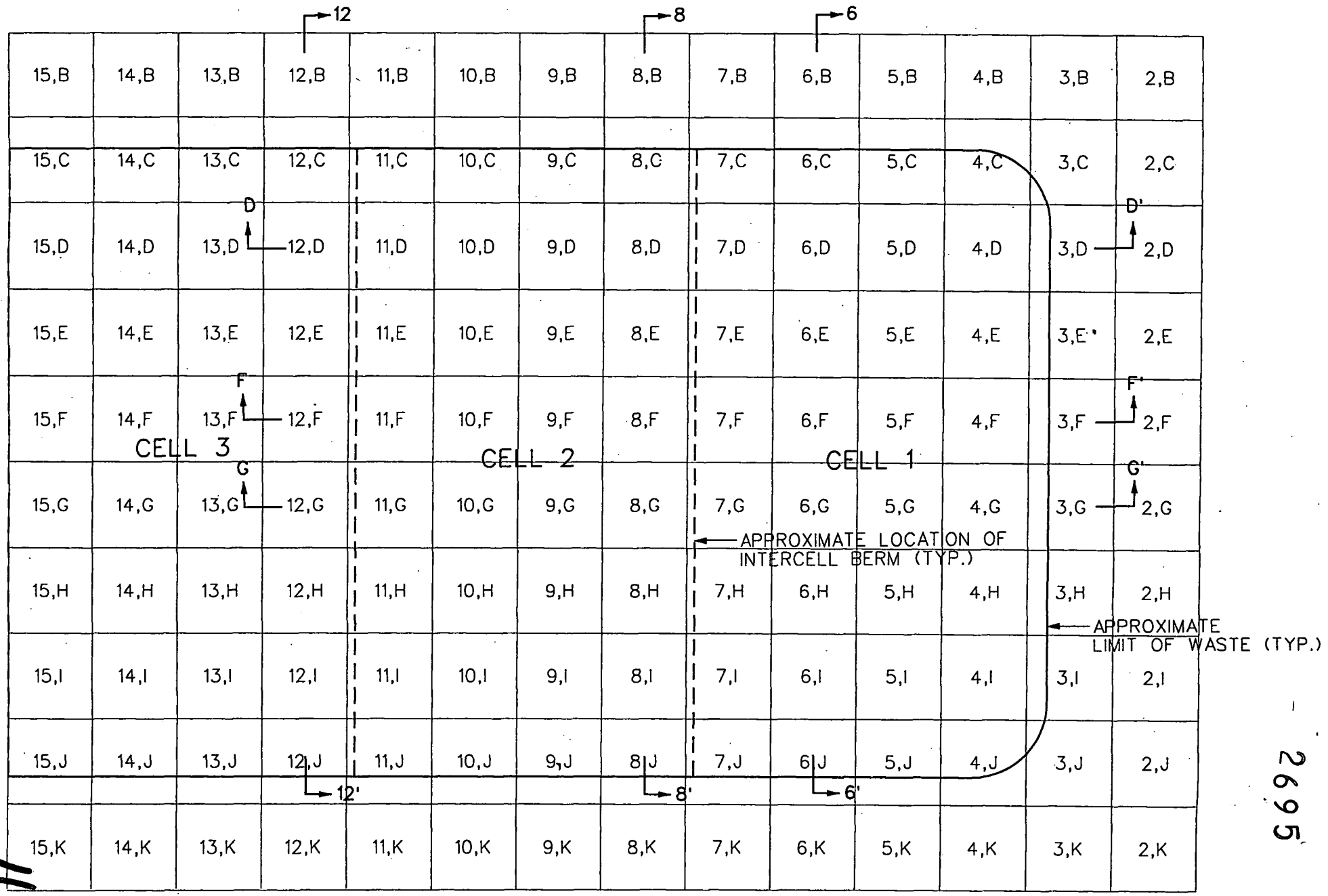
U.S. DEPARTMENT OF ENERGY

CELL 3
TOP LIFT PLAN
CATEGORY PLACEMENT

DATE 12/21/99
DRAWN DRF

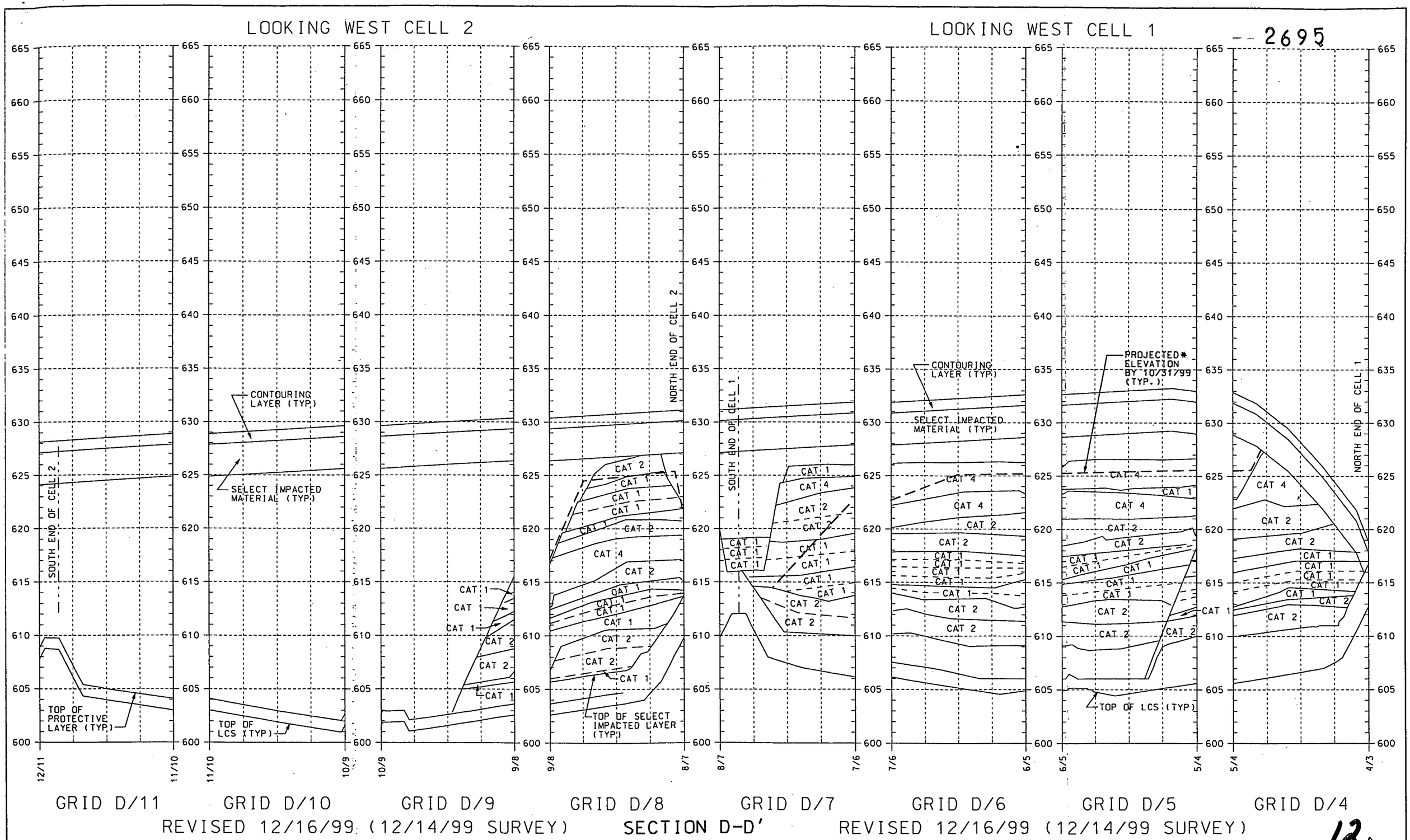
FORMAT REVISED 11/5/98 FDFS.DGN
FORMAT REVISED 6/29/98

OSDF GRID KEY PLAN



2695

cell1.dgn

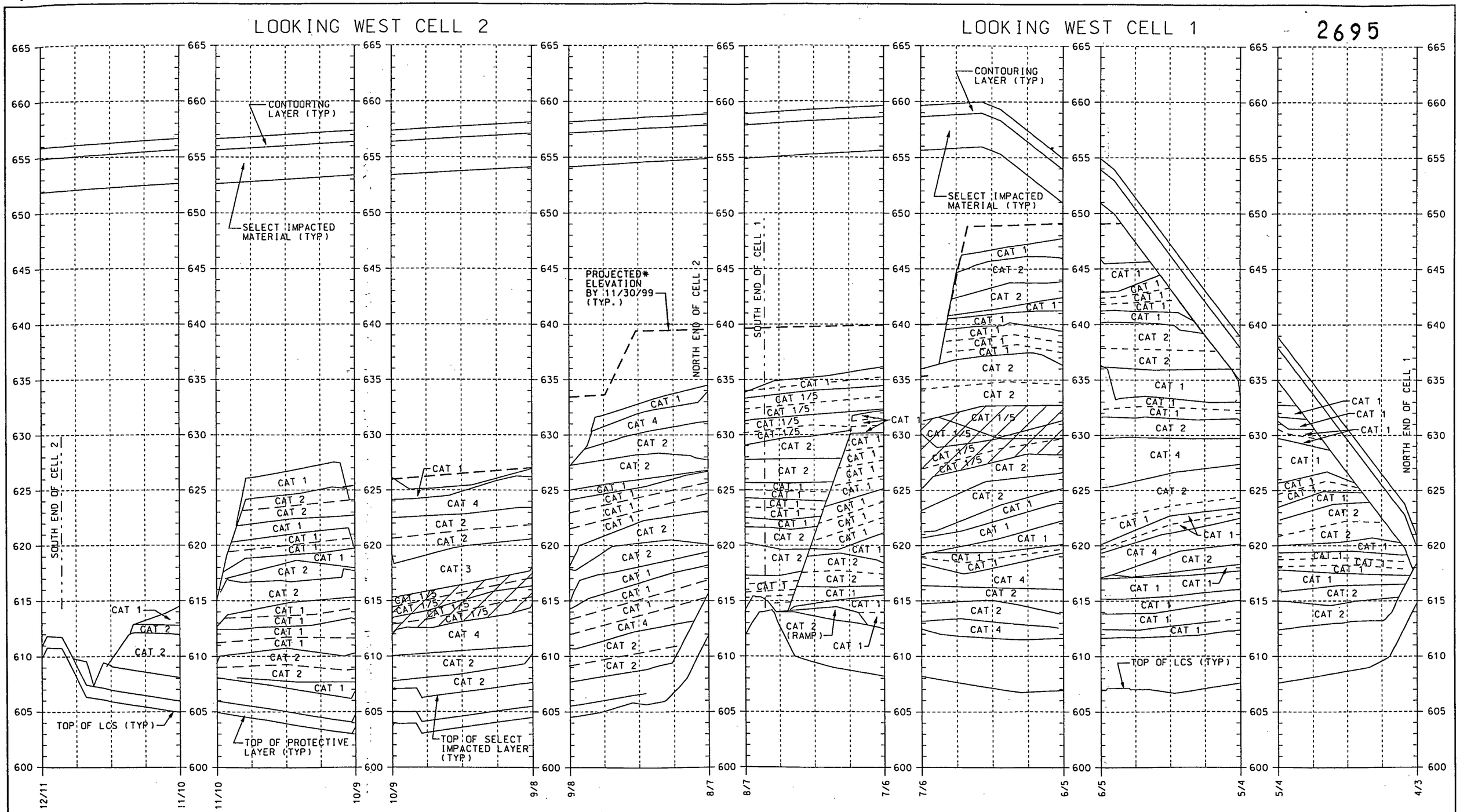


REVISED 12/16/99 (12/14/99 SURVEY) **SECTION D-D'** REVISED 12/16/99 (12/14/99 SURVEY)

12

* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

decsect.dgn

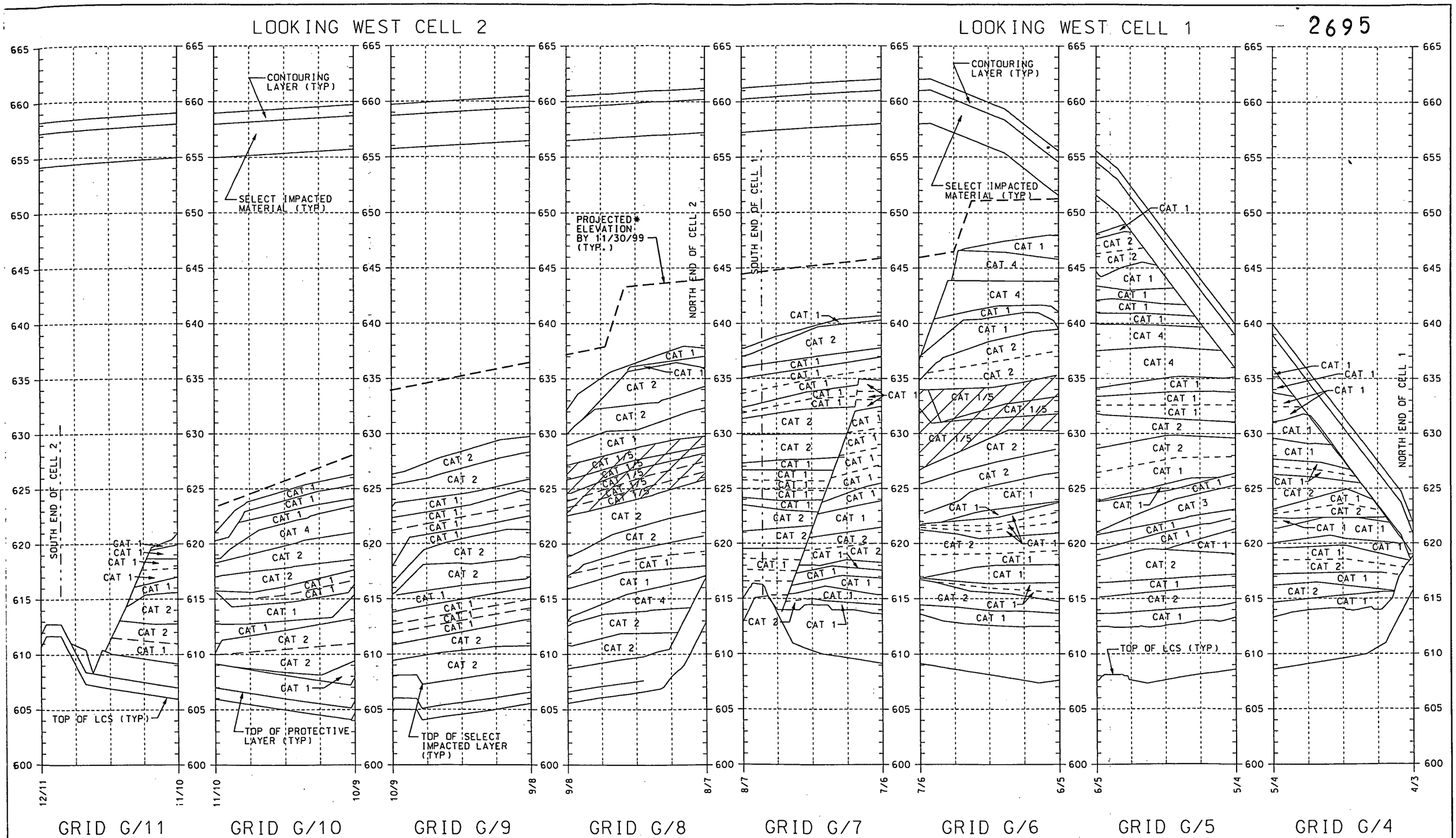


REVISED 12/16/99 (12/14/99 SURVEY) SECTION F-F' REVISED 12/16/99 (12/14/99 SURVEY)

13

* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

decsect.dgn



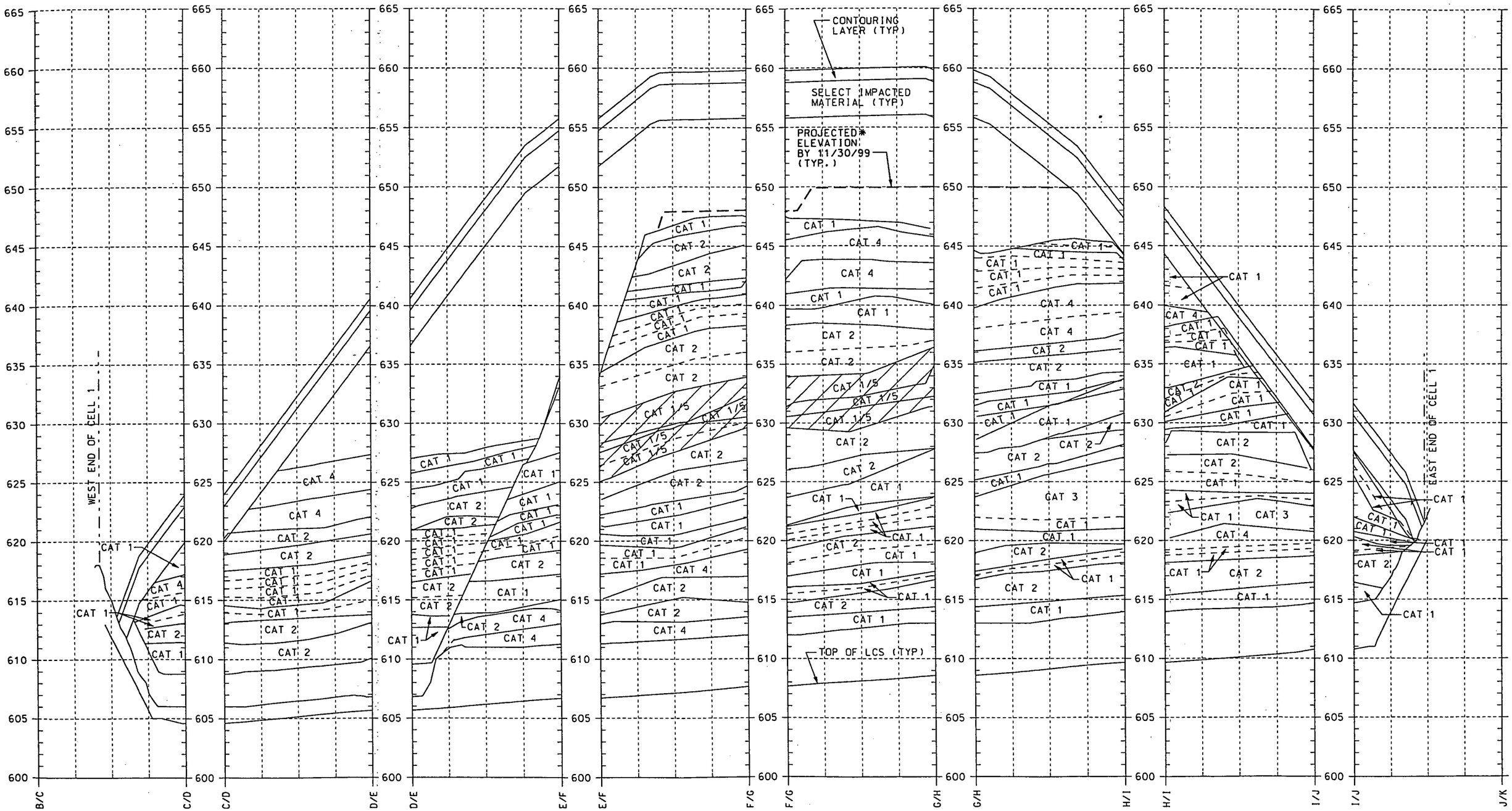
REVISED 12/16/99 (12/14/99 SURVEY) **SECTION G-G'** REVISED 12/16/99 (12/14/99 SURVEY)

14

* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

decsect.dgn

LOOKING NORTH CELL 1



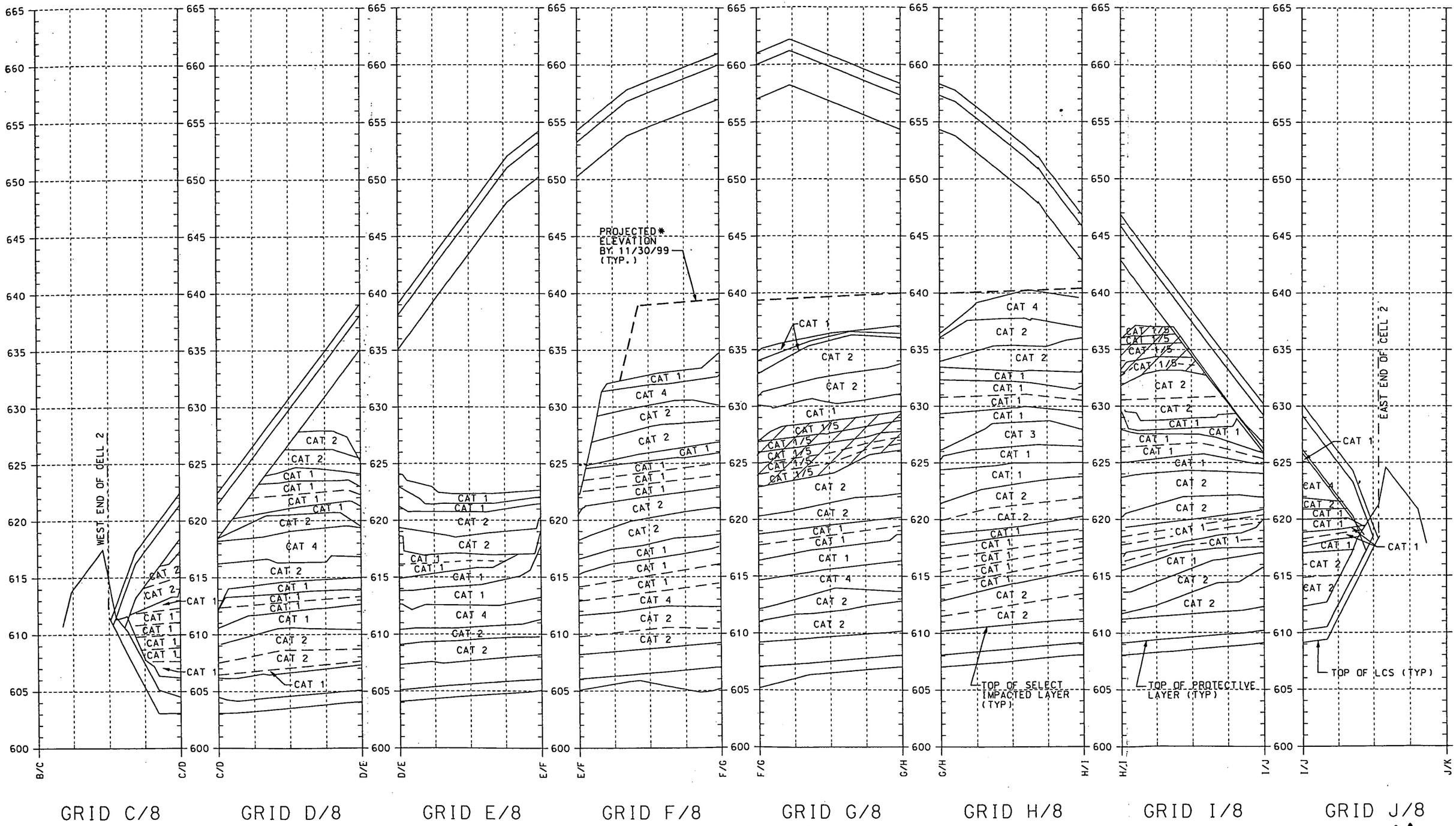
SECTION 6-6'

REVISED 12/16/99 (12/14/99 SURVEY)

* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

decsect.dgn

LOOKING NORTH CELL 2

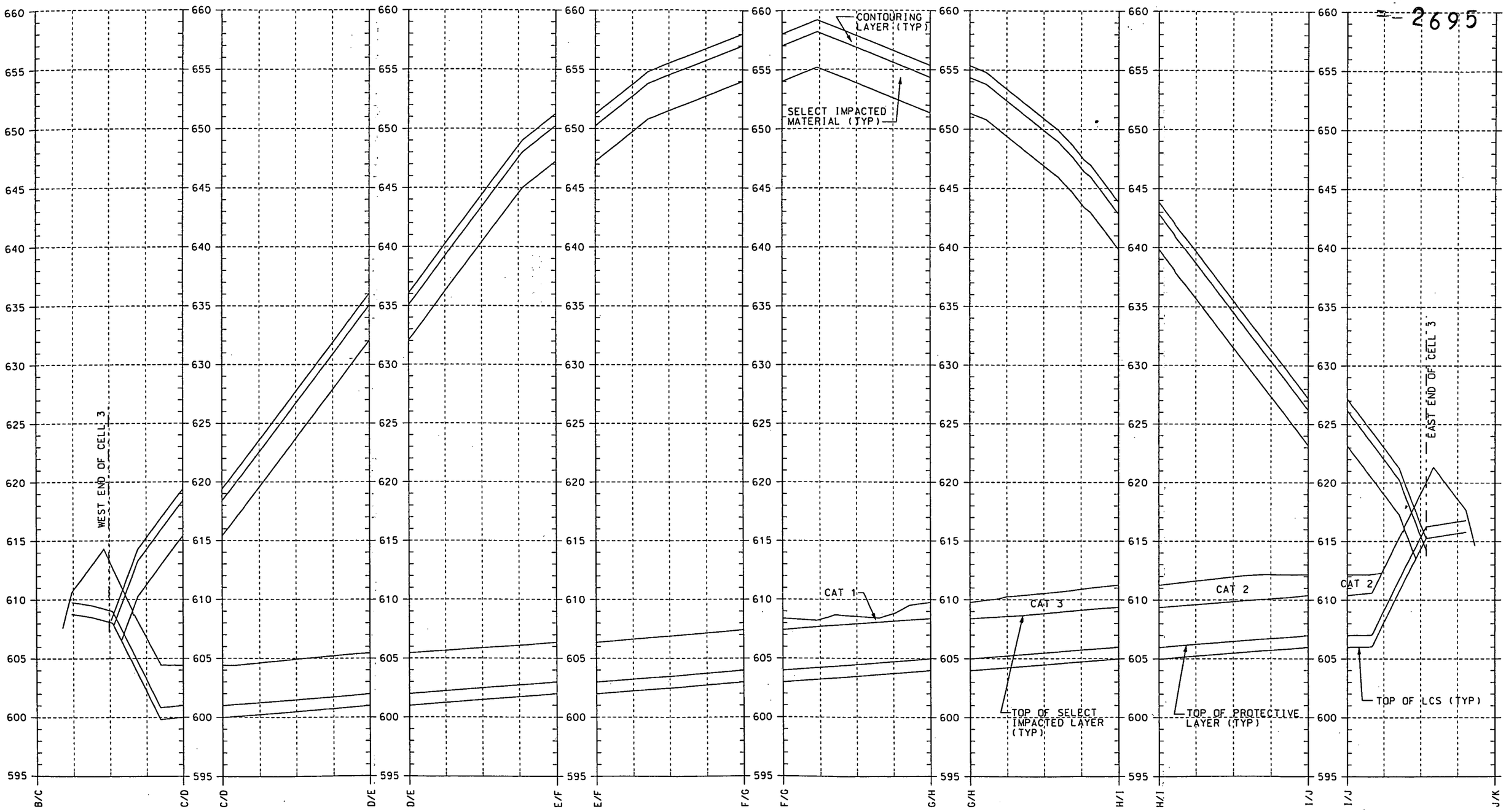


* PROJECTED ELEVATIONS ARE BASED ON PROJECTED IMPACTED MATERIAL VOLUMES TO BE PLACED. LOCATION OF IMPACTED MATERIAL PLACEMENT MAY VARY DUE TO FIELD CONDITIONS.

SECTION 8-8'

REVISED 12/16/99 (12/14/99 SURVEY)

decsect.dgn



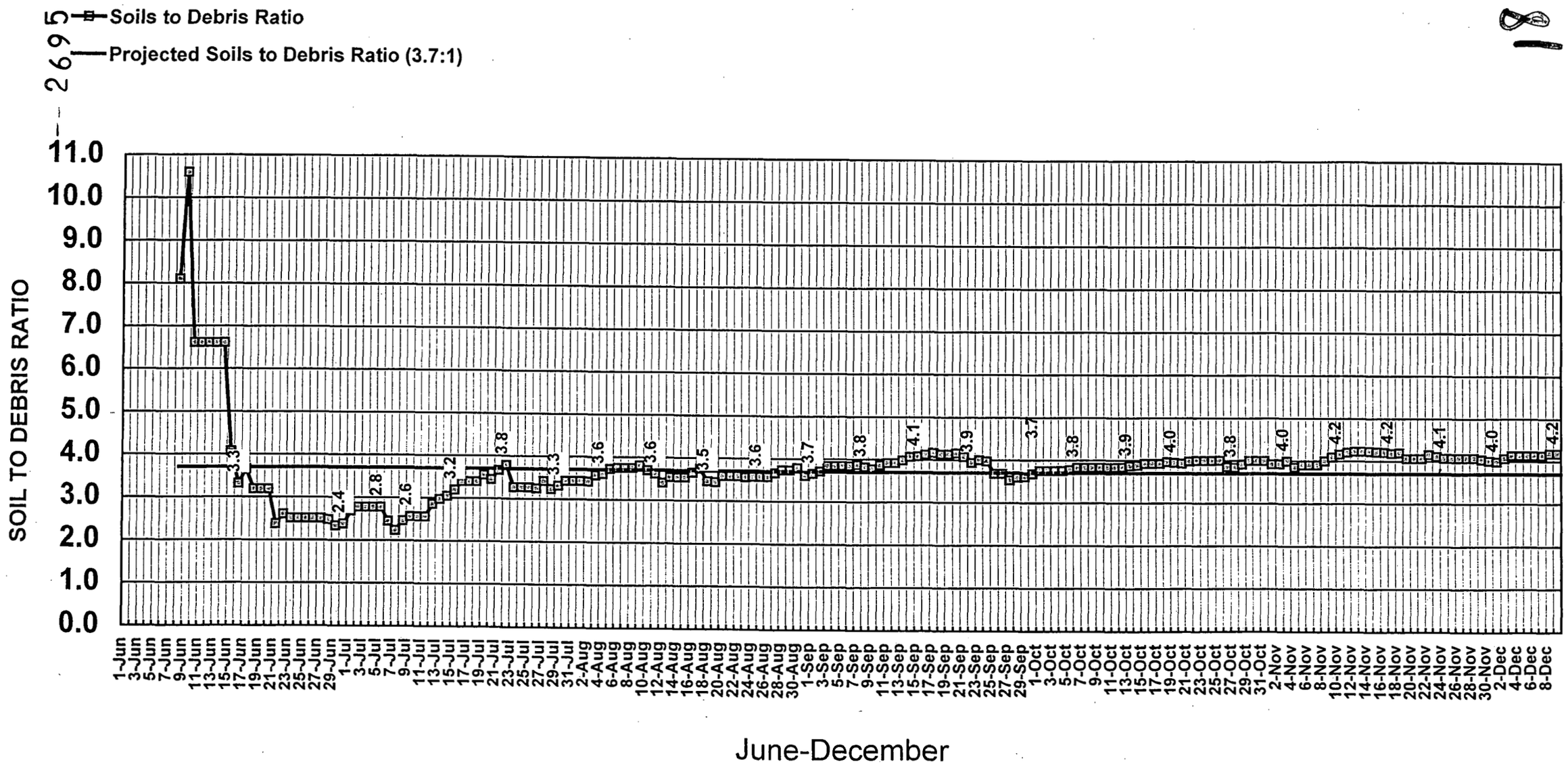
SECTION 12-12'

REVISED 12/20/99 (12/14/99 SURVEY)

17

decsect.dgn

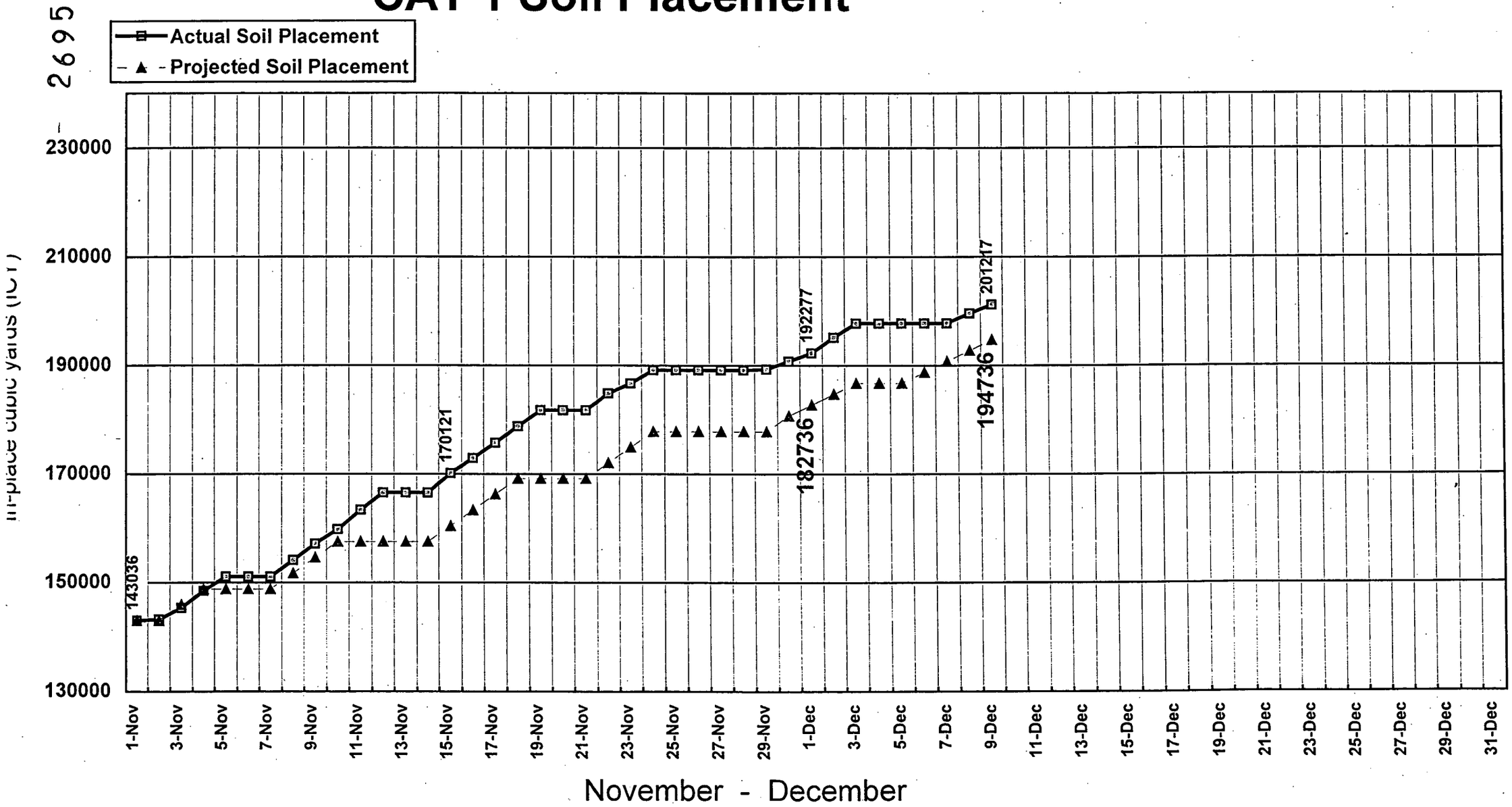
Soils to Debris Ratio



Soil-Debris Ratio Chart 1

12/13/99

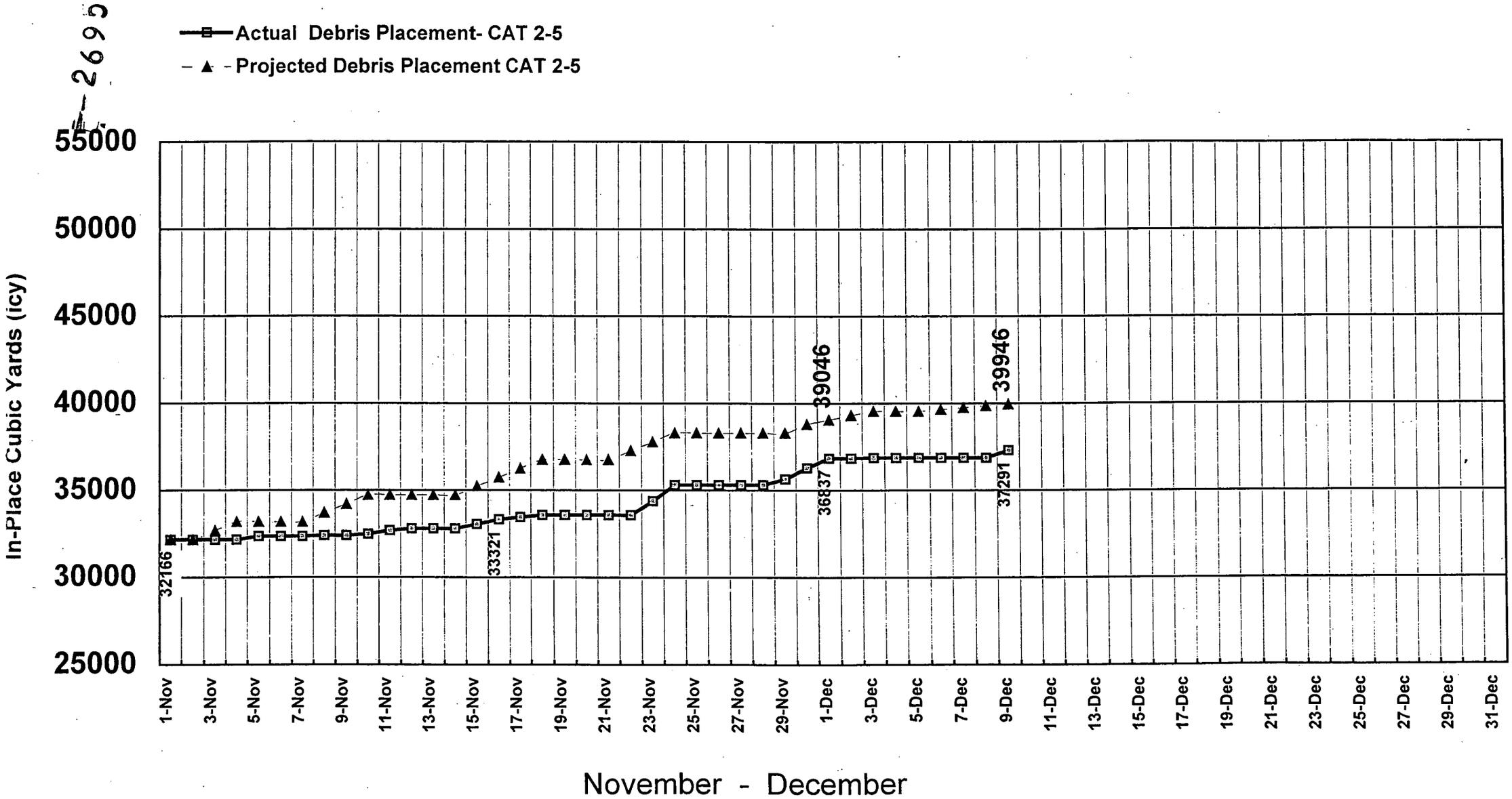
CAT 1 Soil Placement



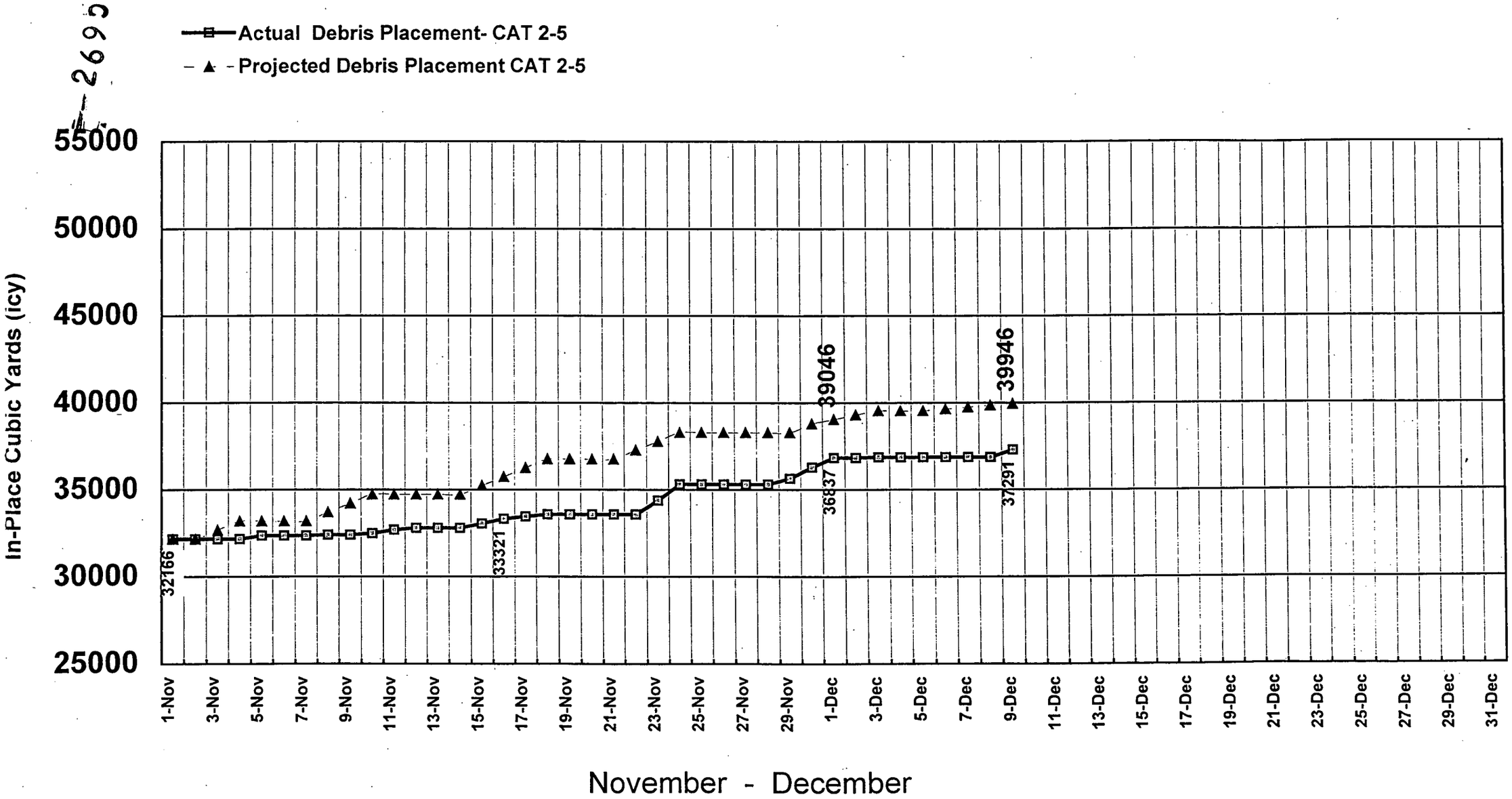
2695

19

Debris Placement



Debris Placement

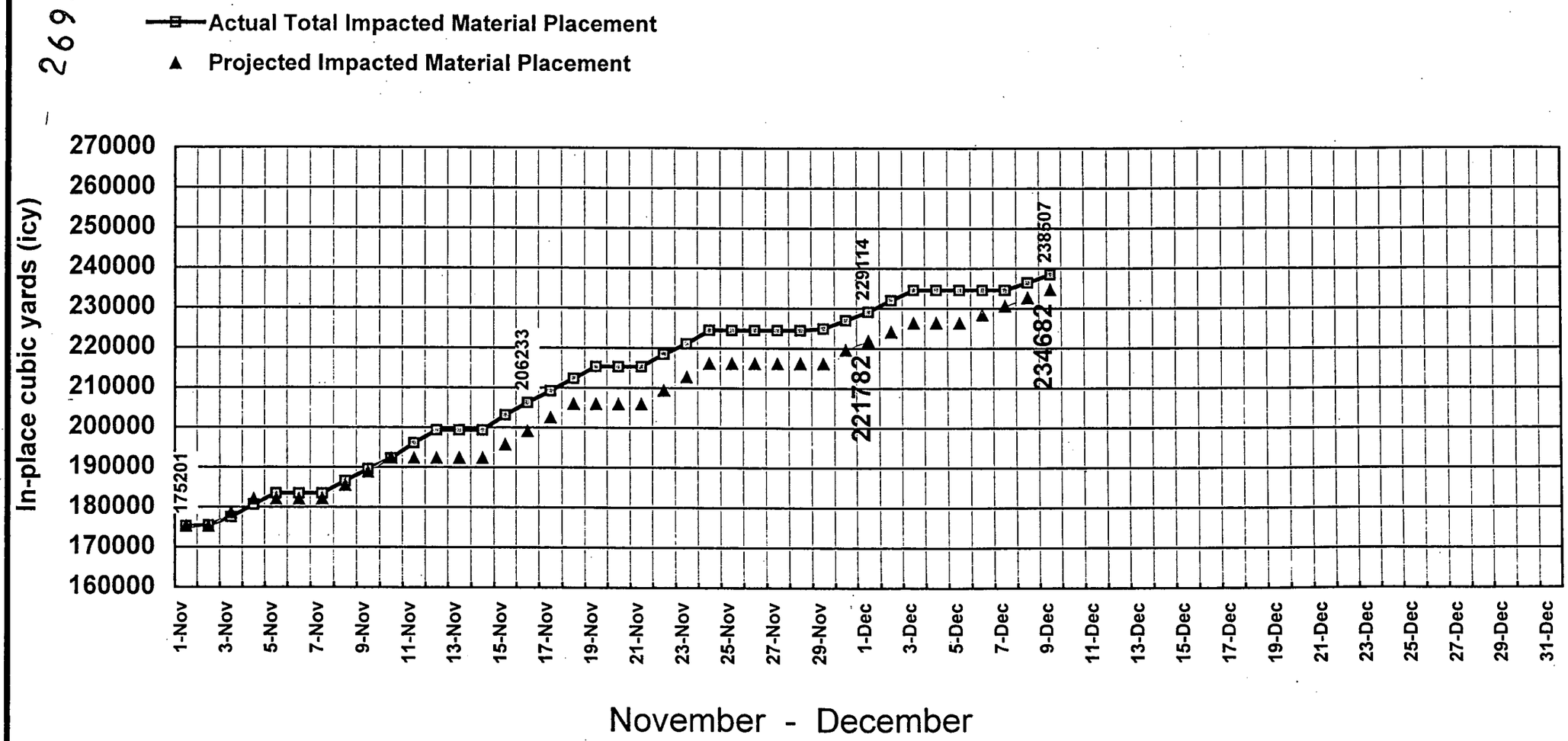


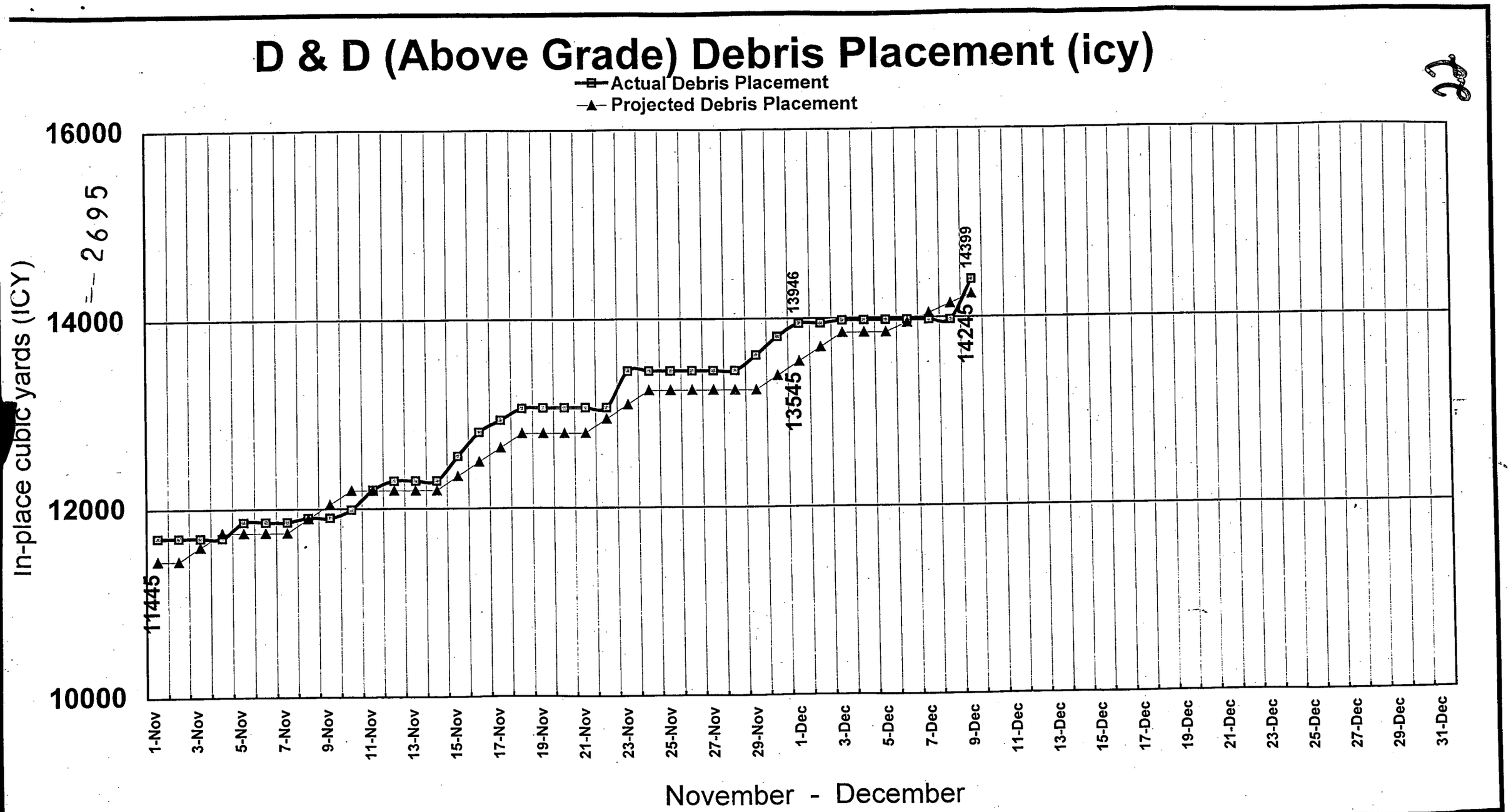
Total Debris Chart 1

12/13/99

2695

Total Soil and Debris Placement (icy)





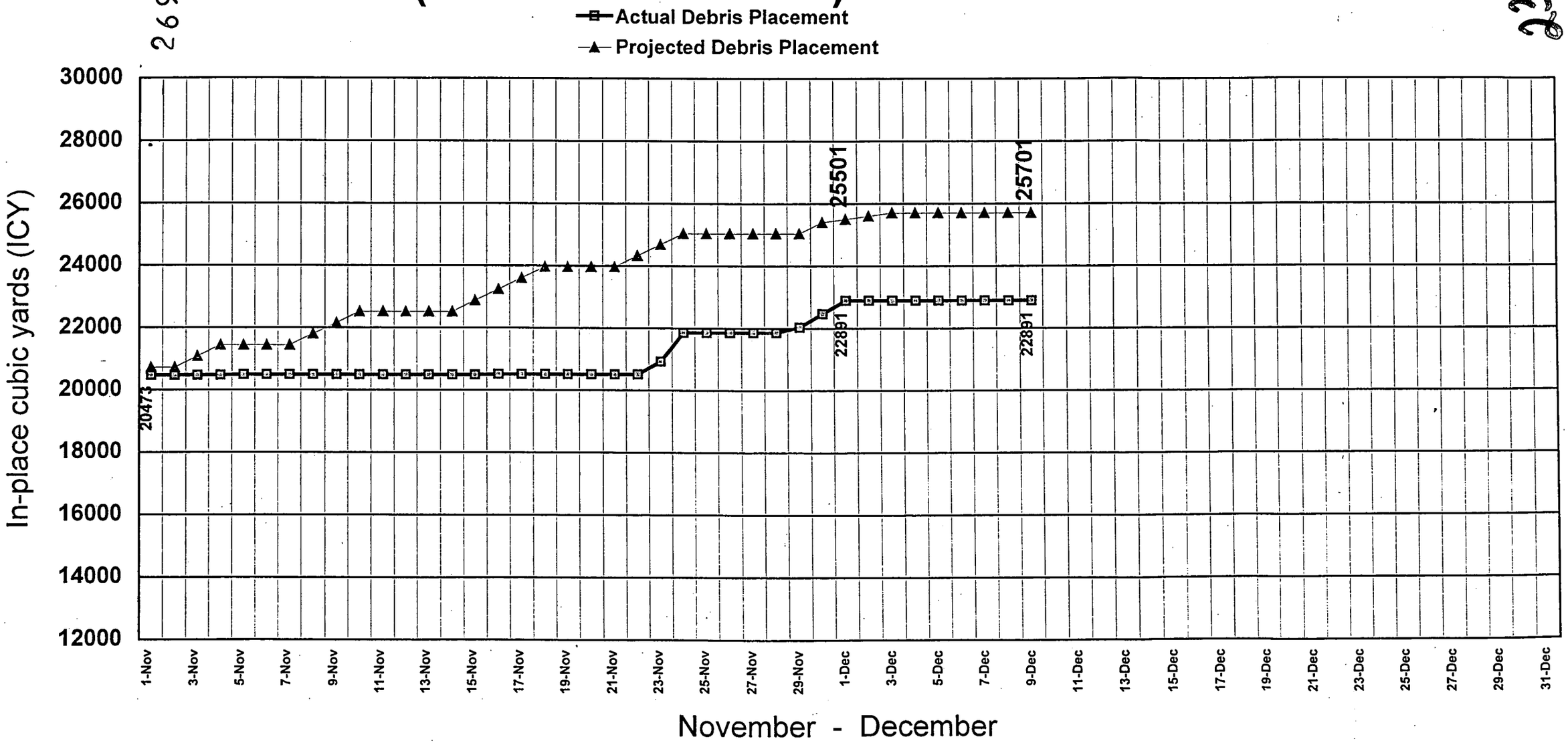
D&D Debris Chart 1

12/13/99

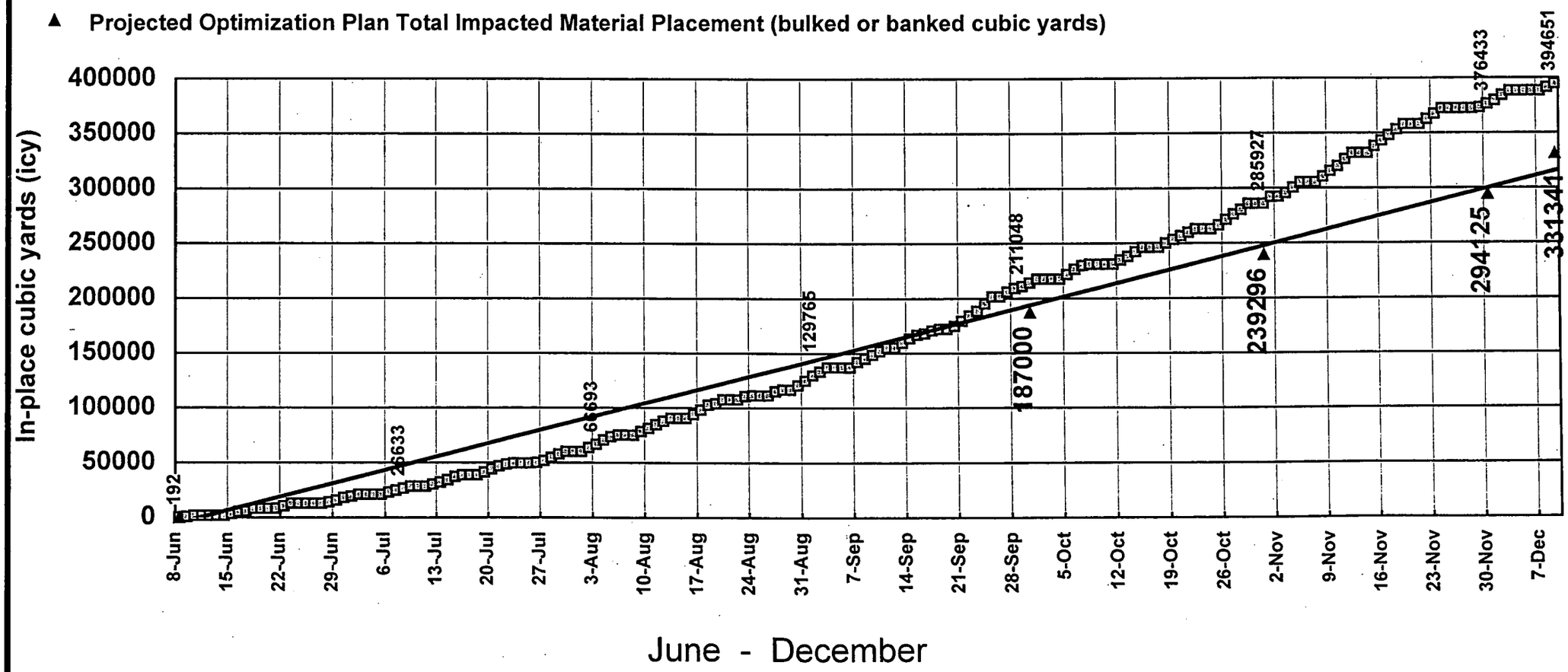
2695

23

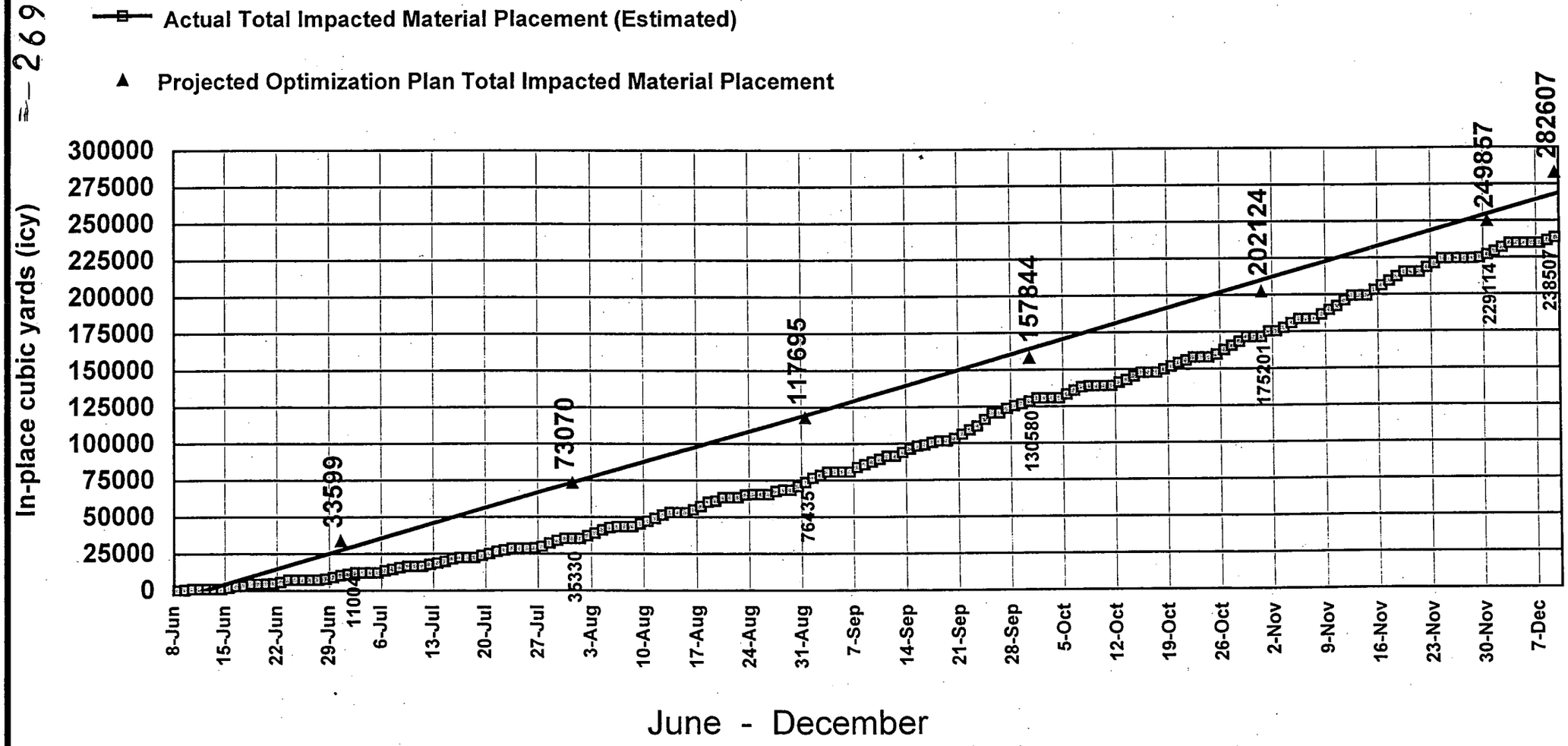
CAT 2 (At or Below Grade) Debris Placement



Total Soil and Debris Placement (bcy)



Total Soil and Debris Placement (icy)



total icy optimized Chart 1

12/15/99