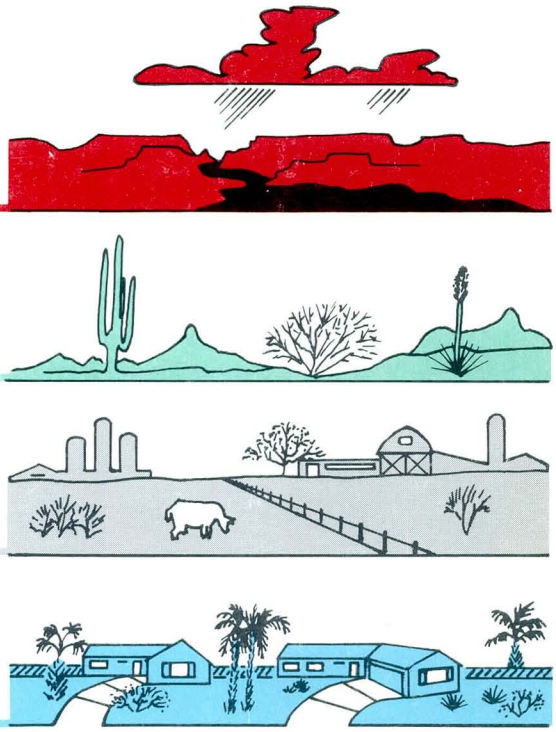


FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

INDIAN BEND WASH
EAST PAPAGO FREEWAY

VOL. 1

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

A680.946

INDIAN BEND WASH
EAST PAPAGO FREEWAY

The Flood Control District
of
Maricopa County

September 1990

INDIAN BEND WASH
EAST PAPAGO FREEWAY
VOL. 1

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

INTEROFFICE MEMORANDUM

Subject: INDIAN BEND WASH - EAST PAPAGO FREEWAY

File: INDIAN BEND WASH

To: DON RERICK 9/7/90
DAVE JOHNSON

From: JOE TRAM
JAN FARMER

Date: ~~8/30/90~~ 11/19/90 DER

REVIEW SUMMARY ENCLOSED:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Subject: INDIAN BEND WASH - EAST PAPAGO FREEWAY

Our review of the Papago Freeway, as it crosses Indian Bend Wash (IBW), considered the existing conditions at the confluence of IBW and the Salt River, and how the channel will respond to the proposed construction.

Using the U.S. Army Corps of Engineers' HEC-2 Model, Simons, Li & Associate Inc., (SLI) prepared a hydraulic analysis for IBW based on the plan and profile hydraulic design from the U.S. Army Corps of Engineers, "General Design Memorandum Phase II for Indian Bend Wash", plate 9 & 10, May 1975 and CRSSirrine, Inc. (CRSS) design plans of August 1, 1990.

To determine starting water-surface elevation (SWE) to be used in the HEC-2 model for IBW, SLA analyzed whether the SWE was dependent or independent of the Salt River. Their analysis indicated that IBW flows were independent of corresponding flows in the Salt River with the exception of the Standard Project Flood (SPF). Therefore SWE was developed using normal depth WSEs at the control section for the 30,000 cfs, 43,000 cfs and 51,000 cfs. The hydraulic parameters for a SPF of 63,000 cfs on the IBW were defined using a SWE at the control section that corresponds to the Salt River's 100-Year WSE.

SLA's analysis reaffirmed the Corps of Engineer conclusion that 43,000 cfs will be contained within the existing IBW levees. As for the Arizona Department of Transporation (ADOT) superflood of 51,000 cfs and the Standard Project Flood (SPF) of 63,000 cfs, 8,000 cfs and 20,000 cfs respectively will break out at McKellips Road and parallel the eastern levee of the outlet channel flowing southward creating a broad shallow floodplain with depths of flow up to 4 feet for the SPF (see Photo), as referenced in the General Design Memorandum Phase II for IBW, page VI-14, 6-06.(d). SLA does suggest that it is possible to contain and collect the entire SPF above McKellips Road within the IBW levees by providing collector channels and elevating the existing levees approximately 2 feet which does not include freeboard. Our review of the Papago Bridge across IBW does confirm that the contained SPF will pass under the bridge if improvements are made to the IBW levees.

Since the construction of the IBW outlet channel, the invert of the Salt River has dropped considerably below that of the IBW, such that evidence of head-cutting is occurring within the channel banks of IBW upstream of the Salt River confluence. The construction of the proposed Papago Freeway Bridge across IBW and the placement of the drop structures will stabilize and tie the two inverts in together improving conditions at the confluence.

To consider the potential of supercritical flow conditions we prepared a continous HEC-2 model from the SLA input (which broke out each drop structure seperate to form 4 profiles), and revised the data to reflect the adopted CRSS design plans of November 11, 1990.

We considered six flow regimens:

1. Existing Conditions - subcritical flow regime.
2. Existing Conditions - supercritical flow regime.
3. Drop Structures with fill in stilling basins - subcritical flow regime.
4. Drop Structures with fill in stilling basins - supercritical flow regime.
5. Drop Structures with out fill in stilling basins - subcritical flow regime.
6. Drop Structures with out fill in stilling basins - supercritical flow regime.

Our analysis concluded that the potential of flows reaching supercritical velocities at the drop structures is eminent which increases our concern of head cutting approximately 300 feet upstream of the bridge. This also may increase the hazard of undercutting of existing buried bank protection.

TABLE 3.1: RELATIVE IMPACTS OF THE PROPOSED EAST PAPAGO CROSSING OF THE INDIAN BEND WASH FOR CONDITIONS I & II, AND OF THE RIO SALADO IMPROVEMENTS FOR CONDITIONS III

SECNO	Q (cfs)	LEVEE ELEV. (MSL)	EXISTING CWSEL (MSL)	LEVEE, MINUS EXISTING (ft)	BRIDGED CWSEL (MSL)	BRIDGED, MINUS EXISTING (ft)	LEVEE, MINUS BRIDGED (ft)	RIO SALADO CWSEL (MSL)	RIO SALADO, MINUS EXISTING (ft)	LEVEE, MINUS RIO (ft)
3420	30000	1163.80	1163.25	0.55	1163.25	0.00	0.55	N/A	N/A	N/A
3420	43000	1163.80	1164.85	-1.05	1164.85	0.00	-1.05	N/A	N/A	N/A
3420	51000	1163.80	1165.75	-1.95	1165.75	0.00	-1.95	N/A	N/A	N/A
3420	63000	1163.80	1167.76	-3.96	1168.01	0.25	-4.21	N/A	N/A	N/A
3640	30000	1164.92	1163.64	1.28	1163.64	0.00	1.28	N/A	N/A	N/A
3640	43000	1164.92	1165.22	-0.30	1165.22	0.00	-0.30	N/A	N/A	N/A
3640	51000	1164.92	1166.11	-1.19	1166.12	0.01	-1.20	N/A	N/A	N/A
3640	63000	1164.92	1168.02	-3.10	1168.25	0.23	-3.33	N/A	N/A	N/A
3860	30000	1166.04	1164.19	1.85	1164.19	0.00	1.85	N/A	N/A	N/A
3860	43000	1166.04	1165.74	0.30	1165.74	0.00	0.30	N/A	N/A	N/A
3860	51000	1166.04	1166.60	-0.56	1166.60	0.00	-0.56	N/A	N/A	N/A
3860	63000	1166.04	1168.37	-2.33	1168.56	0.19	-2.52	N/A	N/A	N/A
3900	30000	1166.24	1164.31	1.93	1164.31	0.00	1.93	N/A	N/A	N/A
3900	43000	1166.24	1165.85	0.39	1165.85	0.00	0.39	N/A	N/A	N/A
3900	51000	1166.24	1166.71	-0.47	1166.71	0.00	-0.47	N/A	N/A	N/A
3900	63000	1166.24	1168.44	-2.20	1168.63	0.19	-2.39	N/A	N/A	N/A
3919.5	30000	1166.34	N/A	N/A	1164.38	N/A	1.96	N/A	N/A	N/A
3919.5	43000	1166.34	N/A	N/A	1165.91	N/A	0.43	N/A	N/A	N/A
3919.5	51000	1166.34	N/A	N/A	1166.77	N/A	-0.43	N/A	N/A	N/A
3919.5	63000	1166.34	N/A	N/A	1168.67	N/A	-2.33	N/A	N/A	N/A
4080.5	30000	1167.16	N/A	N/A	1164.69	N/A	2.47	N/A	N/A	N/A
4080.5	43000	1167.16	N/A	N/A	1166.32	N/A	0.84	N/A	N/A	N/A
4080.5	51000	1167.16	N/A	N/A	1167.23	N/A	-0.07	N/A	N/A	N/A
4080.5	63000	1167.16	N/A	N/A	1169.06	N/A	-1.90	N/A	N/A	N/A
4100	30000	1167.26	1164.98	2.28	1164.77	-0.21	2.49	N/A	N/A	N/A
4100	43000	1167.26	1166.46	0.80	1166.39	-0.07	0.87	N/A	N/A	N/A
4100	51000	1167.26	1167.29	-0.03	1167.29	0.00	-0.03	N/A	N/A	N/A
4100	63000	1167.26	1168.86	-1.60	1169.10	0.24	-1.84	N/A	N/A	N/A

N/A = Not Applicable; NC = Not Computed

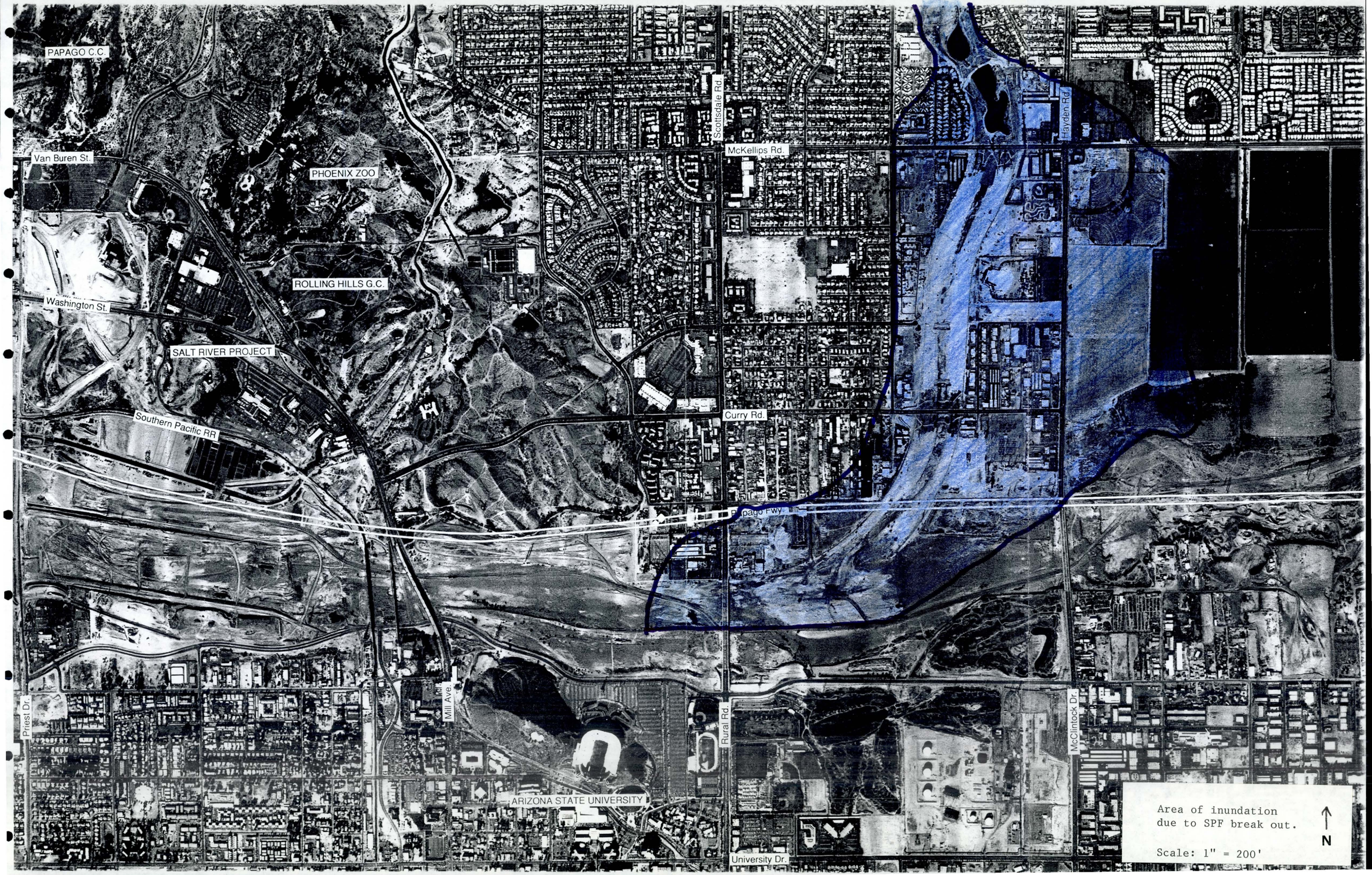
All Elevations are based on COE, GDM, Phase II

TABLE 3.1--Continued

SECNO	Q (cfs)	LEVEE ELEV. (MSL)	EXISTING CWSEL (MSL)	LEVEE, MINUS EXISTING (ft)	BRIDGED CWSEL (MSL)	BRIDGED, MINUS EXISTING (ft)	LEVEE, MINUS BRIDGED (ft)	RIO SALADO CWSEL (MSL)	RIO SALADO, MINUS EXISTING (ft)	LEVEE, MINUS RIO (ft)
4210	30000	1167.82	NC	NC	NC	NC	NC	1163.08	NC	NC
4210	43000	1167.82	NC	NC	NC	NC	NC	1164.23	NC	NC
4210	51000	1167.82	NC	NC	NC	NC	NC	1164.87	NC	NC
4210	63000	1167.82	NC	NC	NC	NC	NC	1165.80	NC	NC
4300	30000	1168.28	1165.74	2.54	1165.65	-0.09	2.63	1164.47	-1.27	3.81
4300	43000	1168.28	1167.17	1.11	1167.13	-0.04	1.15	1165.68	-1.49	2.60
4300	51000	1168.28	1167.98	0.30	1167.97	-0.01	0.31	1166.35	-1.63	1.93
4300	63000	1168.28	1169.39	-1.11	1169.57	0.18	-1.29	1167.35	-2.04	0.93
4640	30000	1169.74	1167.14	2.60	1167.13	-0.01	2.61	1167.39	0.25	2.35
4640	43000	1169.74	1168.52	1.22	1168.49	-0.03	1.25	1168.72	0.20	1.02
4640	51000	1169.74	1169.28	0.46	1169.28	0.00	0.46	1169.46	0.18	0.28
4640	63000	1169.74	1170.46	-0.72	1170.56	0.10	-0.82	1170.43	-0.03	-0.69
4980	30000	1171.21	1168.68	2.53	1168.68	0.00	2.53	1168.73	0.05	2.48
4980	43000	1171.21	1170.02	1.19	1170.02	0.00	1.19	1170.08	0.06	1.13
4980	51000	1171.21	1170.77	0.44	1170.77	0.00	0.44	1170.82	0.05	0.39
4980	63000	1171.21	1171.82	-0.61	1171.86	0.04	-0.65	1171.81	-0.01	-0.60
5320	30000	1172.67	1170.23	2.44	1170.23	0.00	2.44	1170.23	0.00	2.44
5320	43000	1172.67	1171.57	1.10	1171.56	-0.01	1.11	1171.58	0.01	1.09
5320	51000	1172.67	1172.31	0.36	1172.31	0.00	0.36	1172.32	0.01	0.35
5320	63000	1172.67	1173.32	-0.65	1173.33	0.01	-0.66	1173.31	-0.01	-0.64
5600	30000	1176.00	1171.49	4.51	1171.48	-0.01	4.52	1171.49	0.00	4.51
5600	43000	1176.00	1172.84	3.16	1172.84	0.00	3.16	1172.83	-0.01	3.17
5600	51000	1176.00	1173.59	2.41	1173.58	-0.01	2.42	1173.58	-0.01	2.42
5600	63000	1176.00	1174.58	1.42	1174.59	0.01	1.41	1174.58	0.00	1.42

N/A = Not Applicable; NC = Not computed

All Elevations are based on COE, GDM, Phase II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Van Buren St.
PHOENIX ZOO
ROLLING HILLS G.C.
Washington St.
SALT RIVER PROJECT
Southern Pacific RR
Scottsdale Rd.
McKellips Rd.
Hayden Rd.
Curry Rd.
Papago Fwy.
Priest Dr.
Mill Ave.
Rural Rd.
McClintock Dr.
ARIZONA STATE UNIVERSITY
University Dr.
Area of inundation
due to SPF break out.
Scale: 1" = 200'
N

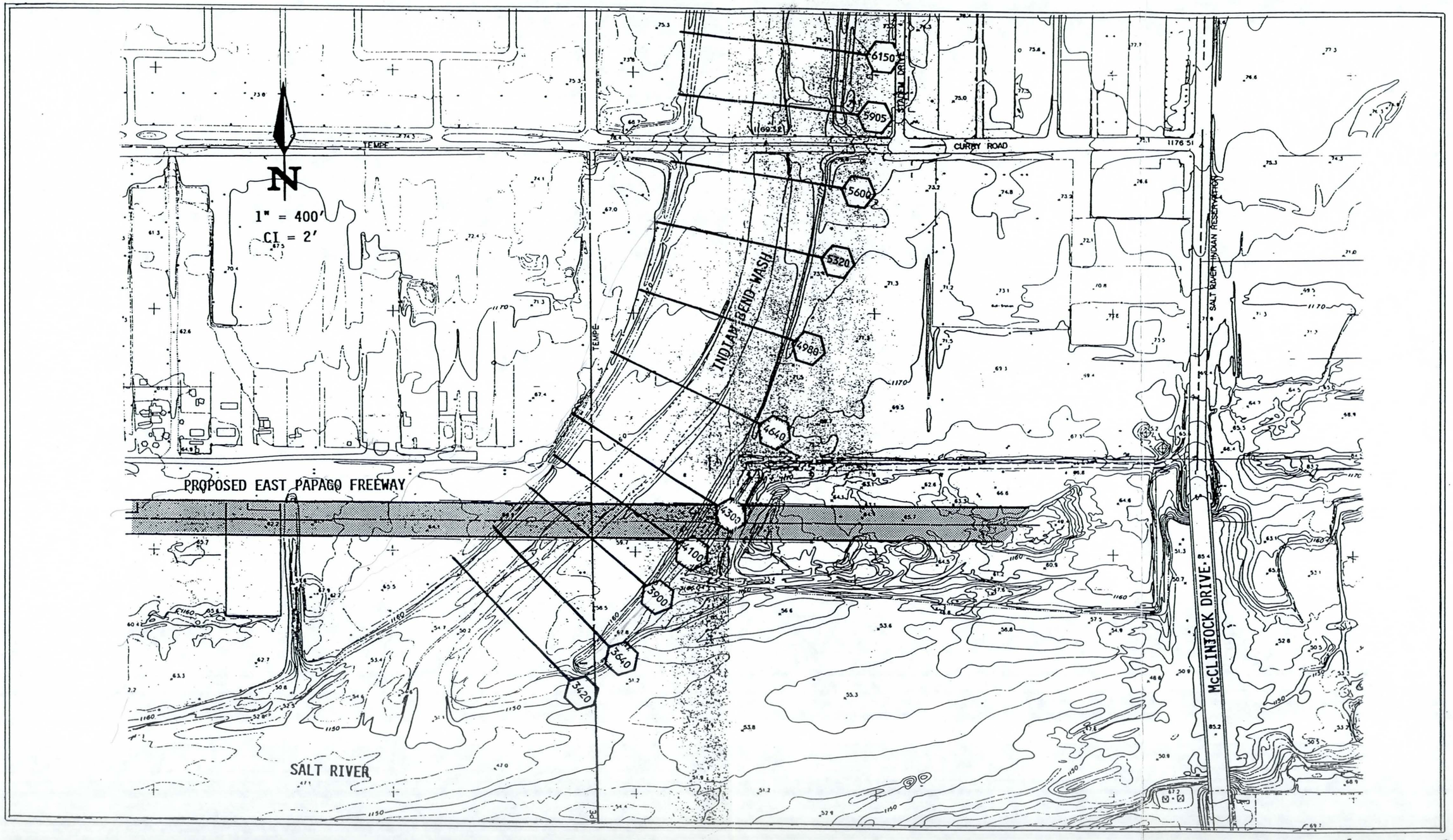
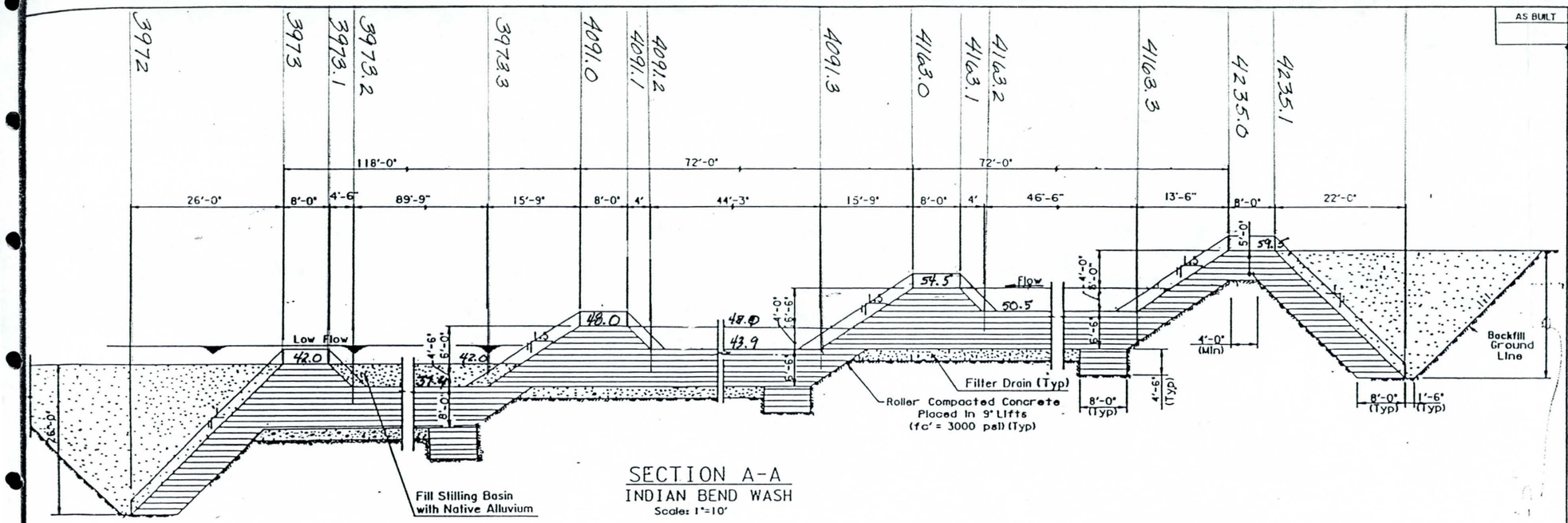


FIGURE 1

CROSS-SECTION LOCATION MAP

sla Simons, Li & Associates, Inc.

AS BUILT	F.H.W.A. REGION	STATE	PROJECT NOS	SHT. NO.
	9	AZ	RAM 600-5-511	520 of 52



SECTION A-A
INDIAN BEND WASH
Scale: 1"=10'

CONSTRUCTION NOTES

-For Indian Bend Wash Structure Additional Details Refer to DWG. NO. CH-7.1

-All Work shall be done According to the Arizona Department of Transportation "Standard Specifications For Road and Bridge Construction." 1987 Edition Amended By Special Provisions.

Design:

In Accordance with ACI 318-83 and Arizona Department of Transportation Highway Division, Structures Section Drainage Manual, Edition August 1987.

Design Loads:

-Cement Stabilized Alluvium - 140 pcf
-Dry Alluvium - 110 pcf
-Hydraulic Uplift (Dynamic) - 21.2 psf
-Design Flow Velocity - 30fps

Materials:

-Cement Stabilized Alluvium - fc' = 1000 psi (7 days)
-Roller Compacted Concrete - fc' = 3000 psi (28 days)
-CSA Levees - 750 psi (7 days)
-Granular Filter Bedding (1)
-Filter Fabric (2)

Miscellaneous:

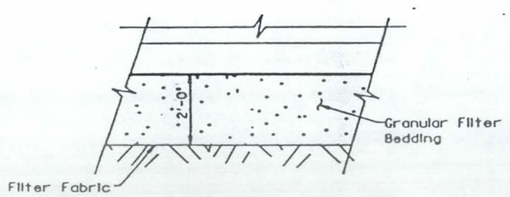
-All Dimensions Shown on the Plans are Measured Horizontally or Vertically Unless Otherwise Noted.

(1) GRADING

Sieve Size	Percent by Weight passing Sieve
3"	100%
2"	70-85%
1"	40-60%
0.5"	8-15%
#200	0-5%

(2) Min Permeability 6.2×10^{-4} ft/sec
Max AoS 0.6 MM
Type : Mirafi 140N
Typar 3401
Trivera Spunbound 1112
or Approved Equal

Overlap : 6" Min



FILTER DRAIN DETAIL

APPROXIMATE QUANITIES

IBW
Roller Compacted Concrete — — — 57,100 CY
Granular Filter Bedding — — — — 8,100 CY
Filter Fabric — — — — — — 12,100 SY
Structural Backfill — — — — 32,900 CY
Structural Excavation — — — — 106,700 CY

NO.	DATE	DESCRIPTION	APPROVAL
3			
2			
1			

REVISIONS

CRSS, INC.
PHOENIX, ARIZONA

RIO SALADO
CHANNEL DESIGN

DEPARTMENT OF PUBLIC WORKS
CITY OF TEMPE
DIVISION OF ENGINEERING
P.O. BOX 5002 TEMPE, ARIZONA

DESIGNED: JV
DRAWN: CRS
APPROVED: GKC

GRADE CONTROL STRUCTURES
CROSS SECTIONS & DETAILS

DATE 11/7/90
PROJECT NO 876191

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1*****************************************************                    ************************************
**
   *  WATER SURFACE PROFILES                          *                    *  U.S. ARMY CORPS OF ENGINEERS
*
   *  VERSION OF SEPTEMBER 1988                       *                    *  THE HYDROLOGIC ENGINEERING CENTER
*
   *  ERROR: 01,02,03                                 *                    *  609 SECOND STREET, SUITE D
*
   *  UPDATED:  APRIL 1990                            *                    *  DAVIS, CALIFORNIA 95616-4687
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   *  RUN DATE    24AUG90    TIME   16:54:46          *                    *           (916) 756-1104
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X     X  X        X                        X
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END OF BANNER

1

24AUG90 16:54:46 PAGE 1

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  ERROR CORR -  01,02,03
  MODIFICATION -
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T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2      STRT BASED ON SLOPE-AREA METHOD
T3      86EXT.DAT                PAZ-DMJM03-13
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J3 VARIABLE CODES FOR SUMMARY PRINTOUT

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     5        33       39        67       68

J5  LPRNT    NUMSEC                 ********REQUESTED SECTION NUMBERS********

   -10       -10

J6  IHLEQ    ICOPY    SUBDIV    STRTDS    RMILE

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NC    0.040     0.040     0.032       0.1       0.3
X1   3420.0        19         0       690         0         0         0         0         0         0
X3                                   100.0
GR    152.0       0.0     154.0      60.0     156.0      80.0     158.0     100.0     158.0     140.0
GR    157.0     240.0     156.7     350.0     156.0     370.0     154.0     410.0     152.0     440.0
GR    151.0     460.0     152.0     490.0     154.0     500.0     156.0     520.0     156.0     590.0
GR    158.0     620.0     160.0     640.0     164.0     660.0     166.0     690.0

X1   3510.0        17         0       650        90        90        90         0         0         0
GR    166.0       0.0     160.0      40.0     158.0      60.0     158.0     190.0     157.0     330.0
GR    156.0     360.0     154.0     395.0     152.0     435.0     151.4     455.0     152.0     475.0
GR    154.0     485.0     156.0     500.0     156.5     545.0     158.0     600.0     160.0     620.0
GR    164.0     635.0     166.0     650.0
1
   24AUG90      16:54:46                                                                    PAGE    2


X1   3640.0        17         0       680       130       130       130         0         0         0
GR    167.5       0.0     166.0      20.0     158.0      60.0     158.4     140.0     158.0     245.0
GR    157.8     350.0     156.0     380.0     154.0     395.0     152.0     435.0     152.0     455.0
GR    154.0     480.0     156.0     520.0     157.2     560.0     158.0     610.0     160.0     630.0
GR    166.0     665.0     166.7     680.0

X1   3790.0        14         0       660       150       150       150         0         0         0
GR    167.9       0.0     166.0      15.0     160.0      50.0     158.7      60.0     158.3     160.0
GR    158.3     320.0     158.0     345.0     156.0     370.0     154.0     380.0     154.0     490.0
GR    156.0     505.0     158.0     570.0     160.0     620.0     166.0     660.0

X1   3919.5        12         0       650       129       129       129         0         0         0
GR    168.0       0.0     160.0      40.0     159.0      55.0     159.0     290.0     158.0     320.0
GR    156.0     345.0     155.0     365.0     155.0     440.0     156.0     475.0     158.0     510.0
GR    160.0     610.0     166.0     650.0

X1   4080.5        10         0       650       161       161       161         0         0         0
GR    168.0       0.0     160.0      40.0     160.0     280.0     158.0     290.0     156.0     320.0
GR    156.0     340.0     156.2     450.0     158.0     470.0     160.0     590.0     168.0     650.0

X1   4235.0        14         0       650       155       155       155         0         0         0
GR    169.0       0.0     168.0      10.0     162.0      45.0     160.8      55.0     160.5     235.0
GR    160.0     260.0     158.0     270.0     156.6     290.0     156.6     435.0     158.0     450.0
```

GR	160.0	500.0	160.0	600.0	164.0	630.0	168.0	650.0		
X1	4435.0	12	0	635	200	200	200	0	0	0
GR	168.0	0.0	162.0	40.0	160.0	210.0	158.0	240.0	157.1	255.0
GR	157.1	380.0	158.0	390.0	160.0	410.0	161.0	460.0	161.0	580.0
GR	162.0	600.0	168.0	635.0						
X1	4640	8	9687.6	10312.5	205	205	205	0	0	0
GR	169.74	9687.6	162.67	9730.0	162.67	9885.0	157.6	9900.0	157.6	10020.0
GR	162.67	10035.0	162.67	10270.0	169.74	10312.5				
X1	4980	8	9690.1	10309.9	340	340	340	0	0	0
GR	171.21	9690.1	164.56	9730.0	164.56	9852.0	158.4	9870.0	158.4	9990.0
GR	164.56	10008.0	164.56	10270.0	171.21	10309.9				
X1	5320	8	9692.7	10307.4	340	340	340	0	0	0
GR	172.67	9692.7	166.45	9730.0	166.45	9838.0	159.2	9860.0	159.2	9980.0
GR	166.45	10002.0	166.45	10270.0	172.67	10307.4				
X1	5600	8	9682.0	10318.0	280	280	280	0	0	0
GR	176.0	9682.0	168.0	9730.0	168.0	9836.0	159.9	9860.0	159.9	9980.0
GR	168.0	10004.0	168.0	10270.0	176.0	10318.0				
X1	5670	8	9622	10258	70	70	70	0	0	0
GR	176.4	9622.0	168.4	9670.0	168.4	9846.0	160.0	9880.0	160.0	10000.0
GR	168.4	10034.0	168.4	10210.0	176.4	10258.0				

1

X1	5672.1	19	9682.0	10318.0	2	2	2	0	0	0
BT	-9	9714.4	171.00	171.00	9730.0	170.18	168.40	9791.0	169.12	168.40
BT		9895.4	168.94	168.40	9895.5	168.94	166.94	10034.5	168.94	166.94
BT		10034.6	168.94	168.40	10270.0	170.42	168.40	10285.6	171.00	171.00
GR	176.40	9682.0	171.00	9714.4	168.40	9730.0	168.40	9791.0	168.40	9895.4
GR	162.72	9895.5	162.72	9937.0	166.94	9937.1	166.94	9938.9	162.72	9939.0
GR	162.72	9991.0	166.94	9991.1	166.94	9992.9	162.72	9993.0	162.72	10034.5
GR	168.40	10034.6	168.40	10270.0	171.00	10285.6	176.40	10318.0		
X1	5750.1	19	9682.0	10318.0	78	78	78	0	0	0
BT	-9	9717.0	171.00	171.00	9730.0	170.57	168.83	9791.0	169.54	168.83
BT		9895.4	169.36	168.83	9895.5	169.36	167.36	10034.5	169.36	167.36
BT		10034.6	169.36	168.83	10270.0	170.80	168.83	10283.0	171.00	171.00
GR	176.83	9682.0	171.00	9717.0	168.83	9730.0	168.83	9791.0	168.83	9895.4
GR	163.19	9895.5	163.19	9937.0	167.36	9937.1	167.36	9938.9	163.19	9939.0
GR	163.19	9991.0	167.36	9991.1	167.36	9992.9	163.19	9993.0	163.19	10034.5
GR	168.83	10034.6	168.83	10270.0	171.00	10283.0	176.83	10318.0		
X1	5825	8	9683.5	10316.5	75	75	75	0	0	0
GR	177.01	9683.5	169.25	9730.0	169.25	9916.0	163.34	9940.0	163.34	10060.0
GR	169.25	10084.0	169.25	10270.0	177.01	10316.5				
X1	5905	8	9685.0	10315.0	80	80	80	0	0	0

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GR   177.20     9685.0     169.70     9730.0     169.70     9916.0     163.73     9940.0     163.73     10060.0
GR   169.70    10084.0     169.70    10270.0     177.20    10315.0

X1     6100          8     9688.1    10311.9        195        195        195          0          0           0
GR   177.76     9688.1     170.78     9730.0     170.78     9915.0     164.41     9940.0     164.41     10060.0
GR   170.78    10085.0     170.78    10270.0     177.76    10311.9
1
   24AUG90      16:54:46                                                                                    PAGE    4


IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.
1
   24AUG90      16:54:46                                                                                    PAGE    5


T1      SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2      STRT BASED ON SLOPE-AREA METHOD
T3      86EXT.DAT                PAZ-DMJM03-13

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0         0         0         0     0.002         0         0     43000    164.35         0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      2         0        -1         0         0         0        -1         0         0         0


IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.
1
   24AUG90      16:54:46                                                                                    PAGE    6


T1      SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2      STRT BASED ON SLOPE-AREA METHOD
T3      86EXT.DAT                PAZ-DMJM03-13

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0         0         0         0     0.002         0         0     51000    165.56         0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      3         0        -1         0         0         0        -1         0         0         0


IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.
1
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T1 SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1 INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2 STRT BASED ON CWSEL @ 220 (SALT RIVER ANALYSYS OF COINCIDENTAL FLOWS)
T3 86EXT.DAT PAZ-DMJM03-13

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	0	0	0	63000	167.76	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15	0	-1	0	0	0	-1	0	0	0

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

1

THIS RUN EXECUTED 24AUG90 16:55:00

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**************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

86EXT.DAT

SUMMARY PRINTOUT

SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
3420.000	163.24	.00	7.65	.00	.00	30000.00	.00	12.24	556.22	100.00	656.22
3420.000	165.05	.00	8.70	.00	.00	43000.00	.00	14.05	575.80	100.00	675.80
3420.000	166.06	.00	9.22	.00	.00	51000.00	.00	15.06	590.00	100.00	690.00
3420.000	167.76	.00	9.64	.00	.00	63000.00	.00	16.76	590.00	100.00	690.00
3510.000	163.51	.00	7.30	.00	.00	30000.00	.00	12.11	616.60	16.58	633.18
3510.000	165.39	.00	8.13	.00	.00	43000.00	.00	13.99	641.39	4.05	645.44

3510.000	166.43	.00	8.55	.00	.00	51000.00	.00	15.03	650.00	.00	650.00
3510.000	168.14	.00	8.90	.00	.00	63000.00	.00	16.74	650.00	.00	650.00
3640.000	163.77	.00	7.34	.00	.00	30000.00	.00	11.77	620.89	31.13	652.02
3640.000	165.63	.00	8.17	.00	.00	43000.00	.00	13.63	641.05	21.82	662.87
3640.000	166.66	.00	8.59	.00	.00	51000.00	.00	14.66	668.41	11.02	679.43
3640.000	168.35	.00	8.89	.00	.00	63000.00	.00	16.35	680.00	.00	680.00
3790.000	164.06	.00	7.50	.00	.00	30000.00	.00	10.06	620.79	26.30	647.09
3790.000	165.89	.00	8.34	.00	.00	43000.00	.00	11.89	643.71	15.60	659.31
3790.000	166.92	.00	8.77	.00	.00	51000.00	.00	12.92	652.22	7.78	660.00
3790.000	168.56	.00	9.13	.00	.00	63000.00	.00	14.56	660.00	.00	660.00
3919.500	164.29	.00	8.02	.00	.00	30000.00	.00	9.29	620.00	18.57	638.57
3919.500	166.08	.00	8.82	.00	.00	43000.00	.00	11.08	640.42	9.58	650.00
3919.500	167.09	.00	9.23	.00	.00	51000.00	.00	12.09	645.47	4.53	650.00
3919.500	168.70	.00	9.60	.00	.00	63000.00	.00	13.70	650.00	.00	650.00
4080.500	164.67	.00	8.58	.00	.00	30000.00	.00	8.67	608.51	16.60	625.11
4080.500	166.40	.00	9.43	.00	.00	43000.00	.00	10.40	629.94	8.02	637.96
4080.500	167.38	.00	9.84	.00	.00	51000.00	.00	11.38	642.20	3.12	645.32
4080.500	168.93	.00	10.18	.00	.00	63000.00	.00	12.93	650.00	.00	650.00
4235.000	165.20	.00	8.52	.00	.00	30000.00	.00	8.60	609.62	26.36	635.98
4235.000	166.85	.00	9.46	.00	.00	43000.00	.00	10.25	627.52	16.72	644.24
4235.000	167.79	.00	9.92	.00	.00	51000.00	.00	11.19	637.77	11.20	648.97
4235.000	169.27	.00	10.34	.00	.00	63000.00	.00	12.67	650.00	.00	650.00

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	4435.000	165.84	.00	8.58	.00	.00	30000.00	.00	8.74	608.13	14.33	622.46
	4435.000	167.43	.00	9.61	.00	.00	43000.00	.00	10.33	627.93	3.77	631.70
	4435.000	168.34	.00	10.09	.00	.00	51000.00	.00	11.24	635.00	.00	635.00
	4435.000	169.73	.00	10.62	.00	.00	63000.00	.00	12.63	635.00	.00	635.00
*	4640.000	166.34	.00	10.92	.00	.00	30000.00	.00	8.74	584.08	9707.99	10292.06
	4640.000	167.78	.00	11.94	.00	.00	43000.00	.00	10.18	601.36	9699.36	10300.71
	4640.000	168.61	.00	12.42	.00	.00	51000.00	.00	11.01	611.39	9694.35	10305.74
	4640.000	169.91	.00	12.83	.00	.00	63000.00	.00	12.31	624.90	9687.60	10312.50
	4980.000	168.69	.00	9.42	.00	.00	30000.00	.00	10.29	589.61	9705.20	10294.80
	4980.000	169.96	.00	10.90	.00	.00	43000.00	.00	11.56	604.86	9697.57	10302.43
	4980.000	170.65	.00	11.69	.00	.00	51000.00	.00	12.25	613.12	9693.44	10306.56
	4980.000	171.59	.00	12.76	.00	.00	63000.00	.00	13.19	619.80	9690.10	10309.90
	5320.000	170.18	.00	9.59	.00	.00	30000.00	.00	10.98	584.82	9707.62	10292.44
	5320.000	171.50	.00	11.00	.00	.00	43000.00	.00	12.30	600.66	9699.71	10300.37
	5320.000	172.23	.00	11.73	.00	.00	51000.00	.00	13.03	609.34	9695.38	10304.72
	5320.000	173.23	.00	12.69	.00	.00	63000.00	.00	14.03	614.70	9692.70	10307.40

	5600.000	171.46	.00	9.65	.00	.00	30000.00	.00	11.56	581.54	9709.23	10290.77
	5600.000	172.79	.00	11.06	.00	.00	43000.00	.00	12.89	597.44	9701.28	10298.72
	5600.000	173.53	.00	11.75	.00	.00	51000.00	.00	13.63	606.42	9696.79	10303.21
	5600.000	174.53	.00	12.74	.00	.00	63000.00	.00	14.63	618.30	9690.85	10309.15
	5670.000	171.91	.00	9.19	.00	.00	30000.00	.00	11.91	582.14	9648.93	10231.07
	5670.000	173.28	.00	10.55	.00	.00	43000.00	.00	13.28	598.63	9640.68	10239.32
	5670.000	174.03	.00	11.28	.00	.00	51000.00	.00	14.03	607.54	9636.23	10243.77
	5670.000	175.06	.00	12.22	.00	.00	63000.00	.00	15.06	619.92	9630.04	10249.96
*	5672.100	172.80	.00	11.93	.00	.00	30000.00	.00	10.08	592.79	9703.60	10296.40
*	5672.100	173.97	.00	13.37	.00	.00	43000.00	.00	11.25	606.81	9696.59	10303.41
*	5672.100	174.69	.00	13.94	.00	.00	51000.00	.00	11.97	615.51	9692.25	10307.75
*	5672.100	175.57	.00	14.98	.00	.00	63000.00	.00	12.85	626.09	9686.96	10313.04
*	5750.100	174.59	.00	8.97	.00	.00	30000.00	.00	11.40	609.12	9695.44	10304.56
*	5750.100	175.93	.00	10.32	.00	.00	43000.00	.00	12.74	625.12	9687.44	10312.56
*	5750.100	176.64	.00	11.06	.00	.00	51000.00	.00	13.45	633.60	9683.20	10316.80
*	5750.100	177.67	.00	11.96	.00	.00	63000.00	.00	14.48	636.00	9682.00	10318.00
*	5825.000	175.36	.00	6.86	.00	.00	30000.00	.00	12.02	613.19	9693.41	10306.59
*	5825.000	176.83	.00	8.13	.00	.00	43000.00	.00	13.49	630.88	9684.56	10315.44
*	5825.000	177.63	.00	8.80	.00	.00	51000.00	.00	14.29	633.00	9683.50	10316.50
*	5825.000	178.73	.00	9.70	.00	.00	63000.00	.00	15.39	633.00	9683.50	10316.50
	5905.000	175.44	.00	7.21	.00	.00	30000.00	.00	11.71	608.91	9695.55	10304.45
	5905.000	176.93	.00	8.47	.00	.00	43000.00	.00	13.20	626.72	9686.64	10313.36
	5905.000	177.72	.00	9.15	.00	.00	51000.00	.00	13.99	630.00	9685.00	10315.00
	5905.000	178.82	.00	10.05	.00	.00	63000.00	.00	15.09	630.00	9685.00	10315.00

SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
6100.000	175.75	.00	7.99	.00	.00	30000.00	.00	11.34	599.63	9700.18	10299.82
6100.000	177.24	.00	9.22	.00	.00	43000.00	.00	12.83	617.60	9691.20	10308.80
6100.000	178.04	.00	9.88	.00	.00	51000.00	.00	13.63	623.80	9688.10	10311.90
6100.000	179.14	.00	10.77	.00	.00	63000.00	.00	14.73	623.80	9688.10	10311.90

86EXT.DAT

SUMMARY PRINTOUT

SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	XLCH	SHEAR	FRCH
3420.000	163.24	160.53	164.15	.00	.00	151.00	20.35	.00	.00	.90	.51
3420.000	165.05	161.78	166.23	.00	.00	151.00	20.34	.00	.00	1.09	.52

3420.000	166.06	162.49	167.38	.00	.00	151.00	20.38	.00	.00	1.19	.53
3420.000	167.76	163.46	169.20	.00	.00	151.00	17.97	.00	.00	1.24	.51
3510.000	163.51	160.84	164.34	.18	.01	151.40	19.77	4.44	90.00	.82	.50
3510.000	165.39	162.04	166.42	.17	.01	151.40	18.46	4.44	90.00	.95	.50
3510.000	166.43	162.71	167.57	.17	.02	151.40	17.74	4.44	90.00	1.02	.50
3510.000	168.14	163.64	169.37	.15	.02	151.40	15.42	4.44	90.00	1.05	.48
3640.000	163.77	161.16	164.60	.26	.00	152.00	20.28	4.62	130.00	.83	.50
3640.000	165.63	162.36	166.66	.24	.00	152.00	18.76	4.62	130.00	.96	.50
3640.000	166.66	163.02	167.81	.24	.00	152.00	18.64	4.62	130.00	1.03	.51
3640.000	168.35	163.96	169.58	.21	.00	152.00	16.27	4.62	130.00	1.06	.49
3790.000	164.06	161.64	164.93	.32	.01	154.00	21.83	13.33	150.00	.88	.52
3790.000	165.89	162.83	166.97	.29	.01	154.00	20.15	13.33	150.00	1.01	.52
3790.000	166.92	163.50	168.11	.28	.01	154.00	19.35	13.33	150.00	1.08	.52
3790.000	168.56	164.43	169.85	.25	.02	154.00	17.10	13.33	150.00	1.11	.50
3919.500	164.29	162.29	165.29	.32	.04	155.00	27.22	7.75	129.00	1.02	.58
3919.500	166.08	163.48	167.29	.29	.04	155.00	24.19	7.75	129.00	1.15	.56
3919.500	167.09	164.14	168.42	.27	.04	155.00	22.70	7.75	129.00	1.21	.56
3919.500	168.70	165.07	170.13	.24	.04	155.00	19.76	7.75	129.00	1.25	.53
4080.500	164.67	163.04	165.81	.49	.04	156.00	33.19	6.21	161.00	1.19	.63
4080.500	166.40	164.24	167.78	.43	.05	156.00	29.53	6.21	161.00	1.33	.62
4080.500	167.38	164.91	168.88	.41	.05	156.00	27.81	6.21	161.00	1.40	.61
4080.500	168.93	165.85	170.54	.35	.05	156.00	23.98	6.21	161.00	1.42	.58
4235.000	165.20	163.53	166.32	.51	.00	156.60	32.50	3.87	155.00	1.17	.62
4235.000	166.85	164.72	168.24	.46	.00	156.60	29.70	3.87	155.00	1.34	.62
4235.000	167.79	165.39	169.32	.43	.01	156.60	28.28	3.87	155.00	1.42	.62
4235.000	169.27	166.35	170.93	.38	.02	156.60	25.25	3.87	155.00	1.48	.60
4435.000	165.84	164.21	166.99	.66	.00	157.10	33.17	2.50	200.00	1.19	.63
4435.000	167.43	165.41	168.86	.61	.01	157.10	31.26	2.50	200.00	1.39	.63
4435.000	168.34	166.08	169.92	.58	.02	157.10	29.84	2.50	200.00	1.48	.63
4435.000	169.73	167.02	171.48	.52	.03	157.10	26.85	2.50	200.00	1.57	.61
* 4640.000	166.34	165.91	168.19	.99	.21	157.60	70.51	2.44	205.00	2.07	.89
4640.000	167.78	167.12	169.99	.90	.23	157.60	61.18	2.44	205.00	2.29	.86
4640.000	168.61	167.80	171.01	.84	.24	157.60	56.74	2.44	205.00	2.38	.84
4640.000	169.91	168.75	172.47	.74	.24	157.60	49.13	2.44	205.00	2.41	.81

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SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	XLCH	SHEAR	FRCH
4980.000	168.69	167.49	170.07	1.83	.05	158.40	43.67	2.35	340.00	1.47	.71
4980.000	169.96	168.78	171.80	1.78	.04	158.40	45.54	2.35	340.00	1.85	.75
4980.000	170.65	169.42	172.77	1.74	.03	158.40	46.59	2.35	340.00	2.07	.77
4980.000	171.59	170.41	174.12	1.65	.00	158.40	47.89	2.35	340.00	2.38	.80

	5320.000	170.18	169.28	171.61	1.52	.02	159.20	45.88	2.35	340.00	1.53	.73
	5320.000	171.50	170.27	173.38	1.56	.01	159.20	46.46	2.35	340.00	1.89	.76
	5320.000	172.23	170.96	174.36	1.59	.00	159.20	46.79	2.35	340.00	2.08	.77
	5320.000	173.23	172.00	175.72	1.60	.00	159.20	46.48	2.35	340.00	2.34	.79
	5600.000	171.46	170.61	172.91	1.29	.01	159.90	46.59	2.50	280.00	1.55	.74
	5600.000	172.79	171.57	174.69	1.31	.01	159.90	47.01	2.50	280.00	1.91	.76
	5600.000	173.53	172.26	175.68	1.31	.00	159.90	46.82	2.50	280.00	2.09	.77
	5600.000	174.53	173.22	177.05	1.31	.01	159.90	47.42	2.50	280.00	2.37	.79
	5670.000	171.91	170.73	173.22	.30	.01	160.00	39.57	1.43	70.00	1.38	.68
	5670.000	173.28	171.74	175.01	.30	.02	160.00	40.26	1.43	70.00	1.71	.71
	5670.000	174.03	172.44	176.00	.31	.02	160.00	40.83	1.43	70.00	1.90	.73
	5670.000	175.06	173.40	177.37	.31	.02	160.00	41.36	1.43	70.00	2.15	.75
*	5672.100	172.80	172.80	175.01	.03	.26	162.72	166.41	1360.00	2.00	4.40	1.02
*	5672.100	173.97	173.97	176.74	.03	.30	162.72	153.83	1360.00	2.00	5.09	1.02
*	5672.100	174.69	174.69	177.71	.03	.30	162.72	142.61	1360.00	2.00	5.29	1.01
*	5672.100	175.57	175.57	179.06	.03	.34	162.72	138.83	1360.00	2.00	5.82	1.02
*	5750.100	174.59	173.19	175.84	.74	.10	163.19	65.99	6.03	78.00	2.26	.68
*	5750.100	175.93	174.43	177.58	.73	.11	163.19	66.68	6.03	78.00	2.77	.70
*	5750.100	176.64	175.05	178.54	.72	.11	163.19	67.72	6.03	78.00	3.07	.72
*	5750.100	177.67	176.00	179.89	.70	.13	163.19	66.61	6.03	78.00	3.44	.73
*	5825.000	175.36	172.18	176.09	.19	.05	163.34	15.99	2.00	75.00	.71	.45
*	5825.000	176.83	173.40	177.86	.21	.06	163.34	18.08	2.00	75.00	.95	.49
*	5825.000	177.63	174.08	178.83	.22	.07	163.34	18.93	2.00	75.00	1.08	.51
*	5825.000	178.73	175.04	180.19	.23	.08	163.34	19.84	2.00	75.00	1.27	.53
	5905.000	175.44	172.62	176.25	.14	.02	163.73	18.72	4.87	80.00	.80	.49
	5905.000	176.93	173.84	178.04	.15	.03	163.73	20.58	4.87	80.00	1.04	.52
	5905.000	177.72	174.52	179.02	.16	.03	163.73	21.36	4.87	80.00	1.18	.54
	5905.000	178.82	175.47	180.39	.17	.03	163.73	22.13	4.87	80.00	1.37	.56
	6100.000	175.75	173.58	176.74	.43	.06	164.41	25.80	3.49	195.00	1.01	.56
	6100.000	177.24	174.88	178.56	.46	.06	164.41	26.74	3.49	195.00	1.26	.59
	6100.000	178.04	175.48	179.56	.47	.07	164.41	27.24	3.49	195.00	1.41	.61
	6100.000	179.14	176.44	180.95	.48	.07	164.41	27.52	3.49	195.00	1.61	.62

1

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 4640.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 5672.100 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5672.100 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5672.100 PROFILE= 2 CRITICAL DEPTH ASSUMED

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CAUTION SECNO=   5672.100  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   5750.100  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   5825.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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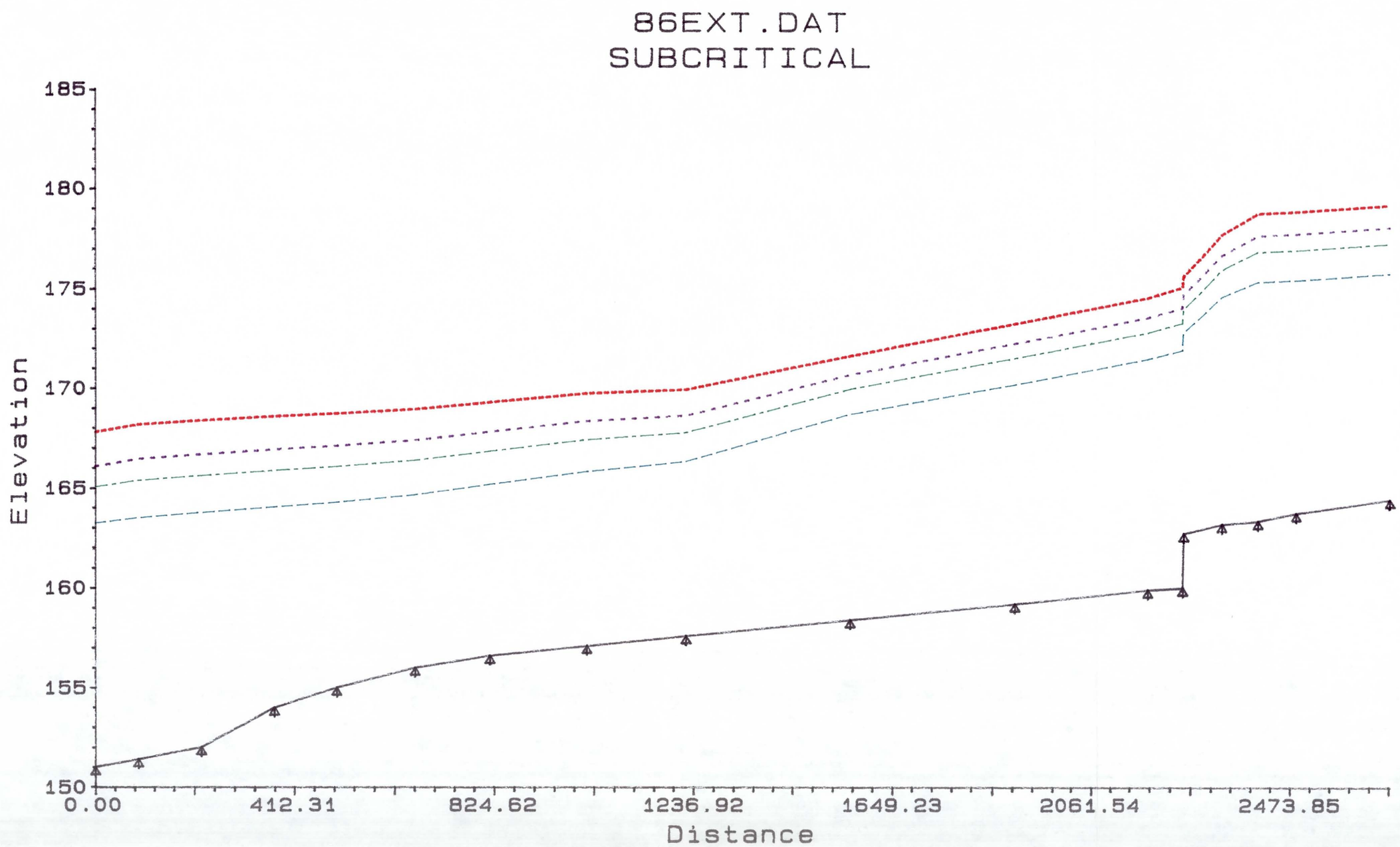
86EXT.DAT
SUBCRITICAL
185
180
175
170
165
160
155
150
Elevation
0.00
412.31
824.62
1236.92
1649.23
2061.54
2473.85
Distance

```
1*****************************************************                    ************************************
**
  *  WATER SURFACE PROFILES                           *                    *  U.S. ARMY CORPS OF ENGINEERS
*
  *  VERSION OF SEPTEMBER 1988                        *                    *  THE HYDROLOGIC ENGINEERING CENTER
*
  *  ERROR: 01,02,03                                  *                    *  609 SECOND STREET, SUITE D
*
  *  UPDATED:  APRIL 1990                             *                    *  DAVIS, CALIFORNIA 95616-4687
*
  *  RUN DATE    24AUG90    TIME   16:57:33           *                    *          (916) 756-1104
*
  *****************************************************                    ************************************
**
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```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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END OF BANNER

1

24AUG90 16:57:33 PAGE 1

THIS RUN EXECUTED 24AUG90 16:57:33

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*************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
*************************************************
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T1      SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2      STRT BASED ON SLOPE-AREA METHOD
T3      S86EXT.DAT              PAZ-DMJM03-13     ***SUPERCRITICAL****

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        0        0        1    0.002        0        0    30000   175.75       0

J2  NPROF    IPLOT    PRFVS    XSECV    XSECH     FN      ALLDC    IBW     CHNIM    ITRACE

      1        0       -1        0        0        0       -1       0        0        0

J3  VARIABLE CODES FOR SUMMARY PRINTOUT
```

38 1 55 26 56 13 14 15 8 4

53	54	0	38	1	2	3	11	12	42	
5	33	39	67	68						

J5 LPRNT NUMSEC ********REQUESTED SECTION NUMBERS********

-10	-10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

NC	0.040	0.040	0.032	0.100	0.300					
X1	6100	8	9688.1	10311.9	195	195	195	0	0	0
GR	177.76	9688.1	170.78	9730.0	170.78	9915.0	164.41	9940.0	164.41	10060.0
GR	170.78	10085.0	170.78	10270.0	177.76	10311.9				
X1	5905	8	9685.0	10315.0	80	80	80	0	0	0
GR	177.20	9685.0	169.70	9730.0	169.70	9916.0	163.73	9940.0	163.73	10060.0
GR	169.70	10084.0	169.70	10270.0	177.20	10315.0				
X1	5825	8	9683.5	10316.5	75	75	75	0	0	0
GR	177.01	9683.5	169.25	9730.0	169.25	9916.0	163.34	9940.0	163.34	10060.0
GR	169.25	10084.0	169.25	10270.0	177.01	10316.5				

1

X1	5750.1	19	9682.0	10318.0	78	78	78	0	0	0
BT	-9	9717.0	171.00	171.00	9730.0	170.57	168.83	9791.0	169.54	168.83
BT		9895.4	169.36	168.83	9895.5	169.36	167.36	10034.5	169.36	167.36
BT		10034.6	169.36	168.83	10270.0	170.80	168.83	10283.0	171.00	171.00
GR	176.83	9682.0	171.00	9717.0	168.83	9730.0	168.83	9791.0	168.83	9895.4
GR	163.19	9895.5	163.19	9937.0	167.36	9937.1	167.36	9938.9	163.19	9939.0
GR	163.19	9991.0	167.36	9991.1	167.36	9992.9	163.19	9993.0	163.19	10034.5
GR	168.83	10034.6	168.83	10270.0	171.00	10283.0	176.83	10318.0		
X1	5672.1	19	9682.0	10318.0	2	2	2	0	0	0
BT	-9	9714.4	171.00	171.00	9730.0	170.18	168.40	9791.0	169.12	168.40
BT		9895.4	168.94	168.40	9895.5	168.94	166.94	10034.5	168.94	166.94
BT		10034.6	168.94	168.40	10270.0	170.42	168.40	10285.6	171.00	171.00
GR	176.40	9682.0	171.00	9714.4	168.40	9730.0	168.40	9791.0	168.40	9895.4
GR	162.72	9895.5	162.72	9937.0	166.94	9937.1	166.94	9938.9	162.72	9939.0
GR	162.72	9991.0	166.94	9991.1	166.94	9992.9	162.72	9993.0	162.72	10034.5
GR	168.40	10034.6	168.40	10270.0	171.00	10285.6	176.40	10318.0		
X1	5670	8	9622	10258	70	70	70	0	0	0
GR	176.4	9622.0	168.4	9670.0	168.4	9846.0	160.0	9880.0	160.0	10000.0
GR	168.4	10034.0	168.4	10210.0	176.4	10258.0				
X1	5600	8	9682.0	10318.0	280	280	280	0	0	0
GR	176.0	9682.0	168.0	9730.0	168.0	9836.0	159.9	9860.0	159.9	9980.0

GR	168.0	10004.0	168.0	10270.0	176.0	10318.0				
X1	5320	8	9692.7	10307.4	340	340	340	0	0	0
GR	172.67	9692.7	166.45	9730.0	166.45	9838.0	159.2	9860.0	159.2	9980.0
GR	166.45	10002.0	166.45	10270.0	172.67	10307.4				
X1	4980	8	9690.1	10309.9	340	340	340	0	0	0
GR	171.21	9690.1	164.56	9730.0	164.56	9852.0	158.4	9870.0	158.4	9990.0
GR	164.56	10008.0	164.56	10270.0	171.21	10309.9				
X1	4640	8	9687.6	10312.5	205	205	205	0	0	0
GR	169.74	9687.6	162.67	9730.0	162.67	9885.0	157.6	9900.0	157.6	10020.0
GR	162.67	10035.0	162.67	10270.0	169.74	10312.5				
X1	4435.0	12	0	635	200	200	200	0	0	0
GR	168.0	0.0	162.0	40.0	160.0	210.0	158.0	240.0	157.1	255.0
GR	157.1	380.0	158.0	390.0	160.0	410.0	161.0	460.0	161.0	580.0
GR	162.0	600.0	168.0	635.0						
X1	4235.0	14	0	650	155	155	155	0	0	0
GR	169.0	0.0	168.0	10.0	162.0	45.0	160.8	55.0	160.5	235.0
GR	160.0	260.0	158.0	270.0	156.6	290.0	156.6	435.0	158.0	450.0
GR	160.0	500.0	160.0	600.0	164.0	630.0	168.0	650.0		

1

X1	4080.5	10	0	650	161	161	161	0	0	0
GR	168.0	0.0	160.0	40.0	160.0	280.0	158.0	290.0	156.0	320.0
GR	156.0	340.0	156.2	450.0	158.0	470.0	160.0	590.0	168.0	650.0
X1	3919.5	12	0	650	129	129	129	0	0	0
X3	10									
GR	168.0	0.0	160.0	40.0	159.0	55.0	159.0	290.0	158.0	320.0
GR	156.0	345.0	155.0	365.0	155.0	440.0	156.0	475.0	158.0	510.0
GR	160.0	610.0	166.0	650.0						
X1	3790.0	14	0	660	150	150	150	0	0	0
GR	167.9	0.0	166.0	15.0	160.0	50.0	158.7	60.0	158.3	160.0
GR	158.3	320.0	158.0	345.0	156.0	370.0	154.0	380.0	154.0	490.0
GR	156.0	505.0	158.0	570.0	160.0	620.0	166.0	660.0		
X1	3640.0	17	0	680	130	130	130	0	0	0
GR	167.5	0.0	166.0	20.0	158.0	60.0	158.4	140.0	158.0	245.0
GR	157.8	350.0	156.0	380.0	154.0	395.0	152.0	435.0	152.0	455.0
GR	154.0	480.0	156.0	520.0	157.2	560.0	158.0	610.0	160.0	630.0
GR	166.0	665.0	166.7	680.0						
X1	3510.0	17	0	650	90	90	90	0	0	0
GR	166.0	0.0	160.0	40.0	158.0	60.0	158.0	190.0	157.0	330.0
GR	156.0	360.0	154.0	395.0	152.0	435.0	151.4	455.0	152.0	475.0
GR	154.0	485.0	156.0	500.0	156.5	545.0	158.0	600.0	160.0	620.0
GR	164.0	635.0	166.0	650.0						

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X1   3420.0      19        0       690       0       0       0       0       0       0
X3                                100.0
GR    152.0     0.0    154.0      60.0   156.0    80.0   158.0   100.0   158.0   140.0
GR    157.0   240.0    156.7     350.0   156.0   370.0   154.0   410.0   152.0   440.0
GR    151.0   460.0    152.0     490.0   154.0   500.0   156.0   520.0   156.0   590.0
GR    158.0   620.0    160.0     640.0   164.0   660.0   166.0   690.0
1
   24AUG90      16:57:33                                                          PAGE    4


IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
DETAILS.
1
   24AUG90      16:57:33                                                          PAGE    5


T1      SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2      STRT BASED ON SLOPE-AREA METHOD
T3      S86EXT.DAT              PAZ-DMJM03-13

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        0        0        1    0.002        0        0    43000    177.24     0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      2        0       -1        0        0        0       -1        0        0        0


IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
DETAILS.
1
   24AUG90      16:57:33                                                          PAGE    6


T1      SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2      STRT BASED ON SLOPE-AREA METHOD
T3      S86EXT.DAT              PAZ-DMJM03-13

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        0        0        1    0.002        0        0    51000    178.04     0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      3        0       -1        0        0        0       -1        0        0        0
```

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

1

T1 SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
T1 INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T2 STRT BASED ON SLOPE-AREA METHOD
T3 S86EXT.DAT PAZ-DMJM03-13

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	1	0	0	0	63000	179.14	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15	0	-1	0	0	0	-1	0	0	0

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

1

THIS RUN EXECUTED 24AUG90 16:57:53

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**************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

S86EXT.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	6100.000	173.57	.00	12.10	.00	.00	30000.00	.00	9.16	573.55	9713.23	10286.77
*	6100.000	174.80	.00	13.47	.00	.00	43000.00	.00	10.39	588.26	9705.87	10294.13

*	6100.000	175.48	.00	14.18	.00	.00	51000.00	.00	11.07	596.46	9701.77	10298.23
*	6100.000	176.44	.00	15.10	.00	.00	63000.00	.00	12.03	607.95	9696.03	10303.97
*	5905.000	172.68	.00	11.88	.00	.00	30000.00	.00	8.95	575.81	9712.10	10287.90
*	5905.000	173.90	.00	13.31	.00	.00	43000.00	.00	10.17	590.36	9704.82	10295.18
*	5905.000	174.58	.00	14.03	.00	.00	51000.00	.00	10.85	598.52	9700.74	10299.26
*	5905.000	175.53	.00	14.96	.00	.00	63000.00	.00	11.80	609.93	9695.04	10304.96
*	5825.000	172.17	.00	12.10	.00	.00	30000.00	.00	8.83	575.00	9712.50	10287.50
*	5825.000	173.40	.00	13.47	.00	.00	43000.00	.00	10.06	589.68	9705.16	10294.84
*	5825.000	174.08	.00	14.17	.00	.00	51000.00	.00	10.74	597.88	9701.06	10298.94
*	5825.000	175.04	.00	15.09	.00	.00	63000.00	.00	11.70	609.34	9695.33	10304.67
*	5750.100	173.19	.00	12.00	.00	.00	30000.00	.00	10.00	592.28	9703.86	10296.14
*	5750.100	174.43	.00	13.25	.00	.00	43000.00	.00	11.24	607.19	9696.41	10303.59
*	5750.100	175.05	.00	14.07	.00	.00	51000.00	.00	11.86	614.63	9692.69	10307.31
*	5750.100	176.00	.00	14.95	.00	.00	63000.00	.00	12.81	626.05	9686.98	10313.02
*	5672.100	172.80	.00	11.93	.00	.00	30000.00	.00	10.08	592.79	9703.60	10296.40
*	5672.100	173.97	.00	13.37	.00	.00	43000.00	.00	11.25	606.81	9696.59	10303.41
*	5672.100	174.69	.00	13.94	.00	.00	51000.00	.00	11.97	615.51	9692.25	10307.75
*	5672.100	175.57	.00	14.98	.00	.00	63000.00	.00	12.85	626.09	9686.96	10313.04
*	5670.000	168.90	.00	19.16	.00	.00	30000.00	.00	8.90	546.02	9666.99	10213.01
*	5670.000	169.89	.00	20.37	.00	.00	43000.00	.00	9.89	557.88	9661.06	10218.94
*	5670.000	170.46	.00	20.97	.00	.00	51000.00	.00	10.46	564.74	9657.63	10222.37
	5670.000	171.27	.00	21.78	.00	.00	63000.00	.00	11.27	574.44	9652.78	10227.22
*	5600.000	170.33	.00	12.21	.00	.00	30000.00	.00	10.43	567.96	9716.02	10283.98
*	5600.000	171.56	.00	13.58	.00	.00	43000.00	.00	11.66	582.77	9708.62	10291.38
*	5600.000	172.25	.00	14.28	.00	.00	51000.00	.00	12.35	591.05	9704.47	10295.53
*	5600.000	173.22	.00	15.19	.00	.00	63000.00	.00	13.32	602.62	9698.69	10301.31

1

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	5320.000	169.21	.00	11.68	.00	.00	30000.00	.00	10.01	573.20	9713.42	10286.62
*	5320.000	170.27	.00	13.52	.00	.00	43000.00	.00	11.07	585.87	9707.10	10292.96
*	5320.000	170.96	.00	14.22	.00	.00	51000.00	.00	11.76	594.14	9702.97	10297.11
*	5320.000	171.93	.00	15.11	.00	.00	63000.00	.00	12.73	605.80	9697.14	10302.95
*	4980.000	167.49	.00	12.07	.00	.00	30000.00	.00	9.09	575.18	9712.41	10287.59
*	4980.000	168.71	.00	13.47	.00	.00	43000.00	.00	10.31	589.78	9705.11	10294.89
*	4980.000	169.39	.00	14.17	.00	.00	51000.00	.00	10.99	597.96	9701.02	10298.98
*	4980.000	170.35	.00	15.08	.00	.00	63000.00	.00	11.95	609.47	9695.27	10304.73
*	4640.000	165.91	.00	12.01	.00	.00	30000.00	.00	8.31	578.91	9710.57	10289.48
*	4640.000	167.12	.00	13.41	.00	.00	43000.00	.00	9.52	593.46	9703.30	10296.76
*	4640.000	167.80	.00	14.12	.00	.00	51000.00	.00	10.20	601.59	9699.24	10300.83
*	4640.000	168.75	.00	15.04	.00	.00	63000.00	.00	11.15	613.00	9693.54	10306.54

*	4435.000	164.21	.00	11.92	.00	.00	30000.00	.00	7.11	587.62	25.27	612.89
*	4435.000	165.41	.00	13.31	.00	.00	43000.00	.00	8.31	602.63	17.26	619.89
	4435.000	166.03	.00	14.13	.00	.00	51000.00	.00	8.93	610.44	13.10	623.54
	4435.000	166.82	.00	15.39	.00	.00	63000.00	.00	9.72	620.26	7.86	628.12
*	4235.000	163.56	.00	11.81	.00	.00	30000.00	.00	6.96	590.80	35.90	626.70
*	4235.000	164.75	.00	13.21	.00	.00	43000.00	.00	8.15	604.83	28.94	633.77
*	4235.000	165.36	.00	14.07	.00	.00	51000.00	.00	8.76	611.41	25.39	636.81
*	4235.000	166.34	.00	14.89	.00	.00	63000.00	.00	9.74	622.06	19.66	641.72
*	4080.500	163.08	.00	11.81	.00	.00	30000.00	.00	7.08	588.52	24.59	613.11
*	4080.500	164.28	.00	13.20	.00	.00	43000.00	.00	8.28	603.53	18.59	622.12
*	4080.500	164.97	.00	13.89	.00	.00	51000.00	.00	8.97	612.07	15.17	627.24
*	4080.500	165.90	.00	14.83	.00	.00	63000.00	.00	9.90	623.72	10.51	634.23
*	3919.500	162.29	.00	11.87	.00	.00	30000.00	.00	7.29	596.75	28.53	625.29
*	3919.500	163.48	.00	13.25	.00	.00	43000.00	.00	8.48	610.61	22.60	633.21
*	3919.500	164.15	.00	13.96	.00	.00	51000.00	.00	9.15	618.38	19.26	637.65
*	3919.500	165.13	.00	14.76	.00	.00	63000.00	.00	10.13	629.87	14.34	644.21
*	3790.000	161.61	.00	11.93	.00	.00	30000.00	.00	7.61	590.17	40.59	630.76
*	3790.000	162.81	.00	13.31	.00	.00	43000.00	.00	8.81	605.14	33.60	638.74
*	3790.000	163.48	.00	14.01	.00	.00	51000.00	.00	9.48	613.52	29.69	643.21
*	3790.000	164.42	.00	14.92	.00	.00	63000.00	.00	10.42	625.25	24.21	649.47
*	3640.000	161.17	.00	11.97	.00	.00	30000.00	.00	9.17	592.62	44.17	636.80
*	3640.000	162.35	.00	13.36	.00	.00	43000.00	.00	10.35	605.51	38.23	643.74
*	3640.000	163.03	.00	14.06	.00	.00	51000.00	.00	11.03	612.78	34.87	647.65
*	3640.000	164.04	.00	14.80	.00	.00	63000.00	.00	12.04	623.81	29.78	653.59
*	3510.000	160.84	.00	12.02	.00	.00	30000.00	.00	9.44	588.71	34.42	623.14
*	3510.000	162.04	.00	13.40	.00	.00	43000.00	.00	10.64	601.21	26.43	627.64
*	3510.000	162.71	.00	14.10	.00	.00	51000.00	.00	11.31	608.21	21.94	630.16
*	3510.000	163.73	.00	14.84	.00	.00	63000.00	.00	12.33	618.89	15.11	634.00

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	3420.000	160.61	.00	12.13	.00	.00	30000.00	.00	9.61	543.04	100.00	643.04
*	3420.000	161.87	.00	13.60	.00	.00	43000.00	.00	10.87	549.33	100.00	649.33
*	3420.000	162.57	.00	14.36	.00	.00	51000.00	.00	11.57	552.87	100.00	652.87
*	3420.000	163.55	.00	15.39	.00	.00	63000.00	.00	12.55	557.74	100.00	657.74

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S86EXT.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	XLCH	SHEAR	FRCH
*	6100.000	173.57	173.57	175.85	.00	.00	164.41	96.85	.00	.00	2.61	1.03
*	6100.000	174.80	174.80	177.62	.00	.00	164.41	88.78	.00	.00	3.01	1.02
*	6100.000	175.48	175.48	178.61	.00	.00	164.41	85.45	.00	.00	3.21	1.02
*	6100.000	176.44	176.44	179.98	.00	.00	164.41	81.52	.00	.00	3.49	1.02
*	5905.000	172.68	172.68	174.88	1.79	.65	163.73	91.66	-3.49	195.00	2.51	1.00
*	5905.000	173.90	173.90	176.65	1.67	.50	163.73	85.53	-3.49	195.00	2.92	1.00
*	5905.000	174.58	174.58	177.63	1.61	.46	163.73	82.75	-3.49	195.00	3.14	1.00
*	5905.000	175.53	175.53	179.00	1.55	.42	163.73	79.41	-3.49	195.00	3.42	1.00
*	5825.000	172.17	172.17	174.44	.78	.30	163.34	97.18	-4.87	80.00	2.61	1.03
*	5825.000	173.40	173.40	176.21	.71	.05	163.34	88.92	-4.87	80.00	3.00	1.02
*	5825.000	174.08	174.08	177.20	.68	.05	163.34	85.45	-4.87	80.00	3.21	1.02
*	5825.000	175.04	175.04	178.57	.65	.06	163.34	81.48	-4.87	80.00	3.48	1.02
*	5750.100	173.19	173.19	175.42	1.27	.24	163.19	169.45	-2.00	75.00	4.46	1.03
*	5750.100	174.43	174.43	177.16	1.12	1.86	163.19	149.29	-2.00	75.00	4.98	1.01
*	5750.100	175.05	175.05	178.13	1.10	1.68	163.19	146.96	-2.00	75.00	5.41	1.02
*	5750.100	176.00	176.00	179.47	1.03	1.43	163.19	137.92	-2.00	75.00	5.79	1.02
*	5672.100	172.80	172.80	175.01	1.30	2.71	162.72	166.41	-6.03	78.00	4.40	1.02
*	5672.100	173.97	173.97	176.74	1.20	1.98	162.72	153.83	-6.03	78.00	5.09	1.02
*	5672.100	174.69	174.69	177.71	1.11	1.71	162.72	142.61	-6.03	78.00	5.29	1.01
*	5672.100	175.57	175.57	179.06	1.08	1.53	162.72	138.83	-6.03	78.00	5.82	1.02
*	5670.000	168.90	170.50	174.60	.06	.35	160.00	419.68	-1360.00	2.00	7.51	1.99
*	5670.000	169.89	171.74	176.33	.05	.37	160.00	327.93	-1360.00	2.00	7.74	1.85
*	5670.000	170.46	172.43	177.29	.04	.38	160.00	292.58	-1360.00	2.00	7.86	1.78
	5670.000	171.27	173.40	178.63	.04	.39	160.00	256.31	-1360.00	2.00	8.05	1.71
*	5600.000	170.33	170.33	172.64	.69	1.92	159.90	98.77	-1.43	70.00	2.67	1.03
*	5600.000	171.56	171.56	174.43	.63	1.67	159.90	90.10	-1.43	70.00	3.06	1.03
*	5600.000	172.25	172.25	175.42	.61	1.47	159.90	86.49	-1.43	70.00	3.26	1.02
*	5600.000	173.22	173.22	176.80	.58	1.26	159.90	82.36	-1.43	70.00	3.54	1.02
*	5320.000	169.21	169.21	171.33	2.41	1.15	159.20	86.20	-2.50	280.00	2.41	.97
*	5320.000	170.27	170.27	173.11	2.51	.81	159.20	89.53	-2.50	280.00	3.03	1.02
*	5320.000	170.96	170.96	174.10	2.41	.70	159.20	85.95	-2.50	280.00	3.24	1.02
*	5320.000	171.93	171.93	175.48	2.28	.61	159.20	81.50	-2.50	280.00	3.50	1.02
*	4980.000	167.49	167.49	169.76	3.29	-.15	158.40	96.66	-2.35	340.00	2.61	1.02
*	4980.000	168.71	168.71	171.52	3.03	3.97	158.40	88.98	-2.35	340.00	3.01	1.02
*	4980.000	169.39	169.39	172.51	2.91	3.52	158.40	85.65	-2.35	340.00	3.22	1.02
*	4980.000	170.35	170.35	173.88	2.77	3.08	158.40	81.55	-2.35	340.00	3.49	1.02

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SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	XLCH	SHEAR	FRCH

*	4640.000	165.91	165.91	168.15	3.26	4.38	157.60	95.80	-2.35	340.00	2.58	1.02
*	4640.000	167.12	167.12	169.91	3.00	3.38	157.60	88.36	-2.35	340.00	2.98	1.02
*	4640.000	167.80	167.80	170.89	2.90	3.05	157.60	85.18	-2.35	340.00	3.19	1.02
*	4640.000	168.75	168.75	172.26	2.77	2.72	157.60	81.34	-2.35	340.00	3.47	1.01
*	4435.000	164.21	164.21	166.42	1.95	1.62	157.10	94.88	-2.44	205.00	2.54	1.02
*	4435.000	165.41	165.41	168.16	1.80	.09	157.10	87.65	-2.44	205.00	2.93	1.01
	4435.000	166.03	166.08	169.13	1.76	.00	157.10	86.68	-2.44	205.00	3.20	1.02
	4435.000	166.82	167.04	170.50	1.75	.02	157.10	88.91	-2.44	205.00	3.66	1.06
*	4235.000	163.56	163.56	165.73	1.85	2.06	156.60	92.59	-2.50	200.00	2.48	1.00
*	4235.000	164.75	164.75	167.46	1.72	1.74	156.60	86.05	-2.50	200.00	2.89	1.00
*	4235.000	165.36	165.36	168.44	1.72	1.68	156.60	85.80	-2.50	200.00	3.17	1.02
*	4235.000	166.34	166.34	169.79	1.60	1.58	156.60	80.05	-2.50	200.00	3.40	1.01
*	4080.500	163.08	163.08	165.25	1.43	.25	156.00	92.10	-3.87	155.00	2.48	1.00
*	4080.500	164.28	164.28	166.99	1.33	.21	156.00	85.60	-3.87	155.00	2.88	1.00
*	4080.500	164.97	164.97	167.96	1.27	.22	156.00	82.25	-3.87	155.00	3.08	1.00
*	4080.500	165.90	165.90	169.31	1.23	.21	156.00	79.22	-3.87	155.00	3.37	1.00
*	3919.500	162.29	162.29	164.48	1.54	1.74	155.00	95.44	-6.21	161.00	2.52	1.02
*	3919.500	163.48	163.48	166.21	1.42	1.44	155.00	87.98	-6.21	161.00	2.92	1.01
*	3919.500	164.15	164.15	167.17	1.36	1.33	155.00	84.72	-6.21	161.00	3.12	1.01
*	3919.500	165.13	165.13	168.51	1.27	1.21	155.00	78.95	-6.21	161.00	3.34	1.00
*	3790.000	161.61	161.61	163.82	1.23	1.56	154.00	95.59	-7.75	129.00	2.54	1.02
*	3790.000	162.81	162.81	165.56	1.14	.27	154.00	88.16	-7.75	129.00	2.94	1.01
*	3790.000	163.48	163.48	166.53	1.10	.26	154.00	84.94	-7.75	129.00	3.14	1.01
*	3790.000	164.42	164.42	167.88	1.05	.24	154.00	81.15	-7.75	129.00	3.42	1.01
*	3640.000	161.17	161.17	163.39	1.46	2.38	152.00	97.42	-13.33	150.00	2.57	1.03
*	3640.000	162.35	162.35	165.13	1.34	2.05	152.00	89.47	-13.33	150.00	2.97	1.02
*	3640.000	163.03	163.03	166.10	1.29	1.83	152.00	85.84	-13.33	150.00	3.17	1.02
*	3640.000	164.04	164.04	167.45	1.18	1.57	152.00	78.72	-13.33	150.00	3.35	1.00
*	3510.000	160.84	160.84	163.08	1.27	.55	151.40	97.83	-4.62	130.00	2.59	1.03
*	3510.000	162.04	162.04	164.82	1.16	.01	151.40	89.42	-4.62	130.00	2.98	1.02
*	3510.000	162.71	162.71	165.80	1.12	1.71	151.40	85.87	-4.62	130.00	3.19	1.02
*	3510.000	163.73	163.73	167.15	1.02	1.45	151.40	78.61	-4.62	130.00	3.36	1.00
*	3420.000	160.61	160.61	162.89	.82	1.45	151.00	91.06	-4.44	90.00	2.59	1.00
*	3420.000	161.87	161.87	164.74	.76	1.31	151.00	84.18	-4.44	90.00	3.02	1.00
*	3420.000	162.57	162.57	165.78	.73	1.19	151.00	81.18	-4.44	90.00	3.25	1.00
*	3420.000	163.55	163.55	167.23	.70	1.09	151.00	78.28	-4.44	90.00	3.58	1.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=   6100.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6100.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6100.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6100.000  PROFILE=  4  CRITICAL DEPTH ASSUMED

CAUTION SECNO=   5905.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5905.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5905.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5905.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5905.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5905.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5905.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5905.000  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5905.000  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5905.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5905.000  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5905.000  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   5825.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5825.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5825.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5825.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5825.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5825.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5825.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5825.000  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5825.000  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5825.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5825.000  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5825.000  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   5750.100  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5750.100  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5750.100  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5750.100  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5750.100  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5750.100  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5750.100  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5750.100  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5750.100  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5750.100  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5750.100  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5750.100  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   5672.100  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5672.100  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5672.100  PROFILE=  3  CRITICAL DEPTH ASSUMED
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CAUTION SECNO=   5672.100  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5672.100  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   5670.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5670.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5670.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   5600.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5600.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5600.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5600.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5600.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5600.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5600.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5600.000  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5600.000  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5600.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5600.000  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5600.000  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=   5320.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5320.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5320.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5320.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5320.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5320.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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CAUTION SECNO=   4980.000  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4980.000  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

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   24AUG90      16:57:33                                                                                    PAGE   15


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   24AUG90      16:57:33                                                    PAGE   16


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CAUTION SECNO=   3420.000  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
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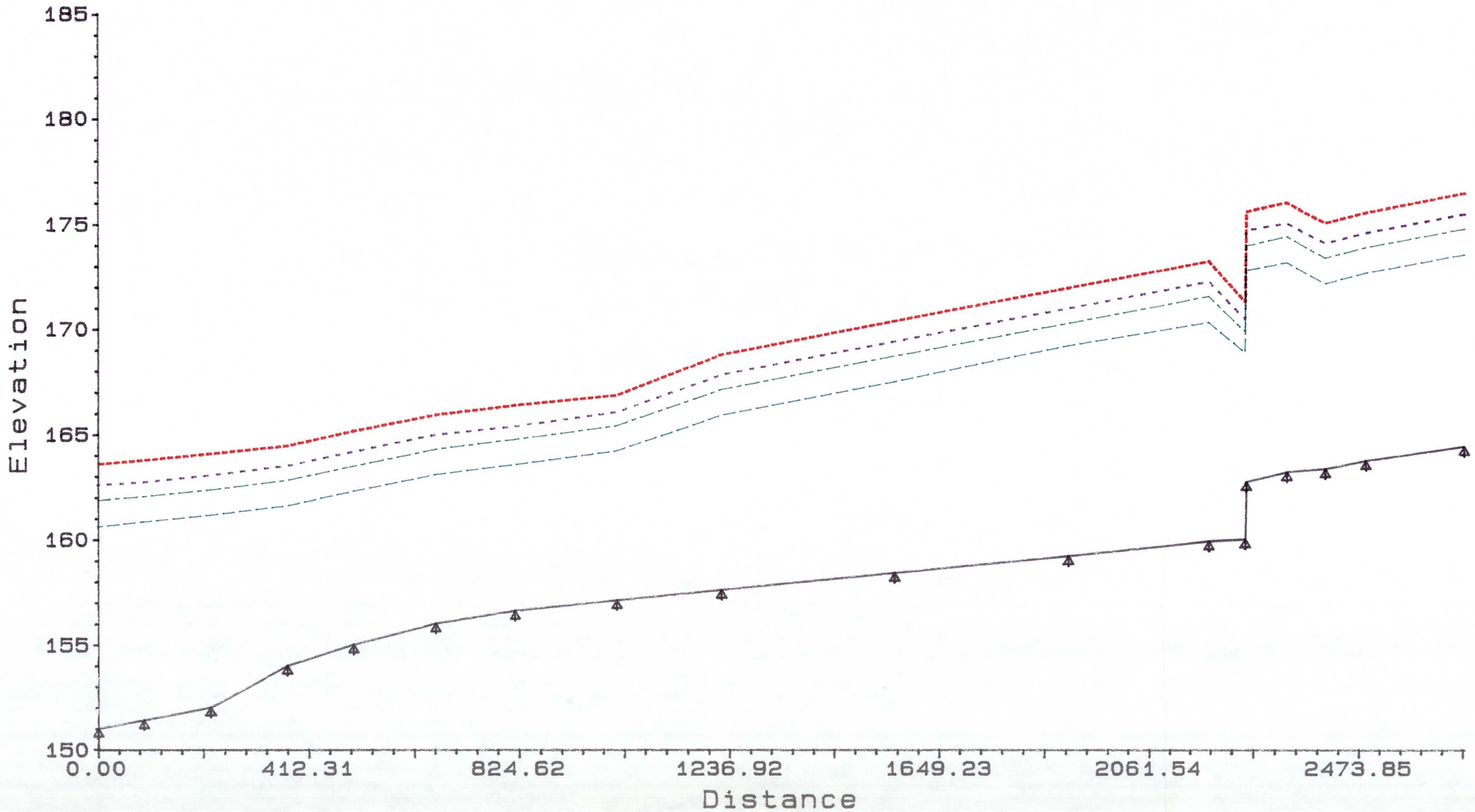
S86EXT.DAT
SUPERCRITICAL



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1*****************************************************
 *  WATER SURFACE PROFILES                           *
 *  VERSION OF SEPTEMBER 1988                        *
 *  ERROR: 01,02,03                                  *
 *  UPDATED:  APRIL 1990                             *
 *  RUN DATE    11NOV90    TIME   11:52:30           *
 *****************************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  THE HYDROLOGIC ENGINEERING CENTER *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*           (916) 756-1104          *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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END OF BANNER

1

11NOV90 11:52:30 PAGE 1

THIS RUN EXECUTED 11NOV90 11:52:30

```
*************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
*************************************************
```

```
T1      ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPTED PLANS OF 11/7/90
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T1      SUBCRITICAL - FILL IN PLACE
T1      PROFILE BEG AT LEVEL 1 OF THE RIO SALADO, IBW DROP STRUCTURE TO SALT R.
T2      STRT BASED ON CRITICAL DEPTH
T3      REVIBW.DAT              PAZ-DMJM03-13      FCDMC 11/15/90
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	-1	0	0	30000	161.81	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1	0	-1	0	0	0	-1	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

```
     38        1       55       26       56       13       14       15        8        4
     53       54        0       38        1        2        3       11       12       42
      5       33       21       22       39

J6  IHLEQ    ICOPY    SUBDIV   STRTDS   RMILE

     1


NC   0.040    0.040    0.032      0.1      0.3
X1    3972        6       54    567.8
GR     170        0    159.5       25      142       54      142    567.8    159.5    596.8
GR     170    621.8

X1   3972.1                              150      150      150

X1   3972.2                               50       50       50

X1   3972.3                               26       26       26
       LEVEL 4
1
   11NOV90     11:52:30                                                                PAGE    2


X1    3973        7       54    567.8       26       26       26
GR     170        0    159.5       25      142       54      139    310.9      142    567.8
GR   159.5    596.8      170    621.8

X1   3973.1                                8        8        8

X1   3973.2        7       54    567.8      4.6      4.6      4.6
GR     170        0    159.5       25      142       54      142    310.9      142    567.8
GR   159.5    596.8      170    621.8

X1   3979.3                             89.9     89.9     89.9
       LEVEL 3

X1    4091        7       44    562.6     15.9     15.9     15.9
GR     170        0    159.5       25      148       44      145    303.3      148    562.6
GR   159.5    581.6      170    606.6

X1   4091.1                                8        8        8

X1   4091.2        7       44    562.6        4        4        4
GR     170        0    159.5       25      148       44      145    303.3      148    562.6
GR   159.5    581.6      170    606.6

X1   4091.3                             44.3     44.3     44.3
       LEVEL 2

X1    4163        7       35    522.2     15.9     15.9     15.9
```

```
GR      170        0     159.5       25     154.5       35     151.5     278.6     154.5     522.2
GR    159.5    532.2       170    557.2

X1   4163.1                                 8         8         8

X1   4163.2        7        35    522.2       4         4         4
GR      170        0     159.5       25     154.5       35     151.5     278.6     154.5     522.2
GR    159.5    532.2       170    557.2

X1   4163.3                                46.6      46.6      46.6
        LEVEL 1

X1     4235        5        25    514.2      13.6      13.6      13.6
GR      170        0     159.5       25     156.5     269.6     156.5     514.2       170     539.2

X1     4235                                 8         8         8


X1   4435.0       12         0       635       200       200       200         0         0         0
GR    169.8      0.0     162.0      40.0     160.0     210.0     158.0     240.0     157.1     255.0
GR    157.1    380.0     158.0     390.0     160.0     410.0     161.0     460.0     161.0     580.0
GR    162.0    600.0     170.0     635.0
1
   11NOV90     11:52:30                                                                    PAGE    3


X1     4640        8    9687.6   10312.5       205       205       205         0         0         0
GR      170   9687.6    162.67    9730.0    162.67    9885.0     157.6    9900.0     157.6   10020.0
GR   162.67  10035.0    162.67   10270.0       170   10312.5

X1     4980        8    9690.1   10309.9       340       340       340         0         0         0
GR   171.21   9690.1    164.56    9730.0    164.56    9852.0     158.4    9870.0     158.4    9990.0
GR   164.56  10008.0    164.56   10270.0    171.21   10309.9

X1     5320        8    9692.7   10307.4       340       340       340         0         0         0
GR   172.67   9692.7    166.45    9730.0    166.45    9838.0     159.2    9860.0     159.2    9980.0
GR   166.45  10002.0    166.45   10270.0    172.67   10307.4

X1     5600        8    9682.0   10318.0       280       280       280         0         0         0
GR    176.0   9682.0     168.0    9730.0     168.0    9836.0     159.9    9860.0     159.9    9980.0
GR    168.0  10004.0     168.0   10270.0     176.0   10318.0

X1     5670        8      9622     10258        70        70        70         0         0         0
GR    176.4   9622.0     168.4    9670.0     168.4    9846.0     160.0    9880.0     160.0   10000.0
GR    168.4  10034.0     168.4   10210.0     176.4   10258.0

X1   5672.1       19    9682.0   10318.0         2         2         2         0         0         0
BT       -9   9714.4    171.00    171.00    9730.0    170.18    168.40    9791.0    169.12    168.40
BT            9895.4    168.94    168.40    9895.5    168.94    166.94   10034.5    168.94    166.94
BT           10034.6    168.94    168.40   10270.0    170.42    168.40   10285.6    171.00    171.00
GR    176.40  9682.0    171.00    9714.4    168.40    9730.0    168.40    9791.0    168.40    9895.4
GR    162.72  9895.5    162.72    9937.0    166.94    9937.1    166.94    9938.9    162.72    9939.0
GR    162.72  9991.0    166.94    9991.1    166.94    9992.9    162.72    9993.0    162.72   10034.5
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GR   168.40    10034.6     168.40    10270.0     171.00    10285.6     176.40    10318.0

X1   5750.1         19    9682.0    10318.0         78         78         78          0          0          0
BT       -9     9717.0     171.00     171.00     9730.0     170.57     168.83     9791.0     169.54     168.83
BT              9895.4     169.36     168.83     9895.5     169.36     167.36    10034.5     169.36     167.36
BT             10034.6     169.36     168.83    10270.0     170.80     168.83    10283.0     171.00     171.00
GR   176.83     9682.0     171.00     9717.0     168.83     9730.0     168.83     9791.0     168.83     9895.4
GR   163.19     9895.5     163.19     9937.0     167.36     9937.1     167.36     9938.9     163.19     9939.0
GR   163.19     9991.0     167.36     9991.1     167.36     9992.9     163.19     9993.0     163.19    10034.5
GR   168.83    10034.6     168.83    10270.0     171.00    10283.0     176.83    10318.0

X1     5825          8    9683.5    10316.5         75         75         75          0          0          0
GR   177.01     9683.5     169.25     9730.0     169.25     9916.0     163.34     9940.0     163.34    10060.0
GR   169.25    10084.0     169.25    10270.0     177.01    10316.5

X1     5905          8    9685.0    10315.0         80         80         80          0          0          0
GR   177.20     9685.0     169.70     9730.0     169.70     9916.0     163.73     9940.0     163.73    10060.0
GR   169.70    10084.0     169.70    10270.0     177.20    10315.0

X1     6100          8    9688.1    10311.9        195        195        195          0          0          0
GR   177.76     9688.1     170.78     9730.0     170.78     9915.0     164.41     9940.0     164.41    10060.0
GR   170.78    10085.0     170.78    10270.0     177.76    10311.9
1
   11NOV90      11:52:30                                                                                PAGE    4


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *PROF 1

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=      .100 CEHV=      .300
 *SECNO 3972.000
 3720 CRITICAL DEPTH ASSUMED
  3972.000     4.72   146.72   146.72   161.81   149.05     2.34      .00      .00   142.00
    30000.     103.   29794.     103.      18.    2423.      18.       0.       0.   142.00
       .00     5.59    12.30     5.59     .040     .032     .040     .000   142.00    46.19
   .008867       0.       0.       0.        0       13        0      .00   529.43   575.61
0
 *SECNO 3972.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77
```

```
 3972.100     6.64   148.64   146.70      .00   149.81     1.17      .64      .12   142.00
   30000.     145.   29711.     145.      37.    3412.      37.      10.       2.   142.00
      .00     3.96     8.71     3.96     .040     .032     .040     .000   142.00    43.00
  .002817     150.     150.     150.        3        5        0      .00   535.81   578.80
0
 *SECNO 3972.200
 3972.200     6.85   148.85   146.72      .00   149.95     1.10      .13      .01   142.00
   30000.     149.   29702.     149.      39.    3522.      39.      14.       2.   142.00
      .01     3.83     8.43     3.83     .040     .032     .040     .000   142.00    42.64
  .002533      50.      50.      50.        2       15        0      .00   536.52   579.16
0
 *SECNO 3972.300
 3972.300     6.95   148.95   146.70      .00   150.02     1.06      .06      .00   142.00
   30000.     151.   29697.     151.      40.    3572.      40.      16.       3.   142.00
      .01     3.78     8.31     3.78     .040     .032     .040     .000   142.00    42.48
  .002415      26.      26.      26.        2       14        0      .00   536.84   579.32
0
1
   11NOV90      11:52:30                                                                    PAGE     5


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 3973.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.52

 3973.000    10.45   149.45   145.21      .00   150.10      .65      .04      .04   142.00
   30000.     120.   29760.     120.      46.    4601.      46.      19.       3.   142.00
      .01     2.60     6.47     2.60     .040     .032     .040     .000   139.00    41.65
  .001043      26.      26.      26.        2       11        0      .00   538.51   580.15
0
 *SECNO 3973.100
 3973.100    10.46   149.46   145.20      .00   150.11      .64      .01      .00   142.00
   30000.     120.   29760.     120.      46.    4606.      46.      20.       3.   142.00
      .01     2.60     6.46     2.60     .040     .032     .040     .000   139.00    41.63
  .001039       8.       8.       8.        0       14        0      .00   538.54   580.17
0
 *SECNO 3973.200
 3973.200     7.23   149.23   146.70      .00   150.21      .98      .01      .10   142.00
   30000.     157.   29685.     157.      43.    3716.      43.      20.       3.   142.00
      .01     3.63     7.99     3.63     .040     .032     .040     .000   142.00    42.01
  .002115       5.       5.       5.        2       14        0      .00   537.77   579.79
0
 *SECNO 3979.300
 3979.300     7.48   149.48   146.70      .00   150.40      .92      .18      .01   142.00
   30000.     163.   29675.     163.      46.    3845.      46.      28.       4.   142.00
      .01     3.51     7.72     3.51     .040     .032     .040     .000   142.00    41.60
  .001887      90.      90.      90.        2       14        0      .00   538.60   580.20
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0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4091.000     6.17   151.17   151.17      .00   153.54     2.36      .14      .38   148.00
    30000.      36.    29928.      36.       8.    2423.       8.      29.       5.   148.00
       .01     4.33    12.35     4.33     .040     .032     .040     .000   145.00    38.76
   .009063      16.      16.      16.        0       15        0      .00   529.08   567.84
0
1
    11NOV90      11:52:30                                                                          PAGE    6


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS

  4091.100     6.84   151.84   151.18      .00   153.65     1.81      .06      .06   148.00
    30000.      48.    29904.      48.      12.    2764.      12.      30.       5.   148.00
       .01     3.94    10.82     3.94     .040     .032     .040     .000   145.00    37.67
   .005828       8.       8.       8.       9        5        0      .00   531.26   568.93
0
 *SECNO 4091.200
  4091.200     6.94   151.94   151.17      .00   153.68     1.74      .02      .01   148.00
    30000.      50.    29900.      50.      13.    2821.      13.      30.       5.   148.00
       .01     3.88    10.60     3.88     .040     .032     .040     .000   145.00    37.49
   .005448       4.       4.       4.       2       11        0      .00   531.62   569.11
0
 *SECNO 4091.300
  4091.300     7.48   152.48   151.18      .00   153.91     1.43      .20      .03   148.00
    30000.      60.    29880.      60.      17.    3106.      17.      33.       5.   148.00
       .01     3.61     9.62     3.61     .040     .032     .040     .000   145.00    36.58
   .003945      44.      44.      44.       2       11        0      .00   533.44   570.02
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4163.000     6.37   157.87   157.87      .00   160.33     2.46      .14      .27   154.50
    30000.      52.    29895.      52.      11.    2373.      11.      34.       5.   154.50
       .01     4.61    12.60     4.61     .040     .032     .040     .000   151.50    28.26
   .008914      16.      16.      16.        0       15        0      .00   500.68   528.94
0
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*SECNO 4163.100

3301 HV CHANGED MORE THAN HVINS

 4163.100     7.05   158.55   157.88      .00   160.44     1.89      .06      .06   154.50
   30000.      69.   29863.      69.      16.    2700.      16.      35.       6.    154.50
      .01     4.19    11.06     4.19     .040     .032     .040     .000   151.50    26.91
  .005782       8.       8.       8.       9        5        0      .00   503.37   530.29
0
1
   11NOV90      11:52:30                                                                          PAGE    7


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


*SECNO 4163.200
 4163.200     7.15   158.65   157.87      .00   160.47     1.82      .02      .01   154.50
   30000.      71.   29857.      71.      17.    2755.      17.      35.       6.    154.50
      .01     4.13    10.84     4.13     .040     .032     .040     .000   151.50    26.69
  .005406       4.       4.       4.       2       11        0      .00   503.82   530.51
0
*SECNO 4163.300
 4163.300     7.71   159.21   157.88      .00   160.71     1.50      .21      .03   154.50
   30000.      85.   29830.      85.      22.    3027.      22.      38.       6.    154.50
      .02     3.83     9.85     3.83     .040     .032     .040     .000   151.50    25.57
  .003943      47.      47.      47.       3       11        0      .00   506.05   531.63
0
*SECNO 4235.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4235.000     5.60   162.10   162.10      .00   164.53     2.44      .12      .25   159.50
   30000.      32.   29783.     186.       8.    2372.      29.      39.       6.    156.50
      .02     3.96    12.56     6.40     .040     .032     .040     .000   156.50    18.81
  .008911      14.      14.      14.       0       19        0      .00   505.75   524.57
0
*SECNO 4235.000

3301 HV CHANGED MORE THAN HVINS

 4235.000     6.26   162.76   162.11      .00   164.64     1.88      .06      .06   159.50
   30000.      47.   29751.     202.      13.    2694.      36.      39.       6.    156.50
      .02     3.71    11.04     5.56     .040     .032     .040     .000   156.50    17.25
  .005815       8.       8.       8.       9        5        0      .00   508.54   525.79
0
*SECNO 4435.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
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 4435.000     7.15   164.25   164.25      .00   166.43     2.18     1.84     -.29   169.80
   30000.       0.   30000.       0.       0.    2530.       0.      52.       9.   170.00
      .02      .00    11.86      .00     .000     .032     .000     .000   157.10    28.48
  .009187     200.     200.     200.        0        8        0      .00   581.34   609.83
0
1
   11NOV90      11:52:30                                                                    PAGE    8


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 4640.000
 4640.000     8.61   166.21   165.91      .00   168.17     1.96     1.72      .02   170.00
   30000.       0.   30000.       0.       0.    2667.       0.      64.      12.   170.00
      .03      .00    11.25      .00     .000     .032     .000     .000   157.60  9709.54
  .007727     205.     205.     205.        2       11        0      .00   580.98 10290.51
0
 *SECNO 4980.000

 3301 HV CHANGED MORE THAN HVINS

 4980.000    10.34   168.74   167.49      .00   170.10     1.35     1.86      .06   171.21
   30000.       0.   30000.       0.       0.    3214.       0.      87.      16.   171.21
      .04      .00     9.34      .00     .000     .032     .000     .000   158.40  9704.90
  .004244     340.     340.     340.        2        8        0      .00   590.19 10295.10
0
 *SECNO 5320.000
 5320.000    10.99   170.19   169.30      .00   171.61     1.42     1.50      .02   172.67
   30000.       0.   30000.       0.       0.    3134.       0.     111.      21.   172.67
      .05      .00     9.57      .00     .000     .032     .000     .000   159.20  9707.57
  .004564     340.     340.     340.        3        6        0      .00   584.93 10292.49
0
 *SECNO 5600.000
 5600.000    11.56   171.46   170.50      .00   172.91     1.45     1.29      .01   176.00
   30000.       0.   30000.       0.       0.    3109.       0.     132.      25.   176.00
      .05      .00     9.65      .00     .000     .032     .000     .000   159.90  9709.22
  .004653     280.     280.     280.        2       10        0      .00   581.57 10290.78
0
 *SECNO 5670.000
 5670.000    11.91   171.91   170.73      .00   173.22     1.31      .30      .01   176.40
   30000.       0.   30000.       0.       0.    3264.       0.     137.      25.   176.40
      .06      .00     9.19      .00     .000     .032     .000     .000   160.00  9648.92
  .003954      70.      70.      70.        2       10        0      .00   582.15 10231.08
0
 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS

1
   11NOV90      11:52:30                                                                    PAGE    9
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    10.08   172.80   172.80      .00   175.01     2.21      .03      .26   176.40
    30000.       0.   30000.       0.       0.    2515.       0.     137.      25.    176.40
       .06      .00    11.93      .00     .000     .032     .000     .000   162.72  9703.60
   .016641       2.       2.       2.        0        9        0  -751.23   592.79 10296.40
0
 *SECNO 5750.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.59


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

  5750.100    11.40   174.59   173.19      .00   175.84     1.25      .74      .10   176.83
    30000.       0.   30000.       0.       0.    3343.       0.     142.      27.    176.83
       .06      .00     8.97      .00     .000     .032     .000     .000   163.19  9695.44
   .006599      78.      78.      78.        3       12        0  -736.07   609.12 10304.56
0
 *SECNO 5825.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.03

  5825.000    12.02   175.36   172.18      .00   176.09      .73      .19      .05   177.01
    30000.       0.   30000.       0.       0.    4372.       0.     149.      28.    177.01
       .06      .00     6.86      .00     .000     .032     .000     .000   163.34  9693.41
   .001599      75.      75.      75.        2       19        0      .00   613.19 10306.59
0
 *SECNO 5905.000
  5905.000    11.71   175.44   172.62      .00   176.25      .81      .14      .02   177.20
    30000.       0.   30000.       0.       0.    4158.       0.     156.      29.    177.20
       .07      .00     7.21      .00     .000     .032     .000     .000   163.73  9695.55
   .001872      80.      80.      80.        2       19        0      .00   608.91 10304.45
0
1
   11NOV90      11:52:30                                                                  PAGE   10
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


*SECNO 6100.000
 6100.000    11.34    175.75    173.58       .00    176.74       .99       .43       .06    177.76
   30000.       0.    30000.       0.        0.     3754.        0.      174.       31.     177.76
      .07      .00      7.99      .00      .000      .032      .000      .000    164.41   9700.18
  .002580     195.      195.     195.         2        19         0       .00    599.63  10299.82
0
1
   11NOV90      11:52:30                                                                          PAGE   11


T1       ADJUSTED SLA-TEMPE BY FCD BASED ON ADOPTED PLANS OF 11/7/90
T1       INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T1       SUBCRITICAL RUN - FILL IN PLACE
T1       PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
T2       STRT BASED ON CRITICAL DEPTH
T3       IBW1RIO.DAT              PAZ-DMJM03-13

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

      0         0         0         0        -1         0         0     43000    164.35       0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      2         0        -1         0         0         0        -1         0         0         0

1
   11NOV90      11:52:30                                                                          PAGE   12


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


*PROF 2

IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=      .100 CEHV=      .300
*SECNO 3972.000
3720 CRITICAL DEPTH ASSUMED
 3972.000     5.97    147.97    147.97    164.35    150.95      2.98       .00       .00    142.00
```

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   43000.     186.   42627.     186.      30.    3067.      30.       0.       0.    142.00
      .00     6.32    13.90     6.32    .040     .032    .040     .000   142.00    44.11
  .008275       0.       0.       0.       0       13       0      .00   533.58   577.69
0
 *SECNO 3972.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.68

  3972.100     8.15   150.15   147.97      .00   151.73     1.59      .65      .14   142.00
   43000.     254.   42493.     254.      55.    4186.      55.      13.       2.    142.00
      .00     4.61    10.15     4.61    .040     .032    .040     .000   142.00    40.50
  .002915     150.     150.     150.       3        5       0      .00   540.80   581.30
0
 *SECNO 3972.200
  3972.200     8.39   150.39   147.98      .00   151.88     1.49      .14      .01   142.00
   43000.     261.   42478.     261.      58.    4310.      58.      18.       2.    142.00
      .01     4.48     9.86     4.48    .040     .032    .040     .000   142.00    40.10
  .002643      50.      50.      50.       2       15       0      .00   541.60   581.70
0
 *SECNO 3972.300
  3972.300     8.50   150.50   147.99      .00   151.95     1.45      .07      .00   142.00
   43000.     264.   42471.     264.      60.    4367.      60.      20.       3.    142.00
      .01     4.42     9.73     4.42    .040     .032    .040     .000   142.00    39.92
  .002529      26.      26.      26.       2       15       0      .00   541.97   581.88
0
1
   11NOV90      11:52:30                                                                  PAGE   13


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45

  3973.000    12.11   151.11   146.49      .00   152.05      .94      .04      .05   142.00
   43000.     221.   42559.     221.      69.    5454.      69.      23.       3.    142.00
      .01     3.20     7.80     3.20    .040     .032    .040     .000   139.00    38.89
  .001210      26.      26.      26.       2       11       0      .00   544.01   582.91
0
 *SECNO 3973.100
  3973.100    12.12   151.12   146.48      .00   152.06      .94      .01      .00   142.00
   43000.     221.   42558.     221.      69.    5459.      69.      24.       3.    142.00
      .01     3.20     7.80     3.20    .040     .032    .040     .000   139.00    38.88
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   .001206      8.       8.       8.       0       14       0      .00   544.04   582.92
0
 *SECNO 3973.200
  3973.200     8.85   150.85   147.95     .00   152.19     1.34     .01      .12   142.00
    43000.     275.   42450.     275.     65.    4546.     65.     25.       3.    142.00
       .01     4.24     9.34     4.24    .040     .032    .040    .000   142.00    39.34
   .002209      5.       5.       5.       2        8       0      .00   543.12   582.46
0
 *SECNO 3979.300
  3979.300     9.12   151.12   147.97     .00   152.38     1.26     .19      .01   142.00
    43000.     284.   42433.     284.     69.    4688.     69.     35.       4.    142.00
       .01     4.11     9.05     4.11    .040     .032    .040    .000   142.00    38.88
   .001992      90.      90.      90.       2       14       0      .00   544.04   582.92
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4091.000     7.44   152.44   152.44     .00   155.43     2.99     .13      .47   148.00
    43000.      85.   42831.      85.     16.    3080.     16.     36.       5.    148.00
       .01     5.20    13.90     5.20    .040     .032    .040    .000   145.00    36.66
   .008335      16.      16.      16.       0       15       0      .00   533.27   569.93
0
1
    11NOV90      11:52:30                                                                    PAGE   14


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS

  4091.100     8.19   153.19   152.45     .00   155.55     2.36     .05      .06   148.00
    43000.     105.   42790.     105.     22.    3465.     22.     37.       5.    148.00
       .01     4.73    12.35     4.73    .040     .032    .040    .000   145.00    35.44
   .005618      8.       8.       8.       9        5       0      .00   535.72   571.16
0
 *SECNO 4091.200
  4091.200     8.32   153.32   152.44     .00   155.58     2.26     .02      .01   148.00
    43000.     109.   42782.     109.     23.    3535.     23.     37.       5.    148.00
       .01     4.66    12.10     4.66    .040     .032    .040    .000   145.00    35.22
   .005254      4.       4.       4.       2       11       0      .00   536.17   571.38
0
 *SECNO 4091.300
  4091.300     8.89   153.89   152.44     .00   155.82     1.92     .20      .03   148.00
    43000.     125.   42750.     125.     29.    3834.     29.     41.       5.    148.00
       .01     4.35    11.15     4.35    .040     .032    .040    .000   145.00    34.26
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   .004001      44.      44.      44.       3      11       0     .00   538.08   572.34
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4163.000     7.69   159.19   159.19     .00   162.30     3.10     .13      .32   154.50
    43000.     121.   42757.     121.     22.    3017.      22.     42.       5.   154.50
       .01     5.51    14.17     5.51    .040     .032     .040    .000   151.50    25.62
   .008191      16.      16.      16.       0      15       0     .00   505.97   531.58
0
 *SECNO 4163.100

 3301 HV CHANGED MORE THAN HVINS

  4163.100     8.49   159.99   159.20     .00   162.42     2.42     .05      .07   154.50
    43000.     158.   42683.     158.     30.    3407.      30.     43.       6.   154.50
       .01     5.24    12.53     5.24    .040     .032     .040    .000   151.50    23.83
   .005443      8.       8.       8.      10       5       0     .00   509.55   533.37
0
1
    11NOV90      11:52:30                                                                    PAGE   15


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.200
  4163.200     8.59   160.09   159.19     .00   162.45     2.35     .02      .01   154.50
    43000.     164.   42673.     164.     31.    3455.      31.     43.       6.   154.50
       .01     5.22    12.35     5.22    .040     .032     .040    .000   151.50    23.59
   .005190       4.       4.       4.       2      11       0     .00   510.02   533.61
0
 *SECNO 4163.300
  4163.300     9.20   160.70   159.20     .00   162.69     1.99     .21      .04   154.50
    43000.     194.   42612.     194.     39.    3751.      39.     47.       6.   154.50
       .01     5.02    11.36     5.02    .040     .032     .040    .000   151.50    22.14
   .003935      47.      47.      47.       3      11       0     .00   512.91   535.06
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     6.92   163.42   163.42     .00   166.49     3.07     .11      .30   159.50
    43000.      91.   42597.     312.     18.    3017.      44.     48.       6.   156.50
       .01     4.98    14.12     7.05    .040     .032     .040    .000   156.50    15.67
   .008176      14.      14.      14.       0      15       0     .00   511.33   527.01
```

```
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

  4235.000     7.68   164.18   163.42      .00   166.61     2.42      .05      .06   159.50
    43000.     120.   42540.     340.      26.    3390.      55.      49.       6.   156.50
       .01     4.61    12.55     6.22     .040     .032     .040     .000   156.50    13.86
   .005525       8.       8.       8.       10        5        0      .00   514.57   528.42
0
 *SECNO 4435.000
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4435.000     8.32   165.42   165.42      .00   168.19     2.77     1.74     -.25   169.80
    43000.       0.   43000.       0.       0.    3219.       0.      64.       9.   170.00
       .02      .00    13.36      .00     .000     .032     .000     .000   157.10    22.47
   .008686     200.     200.     200.        0        8        0      .00   592.49   614.96
0
1
    11NOV90      11:52:30                                                                    PAGE   16


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4640.000
  4640.000     9.67   167.27   167.19      .00   169.92     2.65     1.72      .01   170.00
    43000.       0.   43000.       0.       0.    3293.       0.      79.      12.   170.00
       .02      .00    13.06      .00     .000     .032     .000     .000   157.60  9703.38
   .008093     205.     205.     205.        2        8        0      .00   593.31 10296.69
0
 *SECNO 4980.000

 3301 HV CHANGED MORE THAN HVINS

  4980.000    11.74   170.14   168.71      .00   171.89     1.76     1.88      .09   171.21
    43000.       0.   43000.       0.       0.    4044.       0.     108.      16.   171.21
       .03      .00    10.63      .00     .000     .032     .000     .000   158.40  9696.58
   .004207     340.     340.     340.        1        8        0      .00   606.84 10303.42
0
 *SECNO 5320.000
  5320.000    12.36   171.56   170.27      .00   173.40     1.85     1.48      .03   172.67
    43000.       0.   43000.       0.       0.    3944.       0.     139.      21.   172.67
       .04      .00    10.90      .00     .000     .032     .000     .000   159.20  9699.37
   .004519     340.     340.     340.        3       11        0      .00   601.34 10300.71
0
 *SECNO 5600.000
  5600.000    12.91   172.81   171.56      .00   174.70     1.88     1.28      .01   176.00
    43000.       0.   43000.       0.       0.    3904.       0.     165.      25.   176.00
       .05      .00    11.02      .00     .000     .032     .000     .000   159.90  9701.13
   .004645     280.     280.     280.        2       11        0      .00   597.74 10298.87
```

```
0
 *SECNO 5670.000
  5670.000    13.29   173.29   171.74      .00   175.01     1.73      .30      .02   176.40
    43000.       0.   43000.       0.       0.    4076.       0.     171.      26.    176.40
       .05      .00    10.55      .00     .000     .032     .000     .000   160.00  9640.68
   .004024      70.      70.      70.        2       15        0      .00   598.64 10239.32
0
 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS

1
    11NOV90      11:52:30                                                                          PAGE   17


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    11.25   173.97   173.97      .00   176.74     2.78      .03      .30   176.40
    43000.       0.   43000.       0.       0.    3215.       0.     171.      26.    176.40
       .05      .00    13.37      .00     .000     .032     .000     .000   162.72  9696.59
   .015383       2.       2.       2.        0       12        0  -751.23   606.81 10303.41
0
 *SECNO 5750.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.52


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

  5750.100    12.74   175.93   174.43      .00   177.58     1.66      .73      .11   176.83
    43000.       0.   43000.       0.       0.    4165.       0.     178.      27.    176.83
       .05      .00    10.32      .00     .000     .032     .000     .000   163.19  9687.44
   .006668      78.      78.      78.        3       12        0  -736.07   625.12 10312.56
0
 *SECNO 5825.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.92

  5825.000    13.49   176.83   173.40      .00   177.86     1.03      .21      .06   177.01
```

```
   43000.       0.   43000.       0.       0.    5291.       0.     186.      28.    177.01
      .05      .00     8.13      .00     .000     .032     .000     .000   163.34  9684.56
  .001808      75.      75.      75.        2       15        0      .00   630.88 10315.44
0
 *SECNO 5905.000
 5905.000    13.20   176.93   173.84      .00   178.04     1.11      .15      .03   177.20
   43000.       0.   43000.       0.       0.    5075.       0.     195.      29.    177.20
      .06      .00     8.47      .00     .000     .032     .000     .000   163.73  9686.64
  .002058      80.      80.      80.        2       19        0      .00   626.72 10313.36
0
1
   11NOV90      11:52:30                                                                    PAGE   18


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 6100.000
 6100.000    12.83   177.24   174.88      .00   178.56     1.32      .46      .06   177.76
   43000.       0.   43000.       0.       0.    4665.       0.     217.      32.    177.76
      .06      .00     9.22      .00     .000     .032     .000     .000   164.41  9691.20
  .002674     195.     195.     195.        2       16        0      .00   617.60 10308.80
0
1
   11NOV90      11:52:30                                                                    PAGE   19


 T1      ADJUSTED SLA-TEMPE BY FCD BASED ON ADOPTED PLANS OF 11/7/90
 T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
 T1      SUBCRITICAL RUN - FILL IN PLACE
 T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T2      STRT BASED ON CRITICAL DEPTH
 T3      IBW1RIO.DAT             PAZ-DMJMO3-13

 J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0        0        0        0       -1        0        0     51000    165.60     0

 J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

       3        0       -1        0        0        0       -1        0        0        0

1
   11NOV90      11:52:30                                                                    PAGE   20


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST
```

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*PROF 3

IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=     .100 CEHV=     .300
*SECNO 3972.000
3720 CRITICAL DEPTH ASSUMED
 3972.000     6.70   148.70   148.70   165.60   152.02     3.32      .00      .00   142.00
   51000.     248.   50504.     248.      37.    3441.      37.       0.       0.    142.00
      .00     6.67    14.68     6.67     .040     .032     .040     .000   142.00    42.90
  .007910       0.       0.       0.        0       13        0      .00   536.00   578.90
0
*SECNO 3972.100

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.63

 3972.100     8.98   150.98   148.69      .00   152.81     1.83      .65      .15   142.00
   51000.     331.   50338.     331.      67.    4612.      67.      14.       2.    142.00
      .00     4.96    10.91     4.96     .040     .032     .040     .000   142.00    39.13
  .002961     150.     150.     150.        3        5        0      .00   543.55   582.67
0
*SECNO 3972.200
 3972.200     9.24   151.24   148.69      .00   152.96     1.72      .14      .01   142.00
   51000.     341.   50318.     341.      71.    4751.      71.      20.       2.    142.00
      .01     4.81    10.59     4.81     .040     .032     .040     .000   142.00    38.68
  .002679      50.      50.      50.        1       15        0      .00   544.45   583.12
0
*SECNO 3972.300
 3972.300     9.35   151.35   148.70      .00   153.04     1.68      .07      .00   142.00
   51000.     345.   50311.     345.      72.    4805.      72.      23.       3.    142.00
      .01     4.76    10.47     4.76     .040     .032     .040     .000   142.00    38.50
  .002581      26.      26.      26.        2       15        0      .00   544.79   583.30
0
1
   11NOV90      11:52:30                                                                    PAGE   21


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


*SECNO 3973.000

3301 HV CHANGED MORE THAN HVINS
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3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

 3973.000    13.02   152.02   147.21      .00   153.14     1.11      .04      .06   142.00
   51000.     294.   50412.     294.      83.    5924.      83.      26.       3.   142.00
      .01     3.52     8.51     3.52     .040     .032     .040     .000   139.00    37.38
  .001289      26.      26.      26.        2       11        0      .00   547.04   584.42
0
 *SECNO 3973.100
 3973.100    13.04   152.04   147.20      .00   153.15     1.11      .01      .00   142.00
   51000.     294.   50412.     294.      84.    5929.      84.      27.       3.   142.00
      .01     3.52     8.50     3.52     .040     .032     .040     .000   139.00    37.36
  .001286       8.       8.       8.        0       14        0      .00   547.07   584.44
0
 *SECNO 3973.200
 3973.200     9.74   151.74   148.68      .00   153.29     1.55      .01      .13   142.00
   51000.     359.   50282.     359.      79.    5004.      79.      28.       3.   142.00
      .01     4.57    10.05     4.57     .040     .032     .040     .000   142.00    37.86
  .002252       5.       5.       5.        2       11        0      .00   546.08   583.94
0
 *SECNO 3979.300
 3979.300    10.03   152.03   148.69      .00   153.49     1.46      .19      .01   142.00
   51000.     369.   50261.     369.      83.    5153.      83.      39.       4.   142.00
      .01     4.43     9.75     4.43     .040     .032     .040     .000   142.00    37.38
  .002040      90.      90.      90.        2       14        0      .00   547.04   584.42
0
 *SECNO 4091.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4091.000     8.15   153.15   153.15      .00   156.50     3.34      .13      .52   148.00
   51000.     124.   50753.     124.      22.    3451.      22.      40.       5.   148.00
      .01     5.63    14.71     5.63     .040     .032     .040     .000   145.00    35.48
  .008012      16.      16.      16.        0       15        0      .00   535.63   571.12
0
1
   11NOV90      11:52:30                                                                PAGE   22


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 4091.100

3301 HV CHANGED MORE THAN HVINS

 4091.100     8.99   153.99   153.17      .00   156.62     2.64      .05      .07   148.00
   51000.     151.   50698.     151.      30.    3881.      30.      41.       5.   148.00
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      .01     5.11    13.06     5.11     .040     .032     .040     .000   145.00    34.11
   .005404      8.       8.       8.       10        5        0      .00   538.37   572.49
0
 *SECNO 4091.200
  4091.200     9.08   154.08   153.16      .00   156.65     2.57      .02      .01   148.00
    51000.     155.   50691.     155.      31.    3933.      31.      41.       5.    148.00
      .01     5.05    12.89     5.05     .040     .032     .040     .000   145.00    33.95
   .005168       4.       4.       4.        2       11        0      .00   538.71   572.65
0
 *SECNO 4091.300
  4091.300     9.69   154.69   153.16      .00   156.89     2.20      .20      .04   148.00
    51000.     175.   50650.     175.      37.    4247.      37.      45.       5.    148.00
      .01     4.73    11.93     4.73     .040     .032     .040     .000   145.00    32.95
   .003996      44.      44.      44.        3       11        0      .00   540.70   573.65
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4163.000     8.47   159.97   159.97      .00   163.40     3.43      .12      .34   154.50
    51000.     186.   50627.     186.      30.    3394.      30.      47.       6.    154.50
      .01     6.23    14.92     6.23     .040     .032     .040     .000   151.50    23.89
   .007756      16.      16.      16.        0       11        0      .00   509.42   533.31
0
 *SECNO 4163.100

 3301 HV CHANGED MORE THAN HVINS

  4163.100     9.28   160.78   159.96      .00   163.52     2.74      .05      .07   154.50
    51000.     235.   50530.     235.      40.    3791.      40.      47.       6.    154.50
      .01     5.91    13.33     5.91     .040     .032     .040     .000   151.50    21.95
   .005344       8.       8.       8.       10        5        0      .00   513.30   535.25
0
1
    11NOV90      11:52:30                                                                  PAGE   23


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.200
  4163.200     9.38   160.88   159.95      .00   163.55     2.67      .02      .01   154.50
    51000.     241.   50518.     241.      41.    3841.      41.      48.       6.    154.50
      .01     5.86    13.15     5.86     .040     .032     .040     .000   151.50    21.70
   .005112       4.       4.       4.        2       11        0      .00   513.79   535.50
0
 *SECNO 4163.300
  4163.300    10.02   161.52   159.95      .00   163.80     2.27      .21      .04   154.50
    51000.     278.   50444.     278.      50.    4152.      50.      52.       6.    154.50
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      .01     5.56    12.15     5.56     .040     .032     .040     .000   151.50    20.19
  .003933      47.      47.      47.        3       11        0      .00   516.83   537.01
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     7.65   164.15   164.15      .00   167.59     3.44      .11      .32   159.50
    51000.     141.   50457.     402.      26.    3377.      54.      53.       6.    156.50
      .01     5.48    14.94     7.41     .040     .032     .040     .000   156.50    13.92
  .007878      14.      14.      14.        0       15        0      .00   514.45   528.37
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

  4235.000     8.48   164.98   164.16      .00   167.71     2.73      .05      .07   159.50
    51000.     181.   50383.     436.      36.    3779.      67.      54.       6.    156.50
      .01     5.06    13.33     6.56     .040     .032     .040     .000   156.50    11.96
  .005397       8.       8.       8.       10        5        0      .00   517.93   529.89
0
 *SECNO 4435.000
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4435.000     8.99   166.09   166.09      .00   169.17     3.09     1.68     -.23   169.80
    51000.       0.   51000.       0.       0.    3616.       0.      71.       9.    170.00
      .02      .00    14.10      .00     .000     .032     .000     .000   157.10    19.05
  .008410     200.     200.     200.        0        8        0      .00   598.83   617.87
0
1
    11NOV90      11:52:30                                                                    PAGE   24


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 4640.000
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000    10.26   167.86   167.86      .00   170.90     3.04     1.69      .02   170.00
    51000.       0.   51000.       0.       0.    3643.       0.      88.      12.    170.00
      .02      .00    14.00      .00     .000     .032     .000     .000   157.60  9699.98
  .008253     205.     205.     205.        0        8        0      .00   600.11 10300.09
0
 *SECNO 4980.000

 3301 HV CHANGED MORE THAN HVINS
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3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.41

 4980.000    12.52   170.92   169.40      .00   172.89     1.97     1.88      .11   171.21
   51000.       0.   51000.       0.       0.    4526.       0.     120.      17.    171.21
      .03      .00    11.27      .00     .000     .032     .000     .000   158.40  9691.85
  .004151     340.     340.     340.        2        8        0      .00   616.31 10308.15
0
 *SECNO 5320.000
 5320.000    13.11   172.31   170.95      .00   174.39     2.09     1.47      .03   172.67
   51000.       0.   51000.       0.       0.    4399.       0.     155.      21.    172.67
      .04      .00    11.59      .00     .000     .032     .000     .000   159.20  9694.87
  .004508     340.     340.     340.        3       11        0      .00   610.36 10305.23
0
 *SECNO 5600.000
 5600.000    13.66   173.56   172.25      .00   175.69     2.13     1.28      .01   176.00
   51000.       0.   51000.       0.       0.    4351.       0.     183.      25.    176.00
      .04      .00    11.72      .00     .000     .032     .000     .000   159.90  9696.67
  .004641     280.     280.     280.        2       11        0      .00   606.66 10303.33
0
 *SECNO 5670.000
 5670.000    14.04   174.04   172.44      .00   176.01     1.97      .30      .02   176.40
   51000.       0.   51000.       0.       0.    4533.       0.     190.      26.    176.40
      .05      .00    11.25      .00     .000     .032     .000     .000   160.00  9636.13
  .004054      70.      70.      70.        2       15        0      .00   607.74 10243.87
0
1
   11NOV90      11:52:30                                                                    PAGE   25


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 5672.100    11.97   174.69   174.69      .00   177.71     3.02      .03      .31   176.40
   51000.       0.   51000.       0.       0.    3658.       0.     191.      26.    176.40
      .05      .00    13.94      .00     .000     .032     .000     .000   162.72  9692.25
  .014261       2.       2.       2.        0       12        0  -751.23   615.51 10307.75
0
 *SECNO 5750.100

 3301 HV CHANGED MORE THAN HVINS
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45


3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 5750.100    13.45   176.64   175.05      .00   178.54     1.90      .72      .11   176.83
   51000.       0.   51000.       0.       0.    4610.       0.     198.      27.    176.83
      .05      .00    11.06      .00     .000     .032     .000     .000   163.19  9683.20
  .006772      78.      78.      78.        3       15        0  -736.07   633.60 10316.80
0
 *SECNO 5825.000
 3280 CROSS SECTION   5825.00 EXTENDED       .62 FEET


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.89

 5825.000    14.29   177.63   174.08      .00   178.83     1.20      .22      .07   177.01
   51000.       0.   51000.       0.       0.    5793.       0.     207.      28.    177.01
      .05      .00     8.80      .00     .000     .032     .000     .000   163.34  9683.50
  .001893      75.      75.      75.        2       15        0      .00   633.00 10316.50
0
1
   11NOV90      11:52:30                                                                    PAGE   26


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5905.000
 3280 CROSS SECTION   5905.00 EXTENDED       .52 FEET

 5905.000    13.99   177.72   174.52      .00   179.02     1.30      .16      .03   177.20
   51000.       0.   51000.       0.       0.    5576.       0.     217.      30.    177.20
      .05      .00     9.15      .00     .000     .032     .000     .000   163.73  9685.00
  .002136      80.      80.      80.        2       19        0      .00   630.00 10315.00
0
 *SECNO 6100.000
 3280 CROSS SECTION   6100.00 EXTENDED       .28 FEET

 6100.000    13.63   178.04   175.48      .00   179.56     1.52      .47      .07   177.76
   51000.       0.   51000.       0.       0.    5162.       0.     241.      32.    177.76
      .06      .00     9.88      .00     .000     .032     .000     .000   164.41  9688.10
  .002724     195.     195.     195.        2       15        0      .00   623.80 10311.90
0
1
   11NOV90      11:52:30                                                                    PAGE   27
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T1      ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPTED PLANS OF 11/7/90
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T1      SUBCRITICAL RUN - FILL IN PLACE
T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
T2      STRT BASED ON CRITICAL DEPTH
T3      IBW1RIO.DAT             PAZ-DMJM03-13

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        0        0        0       -1        0        0    63000   168.01     0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     15        0       -1        0        0        0       -1        0        0        0

1
   11NOV90      11:52:30                                                                    PAGE   28


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *PROF 4

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 3972.000
 3720 CRITICAL DEPTH ASSUMED
  3972.000     7.72   149.72   149.72   168.01   153.52     3.80      .00      .00   142.00
    63000.     352.   62295.     352.      49.    3966.      49.       0.       0.   142.00
       .00     7.14    15.71     7.14     .040     .032     .040     .000   142.00    41.21
   .007497       0.       0.       0.        0       13        0      .00   539.39   580.59
0
 *SECNO 3972.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.58

  3972.100    10.14   152.14   149.69      .00   154.32     2.18      .64      .16   142.00
    63000.     461.   62077.     461.      85.    5211.      85.      16.       2.   142.00
       .00     5.41    11.91     5.41     .040     .032     .040     .000   142.00    37.19
   .002997     150.     150.     150.        4        5        0      .00   547.41   584.61
0
 *SECNO 3972.200
```

```
 3972.200    10.41   152.41   149.69      .00   154.47     2.07      .14      .01   142.00
   63000.     473.   62054.     473.      90.    5346.      90.      23.       3.   142.00
      .00     5.27    11.61     5.27     .040     .032     .040     .000   142.00    36.76
  .002751      50.      50.      50.        0       15        0      .00   548.28   585.04
0
 *SECNO 3972.300
 3972.300    10.53   152.53   149.70      .00   154.55     2.02      .07      .01   142.00
   63000.     479.   62042.     479.      92.    5413.      92.      26.       3.   142.00
      .01     5.21    11.46     5.21     .040     .032     .040     .000   142.00    36.54
  .002638      26.      26.      26.        2       15        0      .00   548.71   585.26
0
1
   11NOV90      11:52:30                                                                    PAGE   29


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS

 3973.000    14.29   153.29   148.23      .00   154.66     1.37      .05      .06   142.00
   63000.     418.   62164.     418.     106.    6576.     106.      30.       3.   142.00
      .01     3.95     9.45     3.95     .040     .032     .040     .000   139.00    35.28
  .001384      26.      26.      26.        2       11        0      .00   551.25   586.52
0
 *SECNO 3973.100
 3973.100    14.30   153.30   148.21      .00   154.67     1.37      .01      .00   142.00
   63000.     418.   62163.     418.     106.    6579.     106.      31.       3.   142.00
      .01     3.95     9.45     3.95     .040     .032     .040     .000   139.00    35.27
  .001382       8.       8.       8.        0       14        0      .00   551.27   586.53
0
 *SECNO 3973.200
 3973.200    10.97   152.97   149.69      .00   154.83     1.85      .01      .14   142.00
   63000.     499.   62003.     499.     100.    5638.     100.      31.       3.   142.00
      .01     5.00    11.00     5.00     .040     .032     .040     .000   142.00    35.81
  .002299       5.       5.       5.        2       11        0      .00   550.17   585.99
0
 *SECNO 3979.300
 3979.300    11.28   153.28   149.69      .00   155.03     1.75      .20      .01   142.00
   63000.     512.   61975.     512.     105.    5797.     105.      44.       4.   142.00
      .01     4.86    10.69     4.86     .040     .032     .040     .000   142.00    35.30
  .002095      90.      90.      90.        2       19        0      .00   551.19   586.50
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
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 4091.000     9.16   154.16   154.16      .00   158.00     3.84      .12      .58   148.00
   63000.      194.  62612.     194.      31.    3972.      31.      46.       5.   148.00
      .01     6.19    15.76     6.19     .040     .032     .040     .000   145.00    33.82
  .007630      16.      16.      16.        0       15        0      .00   538.95   572.78
0
1
   11NOV90      11:52:30                                                                    PAGE   30


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS

 4091.100    10.06   155.06   154.17      .00   158.12     3.06      .05      .08   148.00
   63000.      232.  62536.     232.      41.    4440.      41.      46.       5.   148.00
      .01     5.63    14.08     5.63     .040     .032     .040     .000   145.00    32.33
  .005251       8.       8.       8.       10        5        0      .00   541.94   574.27
0
 *SECNO 4091.200
 4091.200    10.17   155.17   154.16      .00   158.15     2.98      .02      .01   148.00
   63000.      236.  62527.     236.      42.    4496.      42.      47.       5.   148.00
      .01     5.57    13.91     5.57     .040     .032     .040     .000   145.00    32.16
  .005037       4.       4.       4.        2       11        0      .00   542.29   574.44
0
 *SECNO 4091.300
 4091.300    10.80   155.80   154.16      .00   158.39     2.59      .20      .04   148.00
   63000.      263.  62474.     263.      50.    4824.      50.      52.       5.   148.00
      .01     5.23    12.95     5.23     .040     .032     .040     .000   145.00    31.11
  .003975      44.      44.      44.        3       11        0      .00   544.38   575.49
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 4163.000     9.50   161.00   161.00      .00   164.95     3.94      .12      .38   154.50
   63000.      306.  62387.     306.      43.    3899.      43.      53.       6.   154.50
      .01     7.17    16.00     7.17     .040     .032     .040     .000   151.50    21.42
  .007416      16.      16.      16.        0       11        0      .00   514.36   535.78
0
 *SECNO 4163.100

 3301 HV CHANGED MORE THAN HVINS

 4163.100    10.40   161.90   161.00      .00   165.07     3.17      .05      .08   154.50
   63000.      371.  62259.     371.      56.    4336.      56.      54.       6.   154.50
      .01     6.64    14.36     6.64     .040     .032     .040     .000   151.50    19.29
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   .005184       8.       8.       8.       10        5        0      .00   518.63   537.91
0
1
   11NOV90      11:52:30                                                                          PAGE   31


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.200
  4163.200    10.51   162.01   160.99      .00   165.10     3.09      .02      .01   154.50
   63000.      378.   62243.     378.      58.    4390.      58.      54.       6.    154.50
      .01     6.57    14.18     6.57     .040     .032     .040     .000   151.50    19.02
   .004972       4.       4.       4.        2       11        0      .00   519.15   538.18
0
 *SECNO 4163.300
  4163.300    11.18   162.68   160.99      .00   165.35     2.67      .20      .04   154.50
   63000.      425.   62149.     425.      69.    4714.      69.      59.       6.    154.50
      .01     6.19    13.18     6.19     .040     .032     .040     .000   151.50    17.44
   .003910      47.      47.      47.        3       11        0      .00   522.32   539.76
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     8.69   165.19   165.19      .00   169.13     3.94      .10      .36   159.50
   63000.      236.   62214.     550.      39.    3884.      70.      61.       6.    156.50
      .01     6.12    16.02     7.87     .040     .032     .040     .000   156.50    11.45
   .007509      14.      14.      14.        0       15        0      .00   518.84   530.29
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

  4235.000     9.59   166.09   165.20      .00   169.26     3.17      .05      .08   159.50
   63000.      291.   62111.     597.      52.    4323.      85.      62.       7.    156.50
      .01     5.64    14.37     7.02     .040     .032     .040     .000   156.50     9.32
   .005240       8.       8.       8.       10        5        0      .00   522.63   531.95
0
 *SECNO 4435.000
  4435.000    10.12   167.22   167.03      .00   170.55     3.33     1.24      .05   169.80
   63000.        0.   63000.       0.       0.    4304.       0.      82.       9.    170.00
      .02      .00    14.64      .00     .000     .032     .000     .000   157.10    13.21
   .007357     200.     200.     200.        2        8        0      .00   609.65   622.86
0
1
   11NOV90      11:52:30                                                                          PAGE   32
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4640.000
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000    11.18   168.78   168.78      .00   172.27     3.49     1.64     -.02   170.00
    63000.       0.   63000.       0.       0.    4201.       0.     102.      12.    170.00
       .02      .00    15.00      .00     .000     .032     .000     .000   157.60  9694.65
   .008019     205.     205.     205.        0        8        0      .00   610.79 10305.43
0
 *SECNO 4980.000
 3280 CROSS SECTION   4980.00 EXTENDED       .73 FEET


 3301 HV CHANGED MORE THAN HVINS

  4980.000    13.53   171.93   170.36      .00   174.25     2.32     1.86      .12   171.21
    63000.       0.   63000.       0.       0.    5158.       0.     138.      17.    171.21
       .03      .00    12.21      .00     .000     .032     .000     .000   158.40  9690.10
   .004142     340.     340.     340.        2        8        0      .00   619.80 10309.90
0
 *SECNO 5320.000
 3280 CROSS SECTION   5320.00 EXTENDED       .64 FEET

  5320.000    14.11   173.31   171.92      .00   175.76     2.45     1.47      .04   172.67
    63000.       0.   63000.       0.       0.    5014.       0.     178.      22.    172.67
       .04      .00    12.57      .00     .000     .032     .000     .000   159.20  9692.70
   .004504     340.     340.     340.        3       11        0      .00   614.70 10307.40
0
 *SECNO 5600.000
  5600.000    14.66   174.56   173.22      .00   177.06     2.50     1.29      .01   176.00
    63000.       0.   63000.       0.       0.    4966.       0.     210.      26.    176.00
       .04      .00    12.69      .00     .000     .032     .000     .000   159.90  9690.65
   .004681     280.     280.     280.        2       11        0      .00   618.70 10309.35
0
 *SECNO 5670.000
  5670.000    15.07   175.07   173.40      .00   177.38     2.31      .31      .02   176.40
    63000.       0.   63000.       0.       0.    5167.       0.     218.      27.    176.40
       .04      .00    12.19      .00     .000     .032     .000     .000   160.00  9629.93
   .004108      70.      70.      70.        2       15        0      .00   620.13 10250.07
0
1
   11NOV90      11:52:30                                                                    PAGE   33


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
```

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*SECNO 5672.100

3301 HV CHANGED MORE THAN HVINS


3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5672.100    12.85   175.57   175.57      .00   179.06     3.48      .03      .34   176.40
   63000.       0.   63000.       0.       0.    4206.       0.     218.      27.    176.40
      .04      .00    14.98      .00     .000     .032     .000     .000   162.72  9686.96
  .013883       2.       2.       2.        0       15        0  -751.23   626.09 10313.04
0
*SECNO 5750.100
3280 CROSS SECTION   5750.10 EXTENDED       .84 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44


3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 5750.100    14.48   177.67   176.00      .00   179.89     2.22      .70      .13   176.83
   63000.       0.   63000.       0.       0.    5268.       0.     227.      28.    176.83
      .04      .00    11.96      .00     .000     .032     .000     .000   163.19  9682.00
  .006661      78.      78.      78.        4       15        0  -736.07   636.00 10318.00
0
*SECNO 5825.000
3280 CROSS SECTION   5825.00 EXTENDED      1.72 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.83

 5825.000    15.39   178.73   175.04      .00   180.19     1.46      .23      .08   177.01
   63000.       0.   63000.       0.       0.    6493.       0.     237.      29.    177.01
      .05      .00     9.70      .00     .000     .032     .000     .000   163.34  9683.50
  .001984      75.      75.      75.        2       15        0      .00   633.00 10316.50
0
1
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SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST
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 *SECNO 5905.000
 3280 CROSS SECTION   5905.00 EXTENDED      1.63 FEET

  5905.000    15.09   178.82   175.47      .00   180.39     1.57      .17      .03   177.20
    63000.       0.   63000.       0.       0.    6271.       0.     249.      30.    177.20
       .05      .00    10.05      .00     .000     .032     .000     .000   163.73  9685.00
   .002213      80.      80.      80.        2       19        0      .00   630.00 10315.00
0
 *SECNO 6100.000
 3280 CROSS SECTION   6100.00 EXTENDED      1.38 FEET

  6100.000    14.73   179.14   176.44      .00   180.95     1.80      .48      .07   177.76
    63000.       0.   63000.       0.       0.    5849.       0.     276.      33.    177.76
       .05      .00    10.77      .00     .000     .032     .000     .000   164.41  9688.10
   .002752     195.     195.     195.        2       15        0      .00   623.80 10311.90
0
1
    11NOV90      11:52:30                                                                          PAGE   35


                                                                          THIS RUN EXECUTED 11NOV90     11:52:51
 ***************************************************
   HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

   ERROR CORR -  01,02,03
   MODIFICATION -
 ***************************************************


 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


 REVIBW.DAT

 SUMMARY PRINTOUT
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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	3972.000	146.72	5.59	12.30	5.59	102.95	29794.10	102.95	4.72	529.43	46.19	575.61
*	3972.000	147.97	6.32	13.90	6.32	186.43	42627.13	186.43	5.97	533.58	44.11	577.69
*	3972.000	148.70	6.67	14.68	6.67	247.87	50504.25	247.87	6.70	536.00	42.90	578.90
*	3972.000	149.72	7.14	15.71	7.14	352.39	62295.21	352.39	7.72	539.39	41.21	580.59
*	3972.100	148.64	3.96	8.71	3.96	144.57	29710.87	144.57	6.64	535.81	43.00	578.80
*	3972.100	150.15	4.61	10.15	4.61	253.68	42492.64	253.68	8.15	540.80	40.50	581.30
*	3972.100	150.98	4.96	10.91	4.96	331.09	50337.82	331.09	8.98	543.55	39.13	582.67
*	3972.100	152.14	5.41	11.91	5.41	461.35	62077.30	461.35	10.14	547.41	37.19	584.61
	3972.200	148.85	3.83	8.43	3.83	149.18	29701.65	149.18	6.85	536.52	42.64	579.16

	3972.200	150.39	4.48	9.86	4.48	261.10	42477.80	261.10	8.39	541.60	40.10	581.70
	3972.200	151.24	4.81	10.59	4.81	340.96	50318.07	340.96	9.24	544.45	38.68	583.12
	3972.200	152.41	5.27	11.61	5.27	473.11	62053.79	473.11	10.41	548.28	36.76	585.04
	3972.300	148.95	3.78	8.31	3.78	151.30	29697.41	151.30	6.95	536.84	42.48	579.32
	3972.300	150.50	4.42	9.73	4.42	264.49	42471.02	264.49	8.50	541.97	39.92	581.88
	3972.300	151.35	4.76	10.47	4.76	344.74	50310.53	344.74	9.35	544.79	38.50	583.30
	3972.300	152.53	5.21	11.46	5.21	478.93	62042.15	478.93	10.53	548.71	36.54	585.26
*	3973.000	149.45	2.60	6.47	2.60	119.77	29760.45	119.78	10.45	538.51	41.65	580.15
*	3973.000	151.11	3.20	7.80	3.20	220.55	42558.90	220.55	12.11	544.01	38.89	582.91
*	3973.000	152.02	3.52	8.51	3.52	293.75	50412.49	293.75	13.02	547.04	37.38	584.42
	3973.000	153.29	3.95	9.45	3.95	418.14	62163.71	418.14	14.29	551.25	35.28	586.52
	3973.100	149.46	2.60	6.46	2.60	119.99	29760.02	119.99	10.46	538.54	41.63	580.17
	3973.100	151.12	3.20	7.80	3.20	220.83	42558.34	220.83	12.12	544.04	38.88	582.92
	3973.100	152.04	3.52	8.50	3.52	294.04	50411.91	294.05	13.04	547.07	37.36	584.44
	3973.100	153.30	3.95	9.45	3.95	418.42	62163.14	418.42	14.30	551.27	35.27	586.53
	3973.200	149.23	3.63	7.99	3.63	157.34	29685.33	157.34	7.23	537.77	42.01	579.79
	3973.200	150.85	4.24	9.34	4.24	275.22	42449.55	275.23	8.85	543.12	39.34	582.46
	3973.200	151.74	4.57	10.05	4.57	358.82	50282.36	358.82	9.74	546.08	37.86	583.94
	3973.200	152.97	5.00	11.00	5.00	498.60	62002.80	498.60	10.97	550.17	35.81	585.99

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	3979.300	149.48	3.51	7.72	3.51	162.73	29674.54	162.73	7.48	538.60	41.60	580.20
	3979.300	151.12	4.11	9.05	4.11	283.72	42432.56	283.72	9.12	544.04	38.88	582.92
	3979.300	152.03	4.43	9.75	4.43	369.37	50261.27	369.37	10.03	547.04	37.38	584.42
	3979.300	153.28	4.86	10.69	4.86	512.35	61975.30	512.35	11.28	551.19	35.30	586.50
*	4091.000	151.17	4.33	12.35	4.33	36.01	29927.99	36.01	6.17	529.08	38.76	567.84
*	4091.000	152.44	5.20	13.90	5.20	84.69	42830.62	84.69	7.44	533.27	36.66	569.93
*	4091.000	153.15	5.63	14.71	5.63	123.65	50752.70	123.65	8.15	535.63	35.48	571.12
*	4091.000	154.16	6.19	15.76	6.19	194.03	62611.94	194.03	9.16	538.95	33.82	572.78
	4091.100	151.84	3.94	10.82	3.94	47.78	29904.45	47.78	6.84	531.26	37.67	568.93
	4091.100	153.19	4.73	12.35	4.73	105.01	42789.98	105.01	8.19	535.72	35.44	571.16
	4091.100	153.99	5.11	13.06	5.11	151.19	50697.61	151.19	8.99	538.37	34.11	572.49
	4091.100	155.06	5.63	14.08	5.63	231.77	62536.45	231.77	10.06	541.94	32.33	574.27
	4091.200	151.94	3.88	10.60	3.88	49.77	29900.47	49.77	6.94	531.62	37.49	569.11
	4091.200	153.32	4.66	12.10	4.66	108.75	42782.50	108.75	8.32	536.17	35.22	571.38
	4091.200	154.08	5.05	12.89	5.05	154.56	50690.89	154.56	9.08	538.71	33.95	572.65
	4091.200	155.17	5.57	13.91	5.57	236.27	62527.46	236.27	10.17	542.29	32.16	574.44
	4091.300	152.48	3.61	9.62	3.61	60.03	29879.95	60.03	7.48	533.44	36.58	570.02
	4091.300	153.89	4.35	11.15	4.35	124.92	42750.15	124.92	8.89	538.08	34.26	572.34
	4091.300	154.69	4.73	11.93	4.73	174.95	50650.10	174.95	9.69	540.70	32.95	573.65
	4091.300	155.80	5.23	12.95	5.23	263.05	62473.89	263.05	10.80	544.38	31.11	575.49

*	4163.000	157.87	4.61	12.60	4.61	52.39	29895.22	52.39	6.37	500.68	28.26	528.94
*	4163.000	159.19	5.51	14.17	5.51	121.35	42757.31	121.35	7.69	505.97	25.62	531.58
*	4163.000	159.97	6.23	14.92	6.23	186.28	50627.45	186.28	8.47	509.42	23.89	533.31
*	4163.000	161.00	7.17	16.00	7.17	306.48	62387.03	306.48	9.50	514.36	21.42	535.78
	4163.100	158.55	4.19	11.06	4.19	68.51	29862.98	68.51	7.05	503.37	26.91	530.29
	4163.100	159.99	5.24	12.53	5.24	158.44	42683.12	158.44	8.49	509.55	23.83	533.37
	4163.100	160.78	5.91	13.33	5.91	235.07	50529.86	235.07	9.28	513.30	21.95	535.25
	4163.100	161.90	6.64	14.36	6.64	370.59	62258.81	370.59	10.40	518.63	19.29	537.91
	4163.200	158.65	4.13	10.84	4.13	71.27	29857.46	71.27	7.15	503.82	26.69	530.51
	4163.200	160.09	5.22	12.35	5.22	163.55	42672.90	163.55	8.59	510.02	23.59	533.61
	4163.200	160.88	5.86	13.15	5.86	241.13	50517.73	241.13	9.38	513.79	21.70	535.50
	4163.200	162.01	6.57	14.18	6.57	378.44	62243.11	378.44	10.51	519.15	19.02	538.18
	4163.300	159.21	3.83	9.85	3.83	85.18	29829.65	85.18	7.71	506.05	25.57	531.63
	4163.300	160.70	5.02	11.36	5.02	194.18	42611.63	194.18	9.20	512.91	22.14	535.06
	4163.300	161.52	5.56	12.15	5.56	278.21	50443.57	278.21	10.02	516.83	20.19	537.01
	4163.300	162.68	6.19	13.18	6.19	425.35	62149.30	425.35	11.18	522.32	17.44	539.76
*	4235.000	162.10	3.96	12.56	6.40	31.79	29782.62	185.60	5.60	505.75	18.81	524.57
*	4235.000	163.42	4.98	14.12	7.05	90.96	42596.59	312.46	6.92	511.33	15.67	527.01
*	4235.000	164.15	5.48	14.94	7.41	141.31	50457.05	401.64	7.65	514.45	13.92	528.37
*	4235.000	165.19	6.12	16.02	7.87	236.03	62213.54	550.43	8.69	518.84	11.45	530.29

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	4235.000	162.76	3.71	11.04	5.56	46.91	29751.37	201.72	6.26	508.54	17.25	525.79
	4235.000	164.18	4.61	12.55	6.22	120.25	42540.11	339.63	7.68	514.57	13.86	528.42
	4235.000	164.98	5.06	13.33	6.56	180.55	50382.98	436.46	8.48	517.93	11.96	529.89
	4235.000	166.09	5.64	14.37	7.02	291.22	62111.41	597.37	9.59	522.63	9.32	531.95
*	4435.000	164.25	.00	11.86	.00	.00	30000.00	.00	7.15	581.34	28.48	609.83
*	4435.000	165.42	.00	13.36	.00	.00	43000.00	.00	8.32	592.49	22.47	614.96
*	4435.000	166.09	.00	14.10	.00	.00	51000.00	.00	8.99	598.83	19.05	617.87
	4435.000	167.22	.00	14.64	.00	.00	63000.00	.00	10.12	609.65	13.21	622.86
	4640.000	166.21	.00	11.25	.00	.00	30000.00	.00	8.61	580.98	9709.54	10290.51
	4640.000	167.27	.00	13.06	.00	.00	43000.00	.00	9.67	593.31	9703.38	10296.69
*	4640.000	167.86	.00	14.00	.00	.00	51000.00	.00	10.26	600.11	9699.98	10300.09
*	4640.000	168.78	.00	15.00	.00	.00	63000.00	.00	11.18	610.79	9694.65	10305.43
	4980.000	168.74	.00	9.34	.00	.00	30000.00	.00	10.34	590.19	9704.90	10295.10
	4980.000	170.14	.00	10.63	.00	.00	43000.00	.00	11.74	606.84	9696.58	10303.42
*	4980.000	170.92	.00	11.27	.00	.00	51000.00	.00	12.52	616.31	9691.85	10308.15
	4980.000	171.93	.00	12.21	.00	.00	63000.00	.00	13.53	619.80	9690.10	10309.90
	5320.000	170.19	.00	9.57	.00	.00	30000.00	.00	10.99	584.93	9707.57	10292.49
	5320.000	171.56	.00	10.90	.00	.00	43000.00	.00	12.36	601.34	9699.37	10300.71

	5320.000	172.31	.00	11.59	.00	.00	51000.00	.00	13.11	610.36	9694.87	10305.23
	5320.000	173.31	.00	12.57	.00	.00	63000.00	.00	14.11	614.70	9692.70	10307.40
	5600.000	171.46	.00	9.65	.00	.00	30000.00	.00	11.56	581.57	9709.22	10290.78
	5600.000	172.81	.00	11.02	.00	.00	43000.00	.00	12.91	597.74	9701.13	10298.87
	5600.000	173.56	.00	11.72	.00	.00	51000.00	.00	13.66	606.66	9696.67	10303.33
	5600.000	174.56	.00	12.69	.00	.00	63000.00	.00	14.66	618.70	9690.65	10309.35
	5670.000	171.91	.00	9.19	.00	.00	30000.00	.00	11.91	582.15	9648.92	10231.08
	5670.000	173.29	.00	10.55	.00	.00	43000.00	.00	13.29	598.64	9640.68	10239.32
	5670.000	174.04	.00	11.25	.00	.00	51000.00	.00	14.04	607.74	9636.13	10243.87
	5670.000	175.07	.00	12.19	.00	.00	63000.00	.00	15.07	620.13	9629.93	10250.07
*	5672.100	172.80	.00	11.93	.00	.00	30000.00	.00	10.08	592.79	9703.60	10296.40
*	5672.100	173.97	.00	13.37	.00	.00	43000.00	.00	11.25	606.81	9696.59	10303.41
*	5672.100	174.69	.00	13.94	.00	.00	51000.00	.00	11.97	615.51	9692.25	10307.75
*	5672.100	175.57	.00	14.98	.00	.00	63000.00	.00	12.85	626.09	9686.96	10313.04
*	5750.100	174.59	.00	8.97	.00	.00	30000.00	.00	11.40	609.12	9695.44	10304.56
*	5750.100	175.93	.00	10.32	.00	.00	43000.00	.00	12.74	625.12	9687.44	10312.56
*	5750.100	176.64	.00	11.06	.00	.00	51000.00	.00	13.45	633.60	9683.20	10316.80
*	5750.100	177.67	.00	11.96	.00	.00	63000.00	.00	14.48	636.00	9682.00	10318.00
*	5825.000	175.36	.00	6.86	.00	.00	30000.00	.00	12.02	613.19	9693.41	10306.59
*	5825.000	176.83	.00	8.13	.00	.00	43000.00	.00	13.49	630.88	9684.56	10315.44
*	5825.000	177.63	.00	8.80	.00	.00	51000.00	.00	14.29	633.00	9683.50	10316.50
*	5825.000	178.73	.00	9.70	.00	.00	63000.00	.00	15.39	633.00	9683.50	10316.50

SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
5905.000	175.44	.00	7.21	.00	.00	30000.00	.00	11.71	608.91	9695.55	10304.45
5905.000	176.93	.00	8.47	.00	.00	43000.00	.00	13.20	626.72	9686.64	10313.36
5905.000	177.72	.00	9.15	.00	.00	51000.00	.00	13.99	630.00	9685.00	10315.00
5905.000	178.82	.00	10.05	.00	.00	63000.00	.00	15.09	630.00	9685.00	10315.00
6100.000	175.75	.00	7.99	.00	.00	30000.00	.00	11.34	599.63	9700.18	10299.82
6100.000	177.24	.00	9.22	.00	.00	43000.00	.00	12.83	617.60	9691.20	10308.80
6100.000	178.04	.00	9.88	.00	.00	51000.00	.00	13.63	623.80	9688.10	10311.90
6100.000	179.14	.00	10.77	.00	.00	63000.00	.00	14.73	623.80	9688.10	10311.90

REVIBW.DAT

SUMMARY PRINTOUT

SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH

*	3972.000	146.72	146.72	149.05	.00	.00	142.00	88.67	.00	54.00	567.80	.00
*	3972.000	147.97	147.97	150.95	.00	.00	142.00	82.75	.00	54.00	567.80	.00
*	3972.000	148.70	148.70	152.02	.00	.00	142.00	79.10	.00	54.00	567.80	.00
*	3972.000	149.72	149.72	153.52	.00	.00	142.00	74.97	.00	54.00	567.80	.00
*	3972.100	148.64	146.70	149.81	.64	.12	142.00	28.17	.00	54.00	567.80	150.00
*	3972.100	150.15	147.97	151.73	.65	.14	142.00	29.15	.00	54.00	567.80	150.00
*	3972.100	150.98	148.69	152.81	.65	.15	142.00	29.61	.00	54.00	567.80	150.00
*	3972.100	152.14	149.69	154.32	.64	.16	142.00	29.97	.00	54.00	567.80	150.00
	3972.200	148.85	146.72	149.95	.13	.01	142.00	25.33	.00	54.00	567.80	50.00
	3972.200	150.39	147.98	151.88	.14	.01	142.00	26.43	.00	54.00	567.80	50.00
	3972.200	151.24	148.69	152.96	.14	.01	142.00	26.79	.00	54.00	567.80	50.00
	3972.200	152.41	149.69	154.47	.14	.01	142.00	27.51	.00	54.00	567.80	50.00
	3972.300	148.95	146.70	150.02	.06	.00	142.00	24.15	.00	54.00	567.80	26.00
	3972.300	150.50	147.99	151.95	.07	.00	142.00	25.29	.00	54.00	567.80	26.00
	3972.300	151.35	148.70	153.04	.07	.00	142.00	25.81	.00	54.00	567.80	26.00
	3972.300	152.53	149.70	154.55	.07	.01	142.00	26.38	.00	54.00	567.80	26.00
*	3973.000	149.45	145.21	150.10	.04	.04	139.00	10.43	-115.38	54.00	567.80	26.00
*	3973.000	151.11	146.49	152.05	.04	.05	139.00	12.10	-115.38	54.00	567.80	26.00
*	3973.000	152.02	147.21	153.14	.04	.06	139.00	12.89	-115.38	54.00	567.80	26.00
	3973.000	153.29	148.23	154.66	.05	.06	139.00	13.84	-115.38	54.00	567.80	26.00
	3973.100	149.46	145.20	150.11	.01	.00	139.00	10.39	.00	54.00	567.80	8.00
	3973.100	151.12	146.48	152.06	.01	.00	139.00	12.06	.00	54.00	567.80	8.00
	3973.100	152.04	147.20	153.15	.01	.00	139.00	12.86	.00	54.00	567.80	8.00
	3973.100	153.30	148.21	154.67	.01	.00	139.00	13.82	.00	54.00	567.80	8.00
	3973.200	149.23	146.70	150.21	.01	.10	142.00	21.15	652.17	54.00	567.80	4.60
	3973.200	150.85	147.95	152.19	.01	.12	142.00	22.09	652.17	54.00	567.80	4.60
	3973.200	151.74	148.68	153.29	.01	.13	142.00	22.52	652.17	54.00	567.80	4.60
	3973.200	152.97	149.69	154.83	.01	.14	142.00	22.99	652.17	54.00	567.80	4.60
	3979.300	149.48	146.70	150.40	.18	.01	142.00	18.87	.00	54.00	567.80	89.90
	3979.300	151.12	147.97	152.38	.19	.01	142.00	19.92	.00	54.00	567.80	89.90
	3979.300	152.03	148.69	153.49	.19	.01	142.00	20.40	.00	54.00	567.80	89.90
	3979.300	153.28	149.69	155.03	.20	.01	142.00	20.95	.00	54.00	567.80	89.90
*	4091.000	151.17	151.17	153.54	.14	.38	145.00	90.63	188.68	44.00	562.60	15.90
*	4091.000	152.44	152.44	155.43	.13	.47	145.00	83.35	188.68	44.00	562.60	15.90
*	4091.000	153.15	153.15	156.50	.13	.52	145.00	80.12	188.68	44.00	562.60	15.90
*	4091.000	154.16	154.16	158.00	.12	.58	145.00	76.30	188.68	44.00	562.60	15.90

1

SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
4091.100	151.84	151.18	153.65	.06	.06	145.00	58.28	.00	44.00	562.60	8.00
4091.100	153.19	152.45	155.55	.05	.06	145.00	56.18	.00	44.00	562.60	8.00

	4091.100	153.99	153.17	156.62	.05	.07	145.00	54.04	.00	44.00	562.60	8.00
	4091.100	155.06	154.17	158.12	.05	.08	145.00	52.51	.00	44.00	562.60	8.00
	4091.200	151.94	151.17	153.68	.02	.01	145.00	54.48	.00	44.00	562.60	4.00
	4091.200	153.32	152.44	155.58	.02	.01	145.00	52.54	.00	44.00	562.60	4.00
	4091.200	154.08	153.16	156.65	.02	.01	145.00	51.68	.00	44.00	562.60	4.00
	4091.200	155.17	154.16	158.15	.02	.01	145.00	50.37	.00	44.00	562.60	4.00
	4091.300	152.48	151.18	153.91	.20	.03	145.00	39.45	.00	44.00	562.60	44.30
	4091.300	153.89	152.44	155.82	.20	.03	145.00	40.01	.00	44.00	562.60	44.30
	4091.300	154.69	153.16	156.89	.20	.04	145.00	39.96	.00	44.00	562.60	44.30
	4091.300	155.80	154.16	158.39	.20	.04	145.00	39.75	.00	44.00	562.60	44.30
*	4163.000	157.87	157.87	160.33	.14	.27	151.50	89.14	408.81	35.00	522.20	15.90
*	4163.000	159.19	159.19	162.30	.13	.32	151.50	81.91	408.81	35.00	522.20	15.90
*	4163.000	159.97	159.97	163.40	.12	.34	151.50	77.56	408.81	35.00	522.20	15.90
*	4163.000	161.00	161.00	164.95	.12	.38	151.50	74.16	408.81	35.00	522.20	15.90
	4163.100	158.55	157.88	160.44	.06	.06	151.50	57.82	.00	35.00	522.20	8.00
	4163.100	159.99	159.20	162.42	.05	.07	151.50	54.43	.00	35.00	522.20	8.00
	4163.100	160.78	159.96	163.52	.05	.07	151.50	53.44	.00	35.00	522.20	8.00
	4163.100	161.90	161.00	165.07	.05	.08	151.50	51.84	.00	35.00	522.20	8.00
	4163.200	158.65	157.87	160.47	.02	.01	151.50	54.06	.00	35.00	522.20	4.00
	4163.200	160.09	159.19	162.45	.02	.01	151.50	51.90	.00	35.00	522.20	4.00
	4163.200	160.88	159.95	163.55	.02	.01	151.50	51.12	.00	35.00	522.20	4.00
	4163.200	162.01	160.99	165.10	.02	.01	151.50	49.72	.00	35.00	522.20	4.00
	4163.300	159.21	157.88	160.71	.21	.03	151.50	39.43	.00	35.00	522.20	46.60
	4163.300	160.70	159.20	162.69	.21	.04	151.50	39.35	.00	35.00	522.20	46.60
	4163.300	161.52	159.95	163.80	.21	.04	151.50	39.33	.00	35.00	522.20	46.60
	4163.300	162.68	160.99	165.35	.20	.04	151.50	39.10	.00	35.00	522.20	46.60
*	4235.000	162.10	162.10	164.53	.12	.25	156.50	89.11	367.65	25.00	514.20	13.60
*	4235.000	163.42	163.42	166.49	.11	.30	156.50	81.76	367.65	25.00	514.20	13.60
*	4235.000	164.15	164.15	167.59	.11	.32	156.50	78.78	367.65	25.00	514.20	13.60
*	4235.000	165.19	165.19	169.13	.10	.36	156.50	75.09	367.65	25.00	514.20	13.60
	4235.000	162.76	162.11	164.64	.06	.06	156.50	58.15	.00	25.00	514.20	8.00
	4235.000	164.18	163.42	166.61	.05	.06	156.50	55.25	.00	25.00	514.20	8.00
	4235.000	164.98	164.16	167.71	.05	.07	156.50	53.97	.00	25.00	514.20	8.00
	4235.000	166.09	165.20	169.26	.05	.08	156.50	52.40	.00	25.00	514.20	8.00
*	4435.000	164.25	164.25	166.43	1.84	-.29	157.10	91.87	3.00	.00	635.00	200.00
*	4435.000	165.42	165.42	168.19	1.74	-.25	157.10	86.86	3.00	.00	635.00	200.00
*	4435.000	166.09	166.09	169.17	1.68	-.23	157.10	84.10	3.00	.00	635.00	200.00
	4435.000	167.22	167.03	170.55	1.24	.05	157.10	73.57	3.00	.00	635.00	200.00

1

SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH

	4640.000	166.21	165.91	168.17	1.72	.02	157.60	77.27	2.44	9687.60	10312.50	205.00
	4640.000	167.27	167.19	169.92	1.72	.01	157.60	80.93	2.44	9687.60	10312.50	205.00
*	4640.000	167.86	167.86	170.90	1.69	.02	157.60	82.53	2.44	9687.60	10312.50	205.00
*	4640.000	168.78	168.78	172.27	1.64	-.02	157.60	80.19	2.44	9687.60	10312.50	205.00
	4980.000	168.74	167.49	170.10	1.86	.06	158.40	42.44	2.35	9690.10	10309.90	340.00
	4980.000	170.14	168.71	171.89	1.88	.09	158.40	42.07	2.35	9690.10	10309.90	340.00
*	4980.000	170.92	169.40	172.89	1.88	.11	158.40	41.51	2.35	9690.10	10309.90	340.00
	4980.000	171.93	170.36	174.25	1.86	.12	158.40	41.42	2.35	9690.10	10309.90	340.00
	5320.000	170.19	169.30	171.61	1.50	.02	159.20	45.64	2.35	9692.70	10307.40	340.00
	5320.000	171.56	170.27	173.40	1.48	.03	159.20	45.19	2.35	9692.70	10307.40	340.00
	5320.000	172.31	170.95	174.39	1.47	.03	159.20	45.08	2.35	9692.70	10307.40	340.00
	5320.000	173.31	171.92	175.76	1.47	.04	159.20	45.04	2.35	9692.70	10307.40	340.00
	5600.000	171.46	170.50	172.91	1.29	.01	159.90	46.53	2.50	9682.00	10318.00	280.00
	5600.000	172.81	171.56	174.70	1.28	.01	159.90	46.45	2.50	9682.00	10318.00	280.00
	5600.000	173.56	172.25	175.69	1.28	.01	159.90	46.41	2.50	9682.00	10318.00	280.00
	5600.000	174.56	173.22	177.06	1.29	.01	159.90	46.81	2.50	9682.00	10318.00	280.00
	5670.000	171.91	170.73	173.22	.30	.01	160.00	39.54	1.43	9622.00	10258.00	70.00
	5670.000	173.29	171.74	175.01	.30	.02	160.00	40.24	1.43	9622.00	10258.00	70.00
	5670.000	174.04	172.44	176.01	.30	.02	160.00	40.54	1.43	9622.00	10258.00	70.00
	5670.000	175.07	173.40	177.38	.31	.02	160.00	41.08	1.43	9622.00	10258.00	70.00
*	5672.100	172.80	172.80	175.01	.03	.26	162.72	166.41	1360.00	9682.00	10318.00	2.00
*	5672.100	173.97	173.97	176.74	.03	.30	162.72	153.83	1360.00	9682.00	10318.00	2.00
*	5672.100	174.69	174.69	177.71	.03	.31	162.72	142.61	1360.00	9682.00	10318.00	2.00
*	5672.100	175.57	175.57	179.06	.03	.34	162.72	138.83	1360.00	9682.00	10318.00	2.00
*	5750.100	174.59	173.19	175.84	.74	.10	163.19	65.99	6.03	9682.00	10318.00	78.00
*	5750.100	175.93	174.43	177.58	.73	.11	163.19	66.68	6.03	9682.00	10318.00	78.00
*	5750.100	176.64	175.05	178.54	.72	.11	163.19	67.72	6.03	9682.00	10318.00	78.00
*	5750.100	177.67	176.00	179.89	.70	.13	163.19	66.61	6.03	9682.00	10318.00	78.00
*	5825.000	175.36	172.18	176.09	.19	.05	163.34	15.99	2.00	9683.50	10316.50	75.00
*	5825.000	176.83	173.40	177.86	.21	.06	163.34	18.08	2.00	9683.50	10316.50	75.00
*	5825.000	177.63	174.08	178.83	.22	.07	163.34	18.93	2.00	9683.50	10316.50	75.00
*	5825.000	178.73	175.04	180.19	.23	.08	163.34	19.84	2.00	9683.50	10316.50	75.00
	5905.000	175.44	172.62	176.25	.14	.02	163.73	18.72	4.87	9685.00	10315.00	80.00
	5905.000	176.93	173.84	178.04	.15	.03	163.73	20.58	4.87	9685.00	10315.00	80.00
	5905.000	177.72	174.52	179.02	.16	.03	163.73	21.36	4.87	9685.00	10315.00	80.00
	5905.000	178.82	175.47	180.39	.17	.03	163.73	22.13	4.87	9685.00	10315.00	80.00
	6100.000	175.75	173.58	176.74	.43	.06	164.41	25.80	3.49	9688.10	10311.90	195.00
	6100.000	177.24	174.88	178.56	.46	.06	164.41	26.74	3.49	9688.10	10311.90	195.00
	6100.000	178.04	175.48	179.56	.47	.07	164.41	27.24	3.49	9688.10	10311.90	195.00
	6100.000	179.14	176.44	180.95	.48	.07	164.41	27.52	3.49	9688.10	10311.90	195.00

1

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=   3972.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   3972.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   3972.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   3972.000  PROFILE=  4  CRITICAL DEPTH ASSUMED

WARNING SECNO=   3972.100  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3972.100  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3972.100  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3972.100  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   3973.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3973.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3973.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   4091.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4091.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4091.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4091.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=   4163.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4163.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4163.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4163.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=   4235.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=   4435.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4435.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4435.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4435.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4435.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4435.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=   4640.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
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CAUTION SECNO=   4640.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4640.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
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   11NOV90      11:52:30                                                                                    PAGE   43


CAUTION SECNO=   4640.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

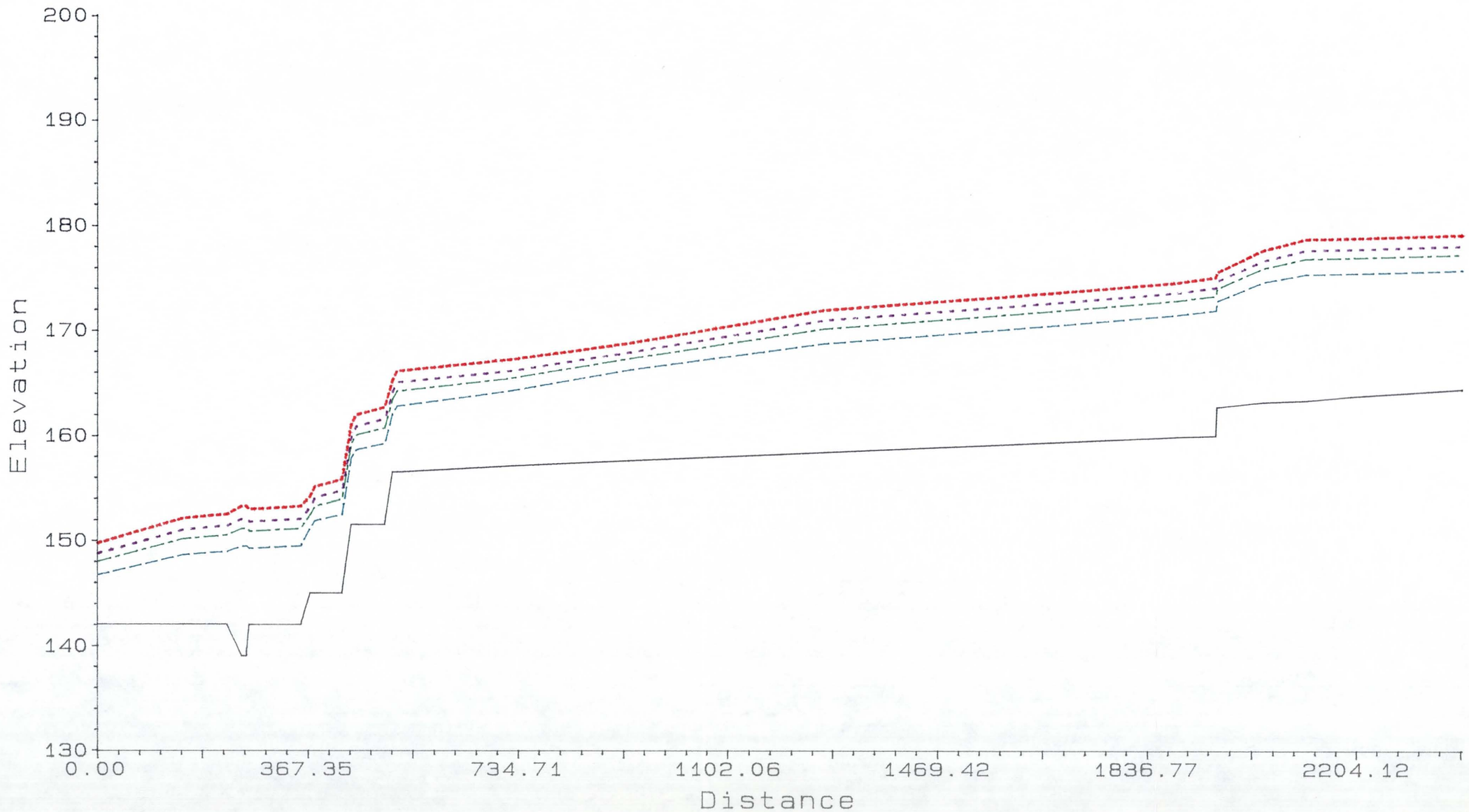
WARNING SECNO=   4980.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   5672.100  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   5750.100  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   5825.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

REV6IBW.DAT
FILL IN PLACE



```
1*****************************************************
 *  WATER SURFACE PROFILES                           *
 *  VERSION OF SEPTEMBER 1988                        *
 *  ERROR: 01,02,03                                  *
 *  UPDATED:  APRIL 1990                             *
 *  RUN DATE    11NOV90    TIME   11:54:27           *
 *****************************************************
```

```
****************************************
 *  U.S. ARMY CORPS OF ENGINEERS        *
 *  THE HYDROLOGIC ENGINEERING CENTER   *
 *  609 SECOND STREET, SUITE D          *
 *  DAVIS, CALIFORNIA 95616-4687        *
 *           (916) 756-1104             *
****************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

END OF BANNER

1

11NOV90 11:54:27 PAGE 1

THIS RUN EXECUTED 11NOV90 11:54:27

```
*************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
*************************************************
```

```
T1      ADJUSTED SLA-TEMPE AZ - TO FINAL ADOPTED PLANS DATED 11/7/90
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T1      SUPERCRITICAL RUN ------ FILL IN PLACE
T1      PROFILE BEG AT LEVEL 1 OF THE RIO SALADO, IBW DROP STRUCTURE TO SALT R.
T2      STRT BASED ON CRITICAL DEPTH
T3      REVIS6BW.DAT              PAZ-DMJM03-13      FCDMC 11/15/90
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	1	-1	0	0	30000	175.75	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1	0	-1	0	0	0	-1	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

```
     38        1       55       26       56       13       14       15        8        4
     53       54        0       38        1        2        3       11       12       42
      5       33       21       22       39

J6  IHLEQ    ICOPY    SUBDIV   STRTDS   RMILE

     1


NC   0.040    0.040    0.032      0.1      0.3
X1    6100        8   9688.1  10311.9      195      195      195        0        0        0
GR  177.76   9688.1   170.78   9730.0   170.78   9915.0   164.41   9940.0   164.41  10060.0
GR  170.78  10085.0   170.78  10270.0   177.76  10311.9

X1    5905        8   9685.0  10315.0       80       80       80        0        0        0
GR  177.20   9685.0   169.70   9730.0   169.70   9916.0   163.73   9940.0   163.73  10060.0
GR  169.70  10084.0   169.70  10270.0   177.20  10315.0

X1    5825        8   9683.5  10316.5       75       75       75        0        0        0
GR  177.01   9683.5   169.25   9730.0   169.25   9916.0   163.34   9940.0   163.34  10060.0
GR  169.25  10084.0   169.25  10270.0   177.01  10316.5
1
   11NOV90     11:54:27                                                          PAGE    2


X1  5750.1       19   9682.0  10318.0       78       78       78        0        0        0
BT      -9   9717.0   171.00   171.00   9730.0   170.57   168.83   9791.0   169.54   168.83
BT           9895.4   169.36   168.83   9895.5   169.36   167.36  10034.5   169.36   167.36
BT          10034.6   169.36   168.83  10270.0   170.80   168.83  10283.0   171.00   171.00
GR  176.83   9682.0   171.00   9717.0   168.83   9730.0   168.83   9791.0   168.83   9895.4
GR  163.19   9895.5   163.19   9937.0   167.36   9937.1   167.36   9938.9   163.19   9939.0
GR  163.19   9991.0   167.36   9991.1   167.36   9992.9   163.19   9993.0   163.19  10034.5
GR  168.83  10034.6   168.83  10270.0   171.00  10283.0   176.83  10318.0

X1  5672.1       19   9682.0  10318.0        2        2        2        0        0        0
BT      -9   9714.4   171.00   171.00   9730.0   170.18   168.40   9791.0   169.12   168.40
BT           9895.4   168.94   168.40   9895.5   168.94   166.94  10034.5   168.94   166.94
BT          10034.6   168.94   168.40  10270.0   170.42   168.40  10285.6   171.00   171.00
GR  176.40   9682.0   171.00   9714.4   168.40   9730.0   168.40   9791.0   168.40   9895.4
GR  162.72   9895.5   162.72   9937.0   166.94   9937.1   166.94   9938.9   162.72   9939.0
GR  162.72   9991.0   166.94   9991.1   166.94   9992.9   162.72   9993.0   162.72  10034.5
GR  168.40  10034.6   168.40  10270.0   171.00  10285.6   176.40  10318.0

X1    5670        8     9622    10258       70       70       70        0        0        0
GR   176.4   9622.0    168.4   9670.0    168.4   9846.0    160.0   9880.0    160.0  10000.0
GR   168.4  10034.0    168.4  10210.0    176.4  10258.0

X1    5600        8   9682.0  10318.0      280      280      280        0        0        0
GR   176.0   9682.0    168.0   9730.0    168.0   9836.0    159.9   9860.0    159.9   9980.0
GR   168.0  10004.0    168.0  10270.0    176.0  10318.0
```

X1	5320	8	9692.7	10307.4	340	340	340	0	0	0
GR	172.67	9692.7	166.45	9730.0	166.45	9838.0	159.2	9860.0	159.2	9980.0
GR	166.45	10002.0	166.45	10270.0	172.67	10307.4				
X1	4980	8	9690.1	10309.9	340	340	340	0	0	0
GR	171.21	9690.1	164.56	9730.0	164.56	9852.0	158.4	9870.0	158.4	9990.0
GR	164.56	10008.0	164.56	10270.0	171.21	10309.9				
X1	4640	8	9687.6	10312.5	205	205	205	0	0	0
GR	170	9687.6	162.67	9730.0	162.67	9885.0	157.6	9900.0	157.6	10020.0
GR	162.67	10035.0	162.67	10270.0	170	10312.5				
X1	4435.0	12	0	635	200	200	200	0	0	0
GR	169.8	0.0	162.0	40.0	160.0	210.0	158.0	240.0	157.1	255.0
GR	157.1	380.0	158.0	390.0	160.0	410.0	161.0	460.0	161.0	580.0
GR	162.0	600.0	170	635.0						
X1	4235				8	8	8			

LEVEL 1

1

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X1	4235	5	25	514.2	13.6	13.6	13.6			
GR	170	0	159.5	25	156.5	269.6	159.5	514.2	170	539.2
X1	4163.3				46.6	46.6	46.6			
X1	4163.2	7	35	522.2	4	4	4			
GR	170	0	159.5	25	154.5	35	151.5	278.6	154.5	522.2
GR	159.5	532.2	170	557.2						
X1	4163.1				8	8	8			

LEVEL 2

X1	4163	7	35	522.2	15.9	15.9	15.9			
GR	170	0	159.5	25	154.5	35	151.5	278.6	154.5	522.2
GR	159.5	532.2	170	557.2						
X1	4091.3				44.3	44.3	44.3			
X1	4091.2	7	44	562.6	4	4	4			
GR	170	0	159.5	25	148	44	145.0	303.3	148	562.6
GR	159.5	581.6	170	606.6						

```
X1   4091.1                                   8        8        8

       LEVEL 3

X1     4091        7       44     562.6     15.9     15.9     15.9
GR      170        0    159.5        25      148       44      145     303.3      148     562.6
GR    159.5    581.6      170     606.6


X1   3979.3                                  89.9     89.9     89.9


X1   3973.2        7       54     567.8      4.6      4.6      4.6
GR      170        0    159.5        25      142       54      139     310.9      142     567.8
GR    159.5    596.8      170     621.8


X1   3973.1                                   8        8        8

1
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X1     3973        7       54     567.8       26       26       26
GR      170        0    159.5        25      142       54      139     310.9      142     567.8
GR    159.5    596.8      170     621.8


X1   3972.3        6       54     567.8       26       26       26
GR      170        0    159.5        25      142       54      142     567.8    159.5     596.8
GR      170    621.8


X1   3972.2                                  50       50       50


X1   3972.1                                 150      150      150

       LEVEL 4

1
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   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


*PROF 1
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IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS

0

CCHV= .100 CEHV= .300

*SECNO 6100.000

3720 CRITICAL DEPTH ASSUMED

6100.000	9.16	173.57	173.57	175.75	175.85	2.27	.00	.00	177.76
30000.	0.	30000.	0.	0.	2479.	0.	0.	0.	177.76
.00	.00	12.10	.00	.000	.032	.000	.000	164.41	9713.23
.009685	0.	0.	0.	0	14	0	.00	573.55	10286.77

0

*SECNO 5905.000

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

5905.000	8.95	172.68	172.68	.00	174.88	2.19	1.79	.65	177.20
30000.	0.	30000.	0.	0.	2525.	0.	11.	3.	177.20
.00	.00	11.88	.00	.000	.032	.000	.000	163.73	9712.10
.009166	195.	195.	195.	20	8	0	.00	575.81	10287.90

0

*SECNO 5825.000

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

5825.000	8.83	172.17	172.17	.00	174.44	2.27	.78	.30	177.01
30000.	0.	30000.	0.	0.	2479.	0.	16.	4.	177.01
.01	.00	12.10	.00	.000	.032	.000	.000	163.34	9712.50
.009718	80.	80.	80.	20	5	0	.00	575.00	10287.50

0

*SECNO 5750.100

3370 NORMAL BRIDGE, NRD= 9 MIN ELTRD= 169.36 MAX ELLC= 171.00

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3693 PROBABLE MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

5750.100	10.00	173.19	173.19	.00	175.42	2.24	1.27	.24	176.83
30000.	0.	30000.	0.	0.	2500.	0.	20.	5.	176.83
.01	.00	12.00	.00	.000	.032	.000	.000	163.19	9703.86
.016945	75.	75.	75.	20	12	0	-736.07	592.28	10296.14

0

```
*SECNO 5672.100

3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5672.100    10.08   172.80   172.80      .00   175.01     2.21     1.30     2.71   176.40
   30000.       0.   30000.       0.       0.    2515.       0.      25.       6.   176.40
      .01      .00    11.93      .00     .000     .032     .000     .000   162.72  9703.60
  .016641      78.      78.      78.       20        9        0  -751.23   592.79 10296.40
0
*SECNO 5670.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.59

 5670.000     8.90   168.90   170.50      .00   174.60     5.70      .06      .35   176.40
   30000.       0.   30000.       0.       0.    1566.       0.      25.       6.   176.40
      .01      .00    19.16      .00     .000     .032     .000     .000   160.00  9666.99
  .041968       2.       2.       2.        9        8        0      .00   546.02 10213.01
0
*SECNO 5600.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5600.000    10.43   170.33   170.33      .00   172.64     2.31      .69     1.92   176.00
   30000.       0.   30000.       0.       0.    2457.       0.      28.       7.   176.00
      .01      .00    12.21      .00     .000     .032     .000     .000   159.90  9716.02
  .009877      70.      70.      70.       20       11        0      .00   567.96 10283.98
0
1
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


*SECNO 5320.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5320.000    10.01   169.21   169.21      .00   171.33     2.12     2.41     1.15   172.67
   30000.       0.   30000.       0.       0.    2568.       0.      44.      10.   172.67
      .02      .00    11.68      .00     .000     .032     .000     .000   159.20  9713.42
  .008620     280.     280.     280.       20       10        0      .00   573.20 10286.62
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0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000     9.09   167.49   167.49      .00   169.76     2.26     3.29     -.15   171.21
    30000.       0.   30000.       0.       0.    2485.       0.      64.      15.    171.21
       .03      .00    12.07      .00     .000     .032     .000     .000   158.40  9712.41
   .009666     340.     340.     340.       20       15        0      .00   575.18 10287.59
0
 *SECNO 4640.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000     8.31   165.91   165.91      .00   168.16     2.24     3.26     4.38   170.00
    30000.       0.   30000.       0.       0.    2495.       0.      83.      19.    170.00
       .03      .00    12.02      .00     .000     .032     .000     .000   157.60  9711.25
   .009575     340.     340.     340.       20       15        0      .00   577.53 10288.79
0
 *SECNO 4435.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4435.000     7.11   164.21   164.21      .00   166.43     2.22     1.94      .09   169.80
    30000.       0.   30000.       0.       0.    2507.       0.      95.      22.    170.00
       .04      .00    11.97      .00     .000     .032     .000     .000   157.10    28.69
   .009467     205.     205.     205.       20       15        0      .00   580.96   609.65
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3720 CRITICAL DEPTH ASSUMED
  4235.000     7.13   164.23   164.23      .00   166.43     2.20     1.86      .25   169.80
    30000.       0.   30000.       0.       0.    2519.       0.     107.      25.    170.00
       .04      .00    11.91      .00     .000     .032     .000     .000   157.10    28.59
   .009325     200.     200.     200.       20        5        0      .00   581.15   609.74
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.61
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 4235.000     5.11   161.61   162.86      .00   166.07     4.46      .13      .23   159.50
   30000.      30.   29940.      30.       5.    1764.       5.     107.      25.   159.50
      .04     5.66    16.97     5.66     .040     .032     .040     .000   156.50    19.98
  .024144       8.       8.       8.        7       11        0      .00   499.23   519.22
0
 *SECNO 4163.300

 3301 HV CHANGED MORE THAN HVINS

 4163.300     5.78   162.28   162.86      .00   165.43     3.15      .25      .39   159.50
   30000.      47.   29906.      47.       9.    2096.       9.     108.      25.   159.50
      .04     5.11    14.27     5.11     .040     .032     .040     .000   156.50    18.37
  .013566      14.      14.      14.        4       11        0      .00   502.46   520.83
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.06

 4163.200     4.29   155.79   157.88      .00   163.34     7.54     1.65      .44   154.50
   30000.      10.   29979.      10.       2.    1360.       2.     109.      25.   154.50
      .04     6.17    22.05     6.17     .040     .032     .040     .000   151.50    32.42
  .057384      47.      47.      47.       9        8        0      .00   492.36   524.78
0
1
   11NOV90      11:54:27                                                                  PAGE     9


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.100
 4163.100     4.38   155.88   157.87      .00   162.99     7.11      .22      .13   154.50
   30000.      12.   29977.      12.       2.    1400.       2.     109.      25.   154.50
      .04     6.12    21.41     6.12     .040     .032     .040     .000   151.50    32.25
  .052037       4.       4.       4.        3       14        0      .00   492.69   524.95
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 4163.000     4.56   156.06   157.87      .00   162.37     6.31      .38      .24   154.50
   30000.      14.   29971.      14.       2.    1486.       2.     110.      26.   154.50
      .04     6.01    20.17     6.01     .040     .032     .040     .000   151.50    31.90
  .042663       8.       8.       8.        4       14        0      .00   493.40   525.30
0
 *SECNO 4091.300

 3301 HV CHANGED MORE THAN HVINS
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 4091.300     4.92   156.42   157.90      .00   161.42     5.00      .56      .40   154.50
   30000.      21.   29958.      21.       4.    1669.       4.     110.      26.   154.50
      .04     5.72    17.95     5.72     .040     .032     .040     .000   151.50    31.15
  .028922      16.      16.      16.        5       11        0      .00   494.90   526.05
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77

 4091.200     3.84   148.84   151.17      .00   158.31     9.47     2.66      .45   148.00
   30000.       3.   29993.       3.       1.    1214.       1.     112.      26.   148.00
      .05     5.67    24.70     5.67     .040     .032     .040     .000   145.00    42.61
  .091007      44.      44.      44.        9       11        0      .00   521.38   563.99
0
 *SECNO 4091.100
1
   11NOV90      11:54:27                                                                    PAGE   10


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3301 HV CHANGED MORE THAN HVINS

 4091.100     3.93   148.93   151.18      .00   157.79     8.86      .34      .18   148.00
   30000.       4.   29992.       4.       1.    1256.       1.     112.      26.   148.00
      .05     5.70    23.89     5.70     .040     .032     .040     .000   145.00    42.48
  .081406       4.       4.       4.        4       14        0      .00   521.64   564.12
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 4091.000     4.08   149.08   151.17      .00   156.88     7.80      .59      .32   148.00
   30000.       5.   29989.       5.       1.    1337.       1.     112.      26.   148.00
      .05     5.70    22.42     5.70     .040     .032     .040     .000   145.00    42.22
  .065917       8.       8.       8.       10       14        0      .00   522.17   564.38
0
 *SECNO 3979.300

 3301 HV CHANGED MORE THAN HVINS

 3979.300     4.41   149.41   151.17      .00   155.52     6.11      .85      .51   148.00
   30000.       9.   29982.       9.       2.    1511.       2.     113.      27.   148.00
      .05     5.56    19.84     5.56     .040     .032     .040     .000   145.00    41.66
  .043852      16.      16.      16.        5       14        0      .00   523.27   564.94
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0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

  3973.200     4.15   143.15   145.23      .00   150.66     7.51     4.72      .14   142.00
    30000.       6.   29987.       6.       1.    1363.       1.     116.      28.    142.00
       .05     5.74    22.00     5.74     .040     .032     .040     .000   139.00    52.09
   .061108      90.      90.      90.        8       11        0      .00   517.62   569.71
0
 *SECNO 3973.100

 3301 HV CHANGED MORE THAN HVINS

1
    11NOV90      11:54:27                                                                          PAGE   11

    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST

  3973.100     4.25   143.25   145.20      .00   150.24     6.99      .26      .16   142.00
    30000.       7.   29985.       7.       1.    1413.       1.     116.      28.    142.00
       .05     5.70    21.22     5.70     .040     .032     .040     .000   139.00    51.93
   .054188       5.       5.       5.        4       14        0      .00   517.94   569.87
0
 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS

  3973.000     4.42   143.42   145.20      .00   149.61     6.18      .39      .24   142.00
    30000.       9.   29981.       9.       2.    1502.       2.     116.      28.    142.00
       .05     5.61    19.96     5.61     .040     .032     .040     .000   139.00    51.64
   .044220       8.       8.       8.        5       14        0      .00   518.52   570.16
0
 *SECNO 3972.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  3972.300     4.70   146.70   146.70      .00   149.05     2.35      .23     1.38   142.00
    30000.     103.   29795.     103.      18.    2414.      18.     117.      28.    142.00
       .05     5.61    12.34     5.61     .040     .032     .040     .000   142.00    46.21
   .008974      26.      26.      26.       20        8        0      .00   529.37   575.59
0
 *SECNO 3972.200
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
```

```
 3972.200     4.70   146.70   146.70      .00   149.05     2.35      .23      .23   142.00
   30000.     103.   29795.     103.      18.    2416.      18.     119.      28.    142.00
      .05     5.60    12.33     5.60     .040     .032     .040     .000   142.00    46.21
  .008946      26.      26.      26.       20        5        0      .00   529.39   575.59
0
 *SECNO 3972.100
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
   11NOV90      11:54:27                                                                    PAGE   12


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


 3972.100     4.70   146.70   146.70      .00   149.05     2.35      .45      .35   142.00
   30000.     103.   29795.     103.      18.    2416.      18.     122.      29.    142.00
      .05     5.60    12.33     5.60     .040     .032     .040     .000   142.00    46.21
  .008952      50.      50.      50.       20        5        0      .00   529.38   575.59
0
1
   11NOV90      11:54:27                                                                    PAGE   13


 T1       SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
 T1       ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPTED PLANS OF 11/7/90
 T1       PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T1       SUPERCRITICAL RUN - FILL IN PLACE
 T2       STRT BASED ON CRITICAL DEPTH
 T3       IBW1RIO.DAT              PAZ-DMJM03-13

 J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0        0        0        1       -1        0        0    43000    177.24     0

 J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

       2        0       -1        0        0        0       -1        0        0        0

1
   11NOV90      11:54:27                                                                    PAGE   14


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


 *PROF 2
```

```
IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=     .100 CEHV=     .300
*SECNO 6100.000
3720 CRITICAL DEPTH ASSUMED
 6100.000    10.39   174.80   174.80   177.24   177.62     2.82      .00      .00   177.76
   43000.       0.   43000.       0.       0.    3191.       0.       0.       0.    177.76
      .00      .00    13.47      .00     .000     .032     .000     .000   164.41  9705.87
  .008878       0.       0.       0.        0       14        0      .00   588.26 10294.13
0
*SECNO 5905.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5905.000    10.17   173.90   173.90      .00   176.65     2.75     1.67      .50   177.20
   43000.       0.   43000.       0.       0.    3231.       0.      14.       3.    177.20
      .00      .00    13.31      .00     .000     .032     .000     .000   163.73  9704.82
  .008553     195.     195.     195.       20        8        0      .00   590.36 10295.18
0
*SECNO 5825.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5825.000    10.06   173.40   173.40      .00   176.21     2.82      .71      .05   177.01
   43000.       0.   43000.       0.       0.    3192.       0.      20.       4.    177.01
      .01      .00    13.47      .00     .000     .032     .000     .000   163.34  9705.16
  .008892      80.      80.      80.       20        5        0      .00   589.68 10294.84
0
*SECNO 5750.100

3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
   11NOV90      11:54:27                                                                                    PAGE   15


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5750.100    11.24   174.43   174.43      .00   177.16     2.73     1.12     1.86   176.83
   43000.       0.   43000.       0.       0.    3245.       0.      26.       5.    176.83
      .01      .00    13.25      .00     .000     .032     .000     .000   163.19  9696.41
  .014929      75.      75.      75.       20       12        0  -736.07   607.19 10303.59
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```
0
*SECNO 5672.100

3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5672.100    11.25   173.97   173.97      .00   176.74     2.78     1.20     1.98   176.40
   43000.       0.   43000.       0.       0.    3215.       0.      32.       6.   176.40
      .01      .00    13.37      .00     .000     .032     .000     .000   162.72  9696.59
  .015383      78.      78.      78.       20       12        0  -751.23   606.81 10303.41
0
*SECNO 5670.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.46

 5670.000     9.89   169.89   171.74      .00   176.33     6.44      .05      .37   176.40
   43000.       0.   43000.       0.       0.    2111.       0.      32.       6.   176.40
      .01      .00    20.37      .00     .000     .032     .000     .000   160.00  9661.06
  .032793       2.       2.       2.        8        8        0      .00   557.88 10218.94
0
*SECNO 5600.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5600.000    11.66   171.56   171.56      .00   174.43     2.86      .63     1.67   176.00
   43000.       0.   43000.       0.       0.    3167.       0.      36.       7.   176.00
      .01      .00    13.58      .00     .000     .032     .000     .000   159.90  9708.62
  .009010      70.      70.      70.       20       11        0      .00   582.77 10291.38
0
1
   11NOV90      11:54:27                                                                    PAGE   16


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


*SECNO 5320.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5320.000    11.07   170.27   170.27      .00   173.11     2.84     2.51      .81   172.67
   43000.       0.   43000.       0.       0.    3179.       0.      56.      11.   172.67
      .02      .00    13.52      .00     .000     .032     .000     .000   159.20  9707.10
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  .008953     280.     280.     280.       20       11        0      .00   585.87 10292.96
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000    10.31   168.71   168.71      .00   171.52     2.82     3.03     3.97   171.21
    43000.       0.   43000.       0.       0.    3193.       0.      81.      15.   171.21
       .02      .00    13.47      .00     .000     .032     .000     .000   158.40  9705.11
  .008898     340.     340.     340.       20       11        0      .00   589.78 10294.89
0
 *SECNO 4640.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000     9.52   167.12   167.12      .00   169.92     2.80     3.00     3.38   170.00
    43000.       0.   43000.       0.       0.    3204.       0.     106.      20.   170.00
       .03      .00    13.42      .00     .000     .032     .000     .000   157.60  9704.24
  .008830     340.     340.     340.       20       11        0      .00   591.58 10295.82
0
 *SECNO 4435.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4435.000     8.31   165.41   165.41      .00   168.19     2.78     1.79      .31   169.80
    43000.       0.   43000.       0.       0.    3213.       0.     121.      23.   170.00
       .03      .00    13.38      .00     .000     .032     .000     .000   157.10    22.52
  .008734     205.     205.     205.       20       15        0      .00   592.40   614.91
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
1
    11NOV90      11:54:27                                                                    PAGE   17


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3720 CRITICAL DEPTH ASSUMED
  4235.000     8.33   165.43   165.43      .00   168.19     2.76     1.73      .18   169.80
    43000.       0.   43000.       0.       0.    3225.       0.     136.      25.   170.00
       .04      .00    13.33      .00     .000     .032     .000     .000   157.10    22.42
  .008633     200.     200.     200.       20        5        0      .00   592.58   615.00
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45
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 4235.000     6.37   162.87   164.17      .00   167.86     4.99      .11      .22   159.50
   43000.      91.   42818.      91.      14.    2384.      14.     137.      25.    159.50
      .04     6.71    17.96     6.71     .040     .032     .040     .000   156.50    16.97
  .018116       8.       8.       8.        7       11        0      .00   505.26   522.23
0
 *SECNO 4163.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
 4163.300     7.05   163.55   164.17      .00   167.39     3.84      .16      .67   159.50
   43000.     119.   42762.     119.      19.    2713.      19.     137.      26.    159.50
      .04     6.10    15.76     6.10     .040     .032     .040     .000   156.50    15.37
  .011731      14.      14.      14.       20       11        0      .00   508.47   523.83
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.99

 4163.200     5.20   156.70   159.20      .00   165.53     8.83     1.35      .50   154.50
   43000.      38.   42924.      38.       5.    1798.       5.     140.      26.    154.50
      .04     7.89    23.87     7.89     .040     .032     .040     .000   151.50    30.62
  .046316      47.      47.      47.       10        8        0      .00   495.96   526.58
0
1
   11NOV90      11:54:27                                                                  PAGE   18

    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 4163.100
 4163.100     5.26   156.76   159.19      .00   165.25     8.50      .18      .10   154.50
   43000.      40.   42920.      40.       5.    1833.       5.     140.      26.    154.50
      .04     7.80    23.41     7.80     .040     .032     .040     .000   151.50    30.47
  .043435       4.       4.       4.        2       14        0      .00   496.25   526.73
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 4163.000     5.43   156.93   159.19      .00   164.72     7.79      .32      .21   154.50
   43000.      45.   42910.      45.       6.    1914.       6.     140.      26.    154.50
      .04     7.61    22.41     7.61     .040     .032     .040     .000   151.50    30.14
  .037575       8.       8.       8.        4       14        0      .00   496.92   527.06
0
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*SECNO 4091.300

3301 HV CHANGED MORE THAN HVINS

 4091.300     5.79   157.29   159.22      .00   163.83     6.54      .52      .38   154.50
   43000.      56.   42888.      56.       8.    2088.       8.     141.      26.    154.50
      .04     7.21    20.54     7.21     .040     .032     .040     .000   151.50    29.43
  .028109      16.      16.      16.        4       11        0      .00   498.34   527.77
0
*SECNO 4091.200

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.66

 4091.200     4.55   149.55   152.44      .00   161.00    11.45     2.34      .49   148.00
   43000.      16.   42969.      16.       2.    1582.       2.     143.      27.    148.00
      .04     7.86    27.16     7.86     .040     .032     .040     .000   145.00    41.44
  .077359      44.      44.      44.      10       11        0      .00   523.72   565.16
0
*SECNO 4091.100
1
   11NOV90      11:54:27                                                                    PAGE   19


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


3301 HV CHANGED MORE THAN HVINS

 4091.100     4.62   149.62   152.45      .00   160.54    10.92      .30      .16   148.00
   43000.      17.   42966.      17.       2.    1620.       2.     143.      27.    148.00
      .04     7.79    26.52     7.79     .040     .032     .040     .000   145.00    41.32
  .071438       4.       4.       4.        4       14        0      .00   523.97   565.28
0
*SECNO 4091.000

3301 HV CHANGED MORE THAN HVINS

 4091.000     4.77   149.77   152.44      .00   159.72     9.95      .53      .29   148.00
   43000.      20.   42960.      20.       3.    1696.       3.     143.      27.    148.00
      .04     7.64    25.32     7.64     .040     .032     .040     .000   145.00    41.07
  .061236       8.       8.       8.        7       14        0      .00   524.45   565.53
0
*SECNO 3979.300

3301 HV CHANGED MORE THAN HVINS

 3979.300     5.07   150.07   152.44      .00   158.39     8.32      .84      .49   148.00
```

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   43000.      26.   42948.      26.       4.    1854.       4.     144.      27.    148.00
     .04     7.32    23.17     7.32     .040     .032     .040     .000   145.00    40.57
  .045529      16.      16.      16.       8       14        0      .00   525.46   566.03
0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

 3973.200     4.84   143.84   146.48      .00   153.58     9.74     4.67      .14   142.00
   43000.      21.   42957.      21.       3.    1714.       3.     148.      28.    142.00
     .04     7.65    25.06     7.65     .040     .032     .040     .000   139.00    50.96
  .058420      90.      90.      90.       9       14        0      .00   519.89   570.84
0
 *SECNO 3973.100
 3973.100     4.92   143.92   146.48      .00   153.17     9.25      .26      .15   142.00
   43000.      23.   42954.      23.       3.    1759.       3.     148.      28.    142.00
     .04     7.56    24.42     7.56     .040     .032     .040     .000   139.00    50.81
  .053589       5.       5.       5.       4       14        0      .00   520.18   570.99
0
1
   11NOV90      11:54:27                                                                PAGE   20


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS

 3973.000     5.09   144.09   146.48      .00   152.53     8.44      .40      .24   142.00
   43000.      27.   42947.      27.       4.    1841.       4.     148.      28.    142.00
     .04     7.38    23.33     7.38     .040     .032     .040     .000   139.00    50.55
  .046040       8.       8.       8.       4       14        0      .00   520.70   571.25
0
 *SECNO 3972.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
 3972.300     5.61   147.61   147.99      .00   150.99     3.38      .26     1.83   142.00
   43000.     175.   42649.     175.      26.    2883.      26.     150.      29.    142.00
     .04     6.72    14.79     6.72     .040     .032     .040     .000   142.00    44.70
  .010173      26.      26.      26.      20        8        0      .00   532.40   577.10
0
 *SECNO 3972.200
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 3972.200     5.97   147.97   147.97      .00   150.95     2.98      .22     1.50   142.00
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   43000.     186.   42627.     186.      30.    3066.      30.     152.      29.    142.00
     .04     6.32    13.90     6.32     .040     .032     .040     .000   142.00    44.11
  .008278     26.      26.      26.      20        8        0      .00   533.58   577.69
0
 *SECNO 3972.100
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  3972.100     5.97   147.97   147.97      .00   150.95     2.97      .41      .04   142.00
   43000.     187.   42627.     187.      30.    3069.      30.     155.      30.    142.00
     .04     6.31    13.89     6.31     .040     .032     .040     .000   142.00    44.10
  .008252     50.      50.      50.      20        5        0      .00   533.60   577.70
0
1
   11NOV90      11:54:27                                                                          PAGE   21


 T1      ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPTED PLANS OF 11/7/90
 T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
 T1      SUPERCRITICAL RUN - FILL IN PLACE
 T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T2      STRT BASED ON CRITICAL DEPTH
 T3      IBW1RIO.DAT             PAZ-DMJM03-13

 J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL      FQ

       0        0        0        1       -1        0        0     51000    178.04       0

 J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM     ITRACE

       3        0       -1        0        0        0       -1        0        0         0

1
   11NOV90      11:54:27                                                                          PAGE   22


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *PROF 3

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 6100.000
 3720 CRITICAL DEPTH ASSUMED
  6100.000    11.07   175.48   175.48   178.04   178.61     3.12      .00      .00   177.76
```

```
   51000.       0.   51000.       0.       0.    3596.       0.       0.       0.    177.76
     .00      .00    14.18      .00     .000     .032     .000     .000   164.41  9701.77
  .008545       0.       0.       0.        0       14        0      .00   596.46 10298.23
0
 *SECNO 5905.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5905.000    10.85   174.58   174.58      .00   177.63     3.06     1.61      .46   177.20
   51000.       0.   51000.       0.       0.    3636.       0.      16.       3.    177.20
     .00      .00    14.03      .00     .000     .032     .000     .000   163.73  9700.74
  .008275     195.     195.     195.       20        8        0      .00   598.52 10299.26
0
 *SECNO 5825.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5825.000    10.74   174.08   174.08      .00   177.20     3.12      .68      .05   177.01
   51000.       0.   51000.       0.       0.    3599.       0.      23.       4.    177.01
     .01      .00    14.17      .00     .000     .032     .000     .000   163.34  9701.06
  .008545      80.      80.      80.       20        5        0      .00   597.88 10298.94
0
 *SECNO 5750.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
   11NOV90      11:54:27                                                                    PAGE   23


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5750.100    11.86   175.05   175.05      .00   178.13     3.08     1.10     1.68   176.83
   51000.       0.   51000.       0.       0.    3623.       0.      29.       5.    176.83
     .01      .00    14.07      .00     .000     .032     .000     .000   163.19  9692.69
  .014696      75.      75.      75.       20       15        0  -736.07   614.63 10307.31
0
 *SECNO 5672.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    11.97   174.69   174.69      .00   177.71     3.02     1.11     1.71   176.40
   51000.       0.   51000.       0.       0.    3658.       0.      36.       6.    176.40
     .01      .00    13.94      .00     .000     .032     .000     .000   162.72  9692.25
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```
  .014261      78.      78.      78.       20       12        0  -751.23   615.51 10307.75
0
 *SECNO 5670.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.43

  5670.000    10.46   170.46   172.43      .00   177.29     6.83      .04      .38   176.40
    51000.       0.   51000.       0.       0.    2432.       0.      36.       6.   176.40
       .01      .00    20.97      .00     .000     .032     .000     .000   160.00  9657.63
  .029258       2.       2.       2.        8        8        0      .00   564.74 10222.37
0
 *SECNO 5600.000

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5600.000    12.35   172.25   172.25      .00   175.42     3.16      .61     1.47   176.00
    51000.       0.   51000.       0.       0.    3572.       0.      41.       7.   176.00
       .01      .00    14.28      .00     .000     .032     .000     .000   159.90  9704.47
  .008649      70.      70.      70.       20       11        0      .00   591.05 10295.53
0
1
    11NOV90      11:54:27                                                                    PAGE   24


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


 *SECNO 5320.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5320.000    11.76   170.96   170.96      .00   174.10     3.14     2.41      .70   172.67
    51000.       0.   51000.       0.       0.    3586.       0.      64.      11.   172.67
       .02      .00    14.22      .00     .000     .032     .000     .000   159.20  9702.97
  .008595     280.     280.     280.       20       11        0      .00   594.14 10297.11
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000    10.99   169.39   169.39      .00   172.51     3.12     2.91     3.52   171.21
    51000.       0.   51000.       0.       0.    3598.       0.      92.      15.   171.21
       .02      .00    14.17      .00     .000     .032     .000     .000   158.40  9701.02
  .008565     340.     340.     340.       20       11        0      .00   597.96 10298.98
0
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*SECNO 4640.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4640.000    10.20   167.80   167.80     .00   170.90     3.10     2.89     3.05   170.00
   51000.       0.   51000.       0.      0.    3608.       0.     120.      20.   170.00
      .03      .00    14.14      .00    .000     .032     .000     .000   157.60  9700.32
  .008513     340.     340.     340.      20       11        0      .00   599.43 10299.75
0
*SECNO 4435.000
7185 MINIMUM SPECIFIC ENERGY
 4435.000     8.97   166.07   166.08     .00   169.17     3.09     1.74      .00   169.80
   51000.       0.   51000.       0.      0.    3615.       0.     137.      23.   170.00
      .03      .00    14.11      .00    .000     .032     .000     .000   157.10    19.06
  .008420     205.     205.     205.       2       15        0      .00   598.80   617.86
0
*SECNO 4235.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4235.000     9.01   166.11   166.11     .00   169.17     3.07     1.66      .16   169.80
   51000.       0.   51000.       0.      0.    3628.       0.     153.      26.   170.00
      .04      .00    14.06      .00    .000     .032     .000     .000   157.10    18.94
  .008317     200.     200.     200.      20        5        0      .00   599.02   617.97
0
1
   11NOV90      11:54:27                                                                    PAGE   25


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


*SECNO 4235.000

3301 HV CHANGED MORE THAN HVINS

 4235.000     7.13   163.63   164.92     .00   168.86     5.24      .10      .22   159.50
   51000.     145.   50710.     145.     20.    2755.      20.     154.      26.   159.50
      .04     7.15    18.41     7.15    .040     .032     .040     .000   156.50    15.16
  .015682       8.       8.       8.       5       11        0      .00   508.87   524.04
0
*SECNO 4163.300

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
 4163.300     7.74   164.24   164.92     .00   168.49     4.24      .15      .48   159.50
   51000.     177.   50647.     177.     27.    3054.      27.     155.      26.   159.50
      .04     6.59    16.58     6.59    .040     .032     .040     .000   156.50    13.71
  .011090      14.      14.      14.      20       11        0      .00   511.79   525.49
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0

*SECNO 4163.200

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.94

4163.200	5.72	157.22	159.96	.00	166.73	9.51	1.23	.53	154.50
51000.	64.	50873.	64.	7.	2053.	7.	158.	26.	154.50
.04	8.65	24.78	8.65	.040	.032	.040	.000	151.50	29.57
.041820	47.	47.	47.	11	8	0	.00	498.06	527.63

0

*SECNO 4163.100

4163.100	5.79	157.29	159.95	.00	166.47	9.18	.16	.10	154.50
51000.	66.	50867.	66.	8.	2090.	8.	158.	26.	154.50
.04	8.55	24.34	8.55	.040	.032	.040	.000	151.50	29.42
.039431	4.	4.	4.	2	14	0	.00	498.36	527.78

0

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4163.000

3301 HV CHANGED MORE THAN HVINS

4163.000	5.96	157.46	159.95	.00	165.97	8.51	.30	.20	154.50
51000.	73.	50854.	73.	9.	2170.	9.	158.	27.	154.50
.04	8.34	23.43	8.34	.040	.032	.040	.000	151.50	29.09
.034746	8.	8.	8.	3	14	0	.00	499.02	528.11

0

*SECNO 4091.300

3301 HV CHANGED MORE THAN HVINS

4091.300	6.29	157.79	159.98	.00	165.13	7.33	.49	.35	154.50
51000.	86.	50828.	86.	11.	2335.	11.	159.	27.	154.50
.04	7.93	21.76	7.93	.040	.032	.040	.000	151.50	28.41
.027178	16.	16.	16.	4	11	0	.00	500.37	528.79

0

*SECNO 4091.200

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.62

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 4091.200     4.96   149.96   153.16      .00   162.44    12.47     2.18      .51   148.00
   51000.      28.   50944.      28.       3.    1797.       3.     161.      27.   148.00
      .04     8.82    28.36     8.82     .040     .032     .040     .000   145.00    40.75
  .071141      44.      44.      44.       11       11        0      .00   525.09   565.85
0
 *SECNO 4091.100
 4091.100     5.04   150.04   153.16      .00   162.01    11.98      .28      .15   148.00
   51000.      30.   50940.      30.       3.    1833.       3.     161.      27.   148.00
      .04     8.73    27.79     8.73     .040     .032     .040     .000   145.00    40.64
  .066497       4.       4.       4.        4       14        0      .00   525.32   565.96
0
 *SECNO 4091.000
1
   11NOV90      11:54:27                                                                    PAGE   27


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST



 3301 HV CHANGED MORE THAN HVINS

 4091.000     5.18   150.18   153.16      .00   161.24    11.06      .50      .28   148.00
   51000.      34.   50933.      34.       4.    1907.       4.     162.      27.   148.00
      .04     8.55    26.70     8.55     .040     .032     .040     .000   145.00    40.40
  .058254       8.       8.       8.        6       14        0      .00   525.80   566.20
0
 *SECNO 3979.300

 3301 HV CHANGED MORE THAN HVINS

 3979.300     5.47   150.47   153.16      .00   159.95     9.48      .81      .47   148.00
   51000.      41.   50917.      41.       5.    2059.       5.     162.      28.   148.00
      .04     8.18    24.73     8.18     .040     .032     .040     .000   145.00    39.92
  .045091      16.      16.      16.        8       14        0      .00   526.76   566.68
0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

 3973.200     5.22   144.22   147.20      .00   155.21    10.99     4.59      .15   142.00
   51000.      35.   50930.      35.       4.    1913.       4.     166.      29.   142.00
      .04     8.58    26.62     8.58     .040     .032     .040     .000   139.00    50.31
  .056933      90.      90.      90.        9       14        0      .00   521.17   571.48
0
 *SECNO 3973.100
 3973.100     5.31   144.31   147.20      .00   154.82    10.51      .25      .14   142.00
   51000.      37.   50925.      37.       4.    1956.       4.     167.      29.   142.00
      .04     8.47    26.03     8.47     .040     .032     .040     .000   139.00    50.18
  .052862       5.       5.       5.        4       14        0      .00   521.45   571.62
0
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*SECNO 3973.000

3301 HV CHANGED MORE THAN HVINS

 3973.000     5.46   144.46   147.20      .00   154.18     9.72      .40      .24   142.00
   51000.      41.   50917.      41.       5.    2034.       5.     167.      29.   142.00
      .04     8.28    25.04     8.28     .040     .032     .040     .000   139.00    49.93
  .046426       8.       8.       8.        4       14        0      .00   521.95   571.87
0
1
   11NOV90      11:54:27                                                                    PAGE   28


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


*SECNO 3972.300

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
 3972.300     6.37   148.37   148.68      .00   152.04     3.67      .24     2.14   142.00
   51000.     236.   50528.     236.      34.    3275.      34.     169.      29.   142.00
      .04     7.01    15.43     7.01     .040     .032     .040     .000   142.00    43.44
  .009342      26.      26.      26.       20       11        0      .00   534.92   578.36
0
*SECNO 3972.200
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 3972.200     6.68   148.68   148.68      .00   152.02     3.33      .21      .14   142.00
   51000.     247.   50505.     247.      37.    3434.      37.     171.      29.   142.00
      .04     6.68    14.71     6.68     .040     .032     .040     .000   142.00    42.93
  .007970      26.      26.      26.       20        8        0      .00   535.95   578.87
0
*SECNO 3972.100
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 3972.100     6.69   148.69   148.69      .00   152.02     3.33      .40      .35   142.00
   51000.     248.   50505.     248.      37.    3437.      37.     175.      30.   142.00
      .04     6.68    14.69     6.68     .040     .032     .040     .000   142.00    42.91
  .007942      50.      50.      50.       20        5        0      .00   535.97   578.89
0
1
   11NOV90      11:54:27                                                                    PAGE   29


T1      ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPETED PLANS OF 11/7/90
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
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T1      SUPERCRITICAL RUN - FILL IN PLACE
T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
T2      STRT BASED ON CRITICAL DEPTH
T3      IBW1RIO.DAT             PAZ-DMJM03-13

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        0        0        1       -1        0        0    63000    179.14     0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     15        0       -1        0        0        0       -1        0        0        0

1
   11NOV90      11:54:27                                                                    PAGE   30


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


*PROF 4

IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE
DOCUMENTATION FOR DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=     .100 CEHV=     .300
*SECNO 6100.000
3720 CRITICAL DEPTH ASSUMED
 6100.000    12.03   176.44   176.44   179.14   179.98     3.54      .00      .00   177.76
   63000.       0.   63000.       0.       0.    4172.       0.       0.       0.    177.76
      .00      .00    15.10      .00     .000     .032     .000     .000   164.41  9696.03
  .008152       0.       0.       0.        0       14        0      .00   607.95 10303.97
0
*SECNO 5905.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5905.000    11.80   175.53   175.53      .00   179.00     3.48     1.55      .42   177.20
   63000.       0.   63000.       0.       0.    4210.       0.      19.       3.    177.20
      .00      .00    14.96      .00     .000     .032     .000     .000   163.73  9695.04
  .007941     195.     195.     195.       20        8        0      .00   609.93 10304.96
0
*SECNO 5825.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 5825.000    11.70   175.04   175.04      .00   178.57     3.53      .65      .06   177.01
   63000.       0.   63000.       0.       0.    4176.       0.      26.       4.    177.01
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      .01      .00    15.09      .00     .000     .032     .000     .000   163.34  9695.33
   .008148      80.      80.      80.       20        5        0      .00   609.34 10304.67
0
 *SECNO 5750.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
    11NOV90      11:54:27                                                                                    PAGE   31


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5750.100    12.81   176.00   176.00      .00   179.47     3.47     1.03     1.43   176.83
    63000.       0.   63000.       0.       0.    4213.       0.      34.       5.   176.83
      .01      .00    14.95      .00     .000     .032     .000     .000   163.19  9686.98
   .013792      75.      75.      75.       20       15        0  -736.07   626.05 10313.02
0
 *SECNO 5672.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    12.85   175.57   175.57      .00   179.06     3.48     1.08     1.53   176.40
    63000.       0.   63000.       0.       0.    4206.       0.      41.       6.   176.40
      .01      .00    14.98      .00     .000     .032     .000     .000   162.72  9686.96
   .013883      78.      78.      78.       20       15        0  -751.23   626.09 10313.04
0
 *SECNO 5670.000

 3301 HV CHANGED MORE THAN HVINS

  5670.000    11.27   171.27   173.40      .00   178.63     7.37      .04      .39   176.40
    63000.       0.   63000.       0.       0.    2893.       0.      41.       6.   176.40
      .01      .00    21.78      .00     .000     .032     .000     .000   160.00  9652.78
   .025631       2.       2.       2.        8        8        0      .00   574.44 10227.22
0
 *SECNO 5600.000

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5600.000    13.32   173.22   173.22      .00   176.80     3.58      .58     1.26   176.00
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   63000.       0.   63000.       0.       0.    4147.       0.      47.       7.    176.00
     .01      .00    15.19      .00     .000     .032     .000     .000   159.90  9698.69
  .008236      70.      70.      70.       20       11        0      .00   602.62 10301.31
0
1
   11NOV90      11:54:27                                                                    PAGE   32


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


 *SECNO 5320.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5320.000    12.73   171.93   171.93      .00   175.48     3.55     2.28      .61   172.67
   63000.       0.   63000.       0.       0.    4168.       0.      74.      11.    172.67
     .01      .00    15.11      .00     .000     .032     .000     .000   159.20  9697.14
  .008150     280.     280.     280.       20       11        0      .00   605.80 10302.95
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000    11.95   170.35   170.35      .00   173.88     3.53     2.77     3.08   171.21
   63000.       0.   63000.       0.       0.    4177.       0.     106.      16.    171.21
     .02      .00    15.08      .00     .000     .032     .000     .000   158.40  9695.27
  .008155     340.     340.     340.       20       11        0      .00   609.47 10304.73
0
 *SECNO 4640.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000    11.15   168.75   168.75      .00   172.27     3.52     2.76     2.72   170.00
   63000.       0.   63000.       0.       0.    4183.       0.     139.      20.    170.00
     .03      .00    15.06      .00     .000     .032     .000     .000   157.60  9694.82
  .008131     340.     340.     340.       20       11        0      .00   610.44 10305.26
0
 *SECNO 4435.000
  4435.000     9.80   166.90   167.05      .00   170.55     3.65     1.71      .01   169.80
   63000.       0.   63000.       0.       0.    4108.       0.     158.      23.    170.00
     .03      .00    15.34      .00     .000     .032     .000     .000   157.10    14.86
  .008537     205.     205.     205.        2       11        0      .00   606.58   621.44
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     9.98   167.08   167.08      .00   170.55     3.47     1.57      .18   169.80
   63000.       0.   63000.       0.       0.    4215.       0.     178.      26.    170.00
     .03      .00    14.95      .00     .000     .032     .000     .000   157.10    13.96
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   .007867     200.     200.     200.       20        5        0      .00   608.25   622.21
0
1
   11NOV90      11:54:27                                                                          PAGE   33


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

  4235.000     8.27   164.77   165.96      .00   170.26     5.49      .08      .20   159.50
    63000.     252.   62496.     252.      33.    3313.      33.     178.      26.    159.50
       .03     7.62    18.86     7.62     .040     .032     .040     .000   156.50    12.45
   .012876       8.       8.       8.        7       11        0      .00   514.31   526.75
0
 *SECNO 4163.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
  4163.300     8.90   165.40   165.99      .00   169.98     4.58      .13      .62   159.50
    63000.     293.   62413.     293.      41.    3620.      41.     179.      26.    159.50
       .03     7.08    17.24     7.08     .040     .032     .040     .000   156.50    10.95
   .009557      14.      14.      14.       20        8        0      .00   517.30   528.25
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.95

  4163.200     6.49   157.99   160.99      .00   168.33    10.35     1.07      .58   154.50
    63000.     116.   62769.     116.      12.    2428.      12.     183.      27.    154.50
       .04     9.53    25.85     9.53     .040     .032     .040     .000   151.50    28.03
   .036416      47.      47.      47.       10        8        0      .00   501.13   529.17
0
 *SECNO 4163.100
  4163.100     6.56   158.06   160.99      .00   168.10    10.04      .14      .09   154.50
    63000.     119.   62761.     119.      13.    2464.      13.     183.      27.    154.50
       .04     9.43    25.47     9.43     .040     .032     .040     .000   151.50    27.89
   .034659       4.       4.       4.        2       14        0      .00   501.43   529.31
0
1
   11NOV90      11:54:27                                                                          PAGE   34
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

  4163.000     6.72    158.22    161.03       .00    167.65      9.44       .26       .18    154.50
    63000.     127.    62746.     127.       14.     2541.       14.      183.       27.     154.50
       .04     9.21     24.69     9.21      .040      .032      .040      .000    151.50     27.57
   .031260       8.        8.        8.         3        11         0       .00    502.06    529.63
0
 *SECNO 4091.300

 3301 HV CHANGED MORE THAN HVINS

  4091.300     7.06    158.56    161.02       .00    166.87      8.31       .45       .34    154.50
    63000.     144.    62711.     144.       16.     2706.       16.      184.       27.     154.50
       .04     8.79     23.17     8.79      .040      .032      .040      .000    151.50     26.89
   .025320      16.       16.       16.         3        11         0       .00    503.42    530.31
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.58

  4091.200     5.57    150.57    154.17       .00    164.35     13.79      1.97       .55    148.00
    63000.      54.    62892.      54.        5.     2109.        5.      187.       28.     148.00
       .04     9.96     29.82     9.96      .040      .032      .040      .000    145.00     39.76
   .063514      44.       44.       44.        12        11         0       .00    527.08    566.84
0
 *SECNO 4091.100
  4091.100     5.65    150.65    154.17       .00    163.97     13.32       .25       .14    148.00
    63000.      57.    62887.      57.        6.     2145.        6.      187.       28.     148.00
       .04     9.86     29.31     9.86      .040      .032      .040      .000    145.00     39.64
   .059992       4.        4.        4.         3        14         0       .00    527.31    566.96
0
 *SECNO 4091.000
1
   11NOV90      11:54:27                                                                          PAGE   35


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA     LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
```

3301 HV CHANGED MORE THAN HVINS

4091.000	5.77	150.77	154.16	.00	163.26	12.50	.46	.25	148.00
63000.	61.	62877.	61.	6.	2214.	6.	187.	28.	148.00
.04	9.66	28.39	9.66	.040	.032	.040	.000	145.00	39.42
.053965	8.	8.	8.	5	14	0	.00	527.75	567.18

0

*SECNO 3979.300

3301 HV CHANGED MORE THAN HVINS

3979.300	6.06	151.06	154.16	.00	162.04	10.97	.77	.46	148.00
63000.	71.	62857.	71.	8.	2362.	8.	188.	28.	148.00
.04	9.26	26.61	9.26	.040	.032	.040	.000	145.00	38.95
.043495	16.	16.	16.	6	14	0	.00	528.69	567.65

0

*SECNO 3973.200

3301 HV CHANGED MORE THAN HVINS

3973.200	5.78	144.78	148.21	.00	157.46	12.68	4.41	.17	142.00
63000.	62.	62875.	62.	6.	2199.	6.	193.	29.	142.00
.04	9.75	28.60	9.75	.040	.032	.040	.000	139.00	49.39
.054592	90.	90.	90.	9	14	0	.00	523.01	572.41

0

*SECNO 3973.100

3973.100	5.86	144.86	148.21	.00	157.08	12.22	.24	.14	142.00
63000.	65.	62870.	65.	7.	2239.	7.	193.	29.	142.00
.04	9.63	28.07	9.63	.040	.032	.040	.000	139.00	49.26
.051337	5.	5.	5.	4	14	0	.00	523.27	572.54

0

*SECNO 3973.000

3301 HV CHANGED MORE THAN HVINS

3973.000	6.00	145.00	148.21	.00	156.46	11.45	.39	.23	142.00
63000.	70.	62859.	70.	7.	2312.	7.	194.	29.	142.00
.04	9.43	27.19	9.43	.040	.032	.040	.000	139.00	49.03
.046123	8.	8.	8.	4	14	0	.00	523.74	572.77

0

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 3972.300

3301 HV CHANGED MORE THAN HVINS

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3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .58

 3972.300     6.22   148.22   149.69      .00   154.09     5.87      .69     1.67   142.00
   63000.     285.   62430.     285.      32.    3198.      32.     195.      30.    142.00
      .04     8.87    19.52     8.87     .040     .032     .040     .000   142.00    43.68
  .015426      26.      26.      26.       9       11        0      .00   534.43   578.12
0
*SECNO 3972.200

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
 3972.200     7.02   149.02   149.69      .00   153.63     4.61      .27      .55   142.00
   63000.     321.   62359.     321.      41.    3605.      41.     197.      30.    142.00
      .04     7.86    17.30     7.86     .040     .032     .040     .000   142.00    42.37
  .010331      26.      26.      26.       20       11        0      .00   537.05   579.43
0
*SECNO 3972.100

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 3972.100     7.70   149.70   149.70      .00   153.52     3.82      .38     3.21   142.00
   63000.     351.   62297.     351.      49.    3954.      49.     202.      31.    142.00
      .04     7.16    15.76     7.16     .040     .032     .040     .000   142.00    41.25
  .007577      50.      50.      50.       20        8        0      .00   539.30   580.55
0
1
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                                                                THIS RUN EXECUTED 11NOV90    11:54:57
**************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
**************************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


REVIBW.DAT

SUMMARY PRINTOUT
```

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	6100.000	173.57	.00	12.10	.00	.00	30000.00	.00	9.16	573.55	9713.23	10286.77
*	6100.000	174.80	.00	13.47	.00	.00	43000.00	.00	10.39	588.26	9705.87	10294.13
*	6100.000	175.48	.00	14.18	.00	.00	51000.00	.00	11.07	596.46	9701.77	10298.23
*	6100.000	176.44	.00	15.10	.00	.00	63000.00	.00	12.03	607.95	9696.03	10303.97
*	5905.000	172.68	.00	11.88	.00	.00	30000.00	.00	8.95	575.81	9712.10	10287.90
*	5905.000	173.90	.00	13.31	.00	.00	43000.00	.00	10.17	590.36	9704.82	10295.18
*	5905.000	174.58	.00	14.03	.00	.00	51000.00	.00	10.85	598.52	9700.74	10299.26
*	5905.000	175.53	.00	14.96	.00	.00	63000.00	.00	11.80	609.93	9695.04	10304.96
*	5825.000	172.17	.00	12.10	.00	.00	30000.00	.00	8.83	575.00	9712.50	10287.50
*	5825.000	173.40	.00	13.47	.00	.00	43000.00	.00	10.06	589.68	9705.16	10294.84
*	5825.000	174.08	.00	14.17	.00	.00	51000.00	.00	10.74	597.88	9701.06	10298.94
*	5825.000	175.04	.00	15.09	.00	.00	63000.00	.00	11.70	609.34	9695.33	10304.67
*	5750.100	173.19	.00	12.00	.00	.00	30000.00	.00	10.00	592.28	9703.86	10296.14
*	5750.100	174.43	.00	13.25	.00	.00	43000.00	.00	11.24	607.19	9696.41	10303.59
*	5750.100	175.05	.00	14.07	.00	.00	51000.00	.00	11.86	614.63	9692.69	10307.31
*	5750.100	176.00	.00	14.95	.00	.00	63000.00	.00	12.81	626.05	9686.98	10313.02
*	5672.100	172.80	.00	11.93	.00	.00	30000.00	.00	10.08	592.79	9703.60	10296.40
*	5672.100	173.97	.00	13.37	.00	.00	43000.00	.00	11.25	606.81	9696.59	10303.41
*	5672.100	174.69	.00	13.94	.00	.00	51000.00	.00	11.97	615.51	9692.25	10307.75
*	5672.100	175.57	.00	14.98	.00	.00	63000.00	.00	12.85	626.09	9686.96	10313.04
*	5670.000	168.90	.00	19.16	.00	.00	30000.00	.00	8.90	546.02	9666.99	10213.01
*	5670.000	169.89	.00	20.37	.00	.00	43000.00	.00	9.89	557.88	9661.06	10218.94
*	5670.000	170.46	.00	20.97	.00	.00	51000.00	.00	10.46	564.74	9657.63	10222.37
	5670.000	171.27	.00	21.78	.00	.00	63000.00	.00	11.27	574.44	9652.78	10227.22
*	5600.000	170.33	.00	12.21	.00	.00	30000.00	.00	10.43	567.96	9716.02	10283.98
*	5600.000	171.56	.00	13.58	.00	.00	43000.00	.00	11.66	582.77	9708.62	10291.38
*	5600.000	172.25	.00	14.28	.00	.00	51000.00	.00	12.35	591.05	9704.47	10295.53
*	5600.000	173.22	.00	15.19	.00	.00	63000.00	.00	13.32	602.62	9698.69	10301.31

1

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	5320.000	169.21	.00	11.68	.00	.00	30000.00	.00	10.01	573.20	9713.42	10286.62
*	5320.000	170.27	.00	13.52	.00	.00	43000.00	.00	11.07	585.87	9707.10	10292.96
*	5320.000	170.96	.00	14.22	.00	.00	51000.00	.00	11.76	594.14	9702.97	10297.11
*	5320.000	171.93	.00	15.11	.00	.00	63000.00	.00	12.73	605.80	9697.14	10302.95
*	4980.000	167.49	.00	12.07	.00	.00	30000.00	.00	9.09	575.18	9712.41	10287.59
*	4980.000	168.71	.00	13.47	.00	.00	43000.00	.00	10.31	589.78	9705.11	10294.89
*	4980.000	169.39	.00	14.17	.00	.00	51000.00	.00	10.99	597.96	9701.02	10298.98
*	4980.000	170.35	.00	15.08	.00	.00	63000.00	.00	11.95	609.47	9695.27	10304.73
*	4640.000	165.91	.00	12.02	.00	.00	30000.00	.00	8.31	577.53	9711.25	10288.79

*	4640.000	167.12	.00	13.42	.00	.00	43000.00	.00	9.52	591.58	9704.24	10295.82
*	4640.000	167.80	.00	14.14	.00	.00	51000.00	.00	10.20	599.43	9700.32	10299.75
*	4640.000	168.75	.00	15.06	.00	.00	63000.00	.00	11.15	610.44	9694.82	10305.26
*	4435.000	164.21	.00	11.97	.00	.00	30000.00	.00	7.11	580.96	28.69	609.65
*	4435.000	165.41	.00	13.38	.00	.00	43000.00	.00	8.31	592.40	22.52	614.91
*	4435.000	166.07	.00	14.11	.00	.00	51000.00	.00	8.97	598.80	19.06	617.86
	4435.000	166.90	.00	15.34	.00	.00	63000.00	.00	9.80	606.58	14.86	621.44
*	4235.000	164.23	.00	11.91	.00	.00	30000.00	.00	7.13	581.15	28.59	609.74
*	4235.000	165.43	.00	13.33	.00	.00	43000.00	.00	8.33	592.58	22.42	615.00
*	4235.000	166.11	.00	14.06	.00	.00	51000.00	.00	9.01	599.02	18.94	617.97
*	4235.000	167.08	.00	14.95	.00	.00	63000.00	.00	9.98	608.25	13.96	622.21
*	4235.000	161.61	5.66	16.97	5.66	29.91	29940.19	29.91	5.11	499.23	19.98	519.22
*	4235.000	162.87	6.71	17.96	6.71	90.86	42818.29	90.86	6.37	505.26	16.97	522.23
	4235.000	163.63	7.15	18.41	7.15	145.25	50709.50	145.25	7.13	508.87	15.16	524.04
	4235.000	164.77	7.62	18.86	7.62	252.22	62495.56	252.22	8.27	514.31	12.45	526.75
	4163.300	162.28	5.11	14.27	5.11	47.17	29905.65	47.17	5.78	502.46	18.37	520.83
*	4163.300	163.55	6.10	15.76	6.10	118.86	42762.28	118.86	7.05	508.47	15.37	523.83
*	4163.300	164.24	6.59	16.58	6.59	176.57	50646.86	176.57	7.74	511.79	13.71	525.49
*	4163.300	165.40	7.08	17.24	7.08	293.30	62413.39	293.30	8.90	517.30	10.95	528.25
*	4163.200	155.79	6.17	22.05	6.17	10.28	29979.45	10.28	4.29	492.36	32.42	524.78
*	4163.200	156.70	7.89	23.87	7.89	37.87	42924.26	37.87	5.20	495.96	30.62	526.58
*	4163.200	157.22	8.65	24.78	8.65	63.70	50872.61	63.70	5.72	498.06	29.57	527.63
*	4163.200	157.99	9.53	25.85	9.53	115.59	62768.82	115.59	6.49	501.13	28.03	529.17
	4163.100	155.88	6.12	21.41	6.12	11.56	29976.88	11.56	4.38	492.69	32.25	524.95
	4163.100	156.76	7.80	23.41	7.80	39.95	42920.09	39.95	5.26	496.25	30.47	526.73
	4163.100	157.29	8.55	24.34	8.55	66.49	50867.01	66.50	5.79	498.36	29.42	527.78
	4163.100	158.06	9.43	25.47	9.43	119.28	62761.45	119.28	6.56	501.43	27.89	529.31
	4163.000	156.06	6.01	20.17	6.01	14.43	29971.13	14.43	4.56	493.40	31.90	525.30
	4163.000	156.93	7.61	22.41	7.61	44.92	42910.17	44.92	5.43	496.92	30.14	527.06
	4163.000	157.46	8.34	23.43	8.34	72.77	50854.45	72.77	5.96	499.02	29.09	528.11
	4163.000	158.22	9.21	24.69	9.21	127.22	62745.56	127.22	6.72	502.06	27.57	529.63

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	4091.300	156.42	5.72	17.95	5.72	21.22	29957.57	21.22	4.92	494.90	31.15	526.05
	4091.300	157.29	7.21	20.54	7.21	55.95	42888.10	55.95	5.79	498.34	29.43	527.77
	4091.300	157.79	7.93	21.76	7.93	86.00	50828.00	86.00	6.29	500.37	28.41	528.79
	4091.300	158.56	8.79	23.17	8.79	144.47	62711.05	144.47	7.06	503.42	26.89	530.31
*	4091.200	148.84	5.67	24.70	5.67	3.32	29993.37	3.32	3.84	521.38	42.61	563.99
*	4091.200	149.55	7.86	27.16	7.86	15.60	42968.81	15.60	4.55	523.72	41.44	565.16
*	4091.200	149.96	8.82	28.36	8.82	28.12	50943.76	28.12	4.96	525.09	40.75	565.85
*	4091.200	150.57	9.96	29.82	9.96	54.24	62891.52	54.24	5.57	527.08	39.76	566.84

	4091.100	148.93	5.70	23.89	5.70	3.99	29992.02	3.99	3.93	521.64	42.48	564.12
	4091.100	149.62	7.79	26.52	7.79	16.96	42966.08	16.96	4.62	523.97	41.32	565.28
	4091.100	150.04	8.73	27.79	8.73	29.87	50940.25	29.87	5.04	525.32	40.64	565.96
	4091.100	150.65	9.86	29.31	9.86	56.64	62886.72	56.64	5.65	527.31	39.64	566.96
	4091.000	149.08	5.70	22.42	5.70	5.48	29989.04	5.48	4.08	522.17	42.22	564.38
	4091.000	149.77	7.64	25.32	7.64	19.80	42960.39	19.80	4.77	524.45	41.07	565.53
	4091.000	150.18	8.55	26.70	8.55	33.51	50932.99	33.51	5.18	525.80	40.40	566.20
	4091.000	150.77	9.66	28.39	9.66	61.26	62877.49	61.26	5.77	527.75	39.42	567.18
	3979.300	149.41	5.56	19.84	5.56	9.19	29981.62	9.19	4.41	523.27	41.66	564.94
	3979.300	150.07	7.32	23.17	7.32	26.03	42947.93	26.04	5.07	525.46	40.57	566.03
	3979.300	150.47	8.18	24.73	8.18	41.28	50917.45	41.28	5.47	526.76	39.92	566.68
	3979.300	151.06	9.26	26.61	9.26	71.38	62857.24	71.38	6.06	528.69	38.95	567.65
	3973.200	143.15	5.74	22.00	5.74	6.32	29987.37	6.32	4.15	517.62	52.09	569.71
	3973.200	143.84	7.65	25.06	7.65	21.37	42957.26	21.37	4.84	519.89	50.96	570.84
	3973.200	144.22	8.58	26.62	8.58	35.15	50929.71	35.15	5.22	521.17	50.31	571.48
	3973.200	144.78	9.75	28.60	9.75	62.37	62875.27	62.37	5.78	523.01	49.39	572.41
	3973.100	143.25	5.70	21.22	5.70	7.38	29985.23	7.38	4.25	517.94	51.93	569.87
	3973.100	143.92	7.56	24.42	7.56	23.16	42953.67	23.16	4.92	520.18	50.81	570.99
	3973.100	144.31	8.47	26.03	8.47	37.37	50925.26	37.37	5.31	521.45	50.18	571.62
	3973.100	144.86	9.63	28.07	9.63	65.20	62869.60	65.20	5.86	523.27	49.26	572.54
	3973.000	143.42	5.61	19.96	5.61	9.42	29981.16	9.42	4.42	518.52	51.64	570.16
	3973.000	144.09	7.38	23.33	7.38	26.54	42946.91	26.54	5.09	520.70	50.55	571.25
	3973.000	144.46	8.28	25.04	8.28	41.46	50917.07	41.46	5.46	521.95	49.93	571.87
	3973.000	145.00	9.43	27.19	9.43	70.32	62859.36	70.32	6.00	523.74	49.03	572.77
*	3972.300	146.70	5.61	12.34	5.61	102.59	29794.83	102.59	4.70	529.37	46.21	575.59
*	3972.300	147.61	6.72	14.79	6.72	175.38	42649.24	175.38	5.61	532.40	44.70	577.10
*	3972.300	148.37	7.01	15.43	7.01	235.98	50528.04	235.98	6.37	534.92	43.44	578.36
*	3972.300	148.22	8.87	19.52	8.87	284.79	62430.43	284.79	6.22	534.43	43.68	578.12
*	3972.200	146.70	5.60	12.33	5.60	102.68	29794.64	102.68	4.70	529.39	46.21	575.59
*	3972.200	147.97	6.32	13.90	6.32	186.42	42627.16	186.42	5.97	533.58	44.11	577.69
*	3972.200	148.68	6.68	14.71	6.68	247.32	50505.36	247.32	6.68	535.95	42.93	578.87
*	3972.200	149.02	7.86	17.30	7.86	320.60	62358.80	320.60	7.02	537.05	42.37	579.43

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	3972.100	146.70	5.60	12.33	5.60	102.66	29794.68	102.66	4.70	529.38	46.21	575.59
*	3972.100	147.97	6.31	13.89	6.31	186.59	42626.82	186.59	5.97	533.60	44.10	577.70
*	3972.100	148.69	6.68	14.69	6.68	247.58	50504.84	247.58	6.69	535.97	42.91	578.89
*	3972.100	149.70	7.16	15.76	7.16	351.29	62297.43	351.29	7.70	539.30	41.25	580.55

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REVIBW.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
*	6100.000	173.57	173.57	175.85	.00	.00	164.41	96.85	.00	9688.10	10311.90	.00
*	6100.000	174.80	174.80	177.62	.00	.00	164.41	88.78	.00	9688.10	10311.90	.00
*	6100.000	175.48	175.48	178.61	.00	.00	164.41	85.45	.00	9688.10	10311.90	.00
*	6100.000	176.44	176.44	179.98	.00	.00	164.41	81.52	.00	9688.10	10311.90	.00
*	5905.000	172.68	172.68	174.88	1.79	.65	163.73	91.66	-3.49	9685.00	10315.00	195.00
*	5905.000	173.90	173.90	176.65	1.67	.50	163.73	85.53	-3.49	9685.00	10315.00	195.00
*	5905.000	174.58	174.58	177.63	1.61	.46	163.73	82.75	-3.49	9685.00	10315.00	195.00
*	5905.000	175.53	175.53	179.00	1.55	.42	163.73	79.41	-3.49	9685.00	10315.00	195.00
*	5825.000	172.17	172.17	174.44	.78	.30	163.34	97.18	-4.87	9683.50	10316.50	80.00
*	5825.000	173.40	173.40	176.21	.71	.05	163.34	88.92	-4.87	9683.50	10316.50	80.00
*	5825.000	174.08	174.08	177.20	.68	.05	163.34	85.45	-4.87	9683.50	10316.50	80.00
*	5825.000	175.04	175.04	178.57	.65	.06	163.34	81.48	-4.87	9683.50	10316.50	80.00
*	5750.100	173.19	173.19	175.42	1.27	.24	163.19	169.45	-2.00	9682.00	10318.00	75.00
*	5750.100	174.43	174.43	177.16	1.12	1.86	163.19	149.29	-2.00	9682.00	10318.00	75.00
*	5750.100	175.05	175.05	178.13	1.10	1.68	163.19	146.96	-2.00	9682.00	10318.00	75.00
*	5750.100	176.00	176.00	179.47	1.03	1.43	163.19	137.92	-2.00	9682.00	10318.00	75.00
*	5672.100	172.80	172.80	175.01	1.30	2.71	162.72	166.41	-6.03	9682.00	10318.00	78.00
*	5672.100	173.97	173.97	176.74	1.20	1.98	162.72	153.83	-6.03	9682.00	10318.00	78.00
*	5672.100	174.69	174.69	177.71	1.11	1.71	162.72	142.61	-6.03	9682.00	10318.00	78.00
*	5672.100	175.57	175.57	179.06	1.08	1.53	162.72	138.83	-6.03	9682.00	10318.00	78.00
*	5670.000	168.90	170.50	174.60	.06	.35	160.00	419.68	-1360.00	9622.00	10258.00	2.00
*	5670.000	169.89	171.74	176.33	.05	.37	160.00	327.93	-1360.00	9622.00	10258.00	2.00
*	5670.000	170.46	172.43	177.29	.04	.38	160.00	292.58	-1360.00	9622.00	10258.00	2.00
	5670.000	171.27	173.40	178.63	.04	.39	160.00	256.31	-1360.00	9622.00	10258.00	2.00
*	5600.000	170.33	170.33	172.64	.69	1.92	159.90	98.77	-1.43	9682.00	10318.00	70.00
*	5600.000	171.56	171.56	174.43	.63	1.67	159.90	90.10	-1.43	9682.00	10318.00	70.00
*	5600.000	172.25	172.25	175.42	.61	1.47	159.90	86.49	-1.43	9682.00	10318.00	70.00
*	5600.000	173.22	173.22	176.80	.58	1.26	159.90	82.36	-1.43	9682.00	10318.00	70.00
*	5320.000	169.21	169.21	171.33	2.41	1.15	159.20	86.20	-2.50	9692.70	10307.40	280.00
*	5320.000	170.27	170.27	173.11	2.51	.81	159.20	89.53	-2.50	9692.70	10307.40	280.00
*	5320.000	170.96	170.96	174.10	2.41	.70	159.20	85.95	-2.50	9692.70	10307.40	280.00
*	5320.000	171.93	171.93	175.48	2.28	.61	159.20	81.50	-2.50	9692.70	10307.40	280.00
*	4980.000	167.49	167.49	169.76	3.29	-.15	158.40	96.66	-2.35	9690.10	10309.90	340.00
*	4980.000	168.71	168.71	171.52	3.03	3.97	158.40	88.98	-2.35	9690.10	10309.90	340.00
*	4980.000	169.39	169.39	172.51	2.91	3.52	158.40	85.65	-2.35	9690.10	10309.90	340.00
*	4980.000	170.35	170.35	173.88	2.77	3.08	158.40	81.55	-2.35	9690.10	10309.90	340.00

	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
*	4640.000	165.91	165.91	168.16	3.26	4.38	157.60	95.75	-2.35	9687.60	10312.50	340.00
*	4640.000	167.12	167.12	169.92	3.00	3.38	157.60	88.30	-2.35	9687.60	10312.50	340.00
*	4640.000	167.80	167.80	170.90	2.89	3.05	157.60	85.13	-2.35	9687.60	10312.50	340.00
*	4640.000	168.75	168.75	172.27	2.76	2.72	157.60	81.31	-2.35	9687.60	10312.50	340.00
*	4435.000	164.21	164.21	166.43	1.94	.09	157.10	94.67	-2.44	.00	635.00	205.00
*	4435.000	165.41	165.41	168.19	1.79	.31	157.10	87.34	-2.44	.00	635.00	205.00
*	4435.000	166.07	166.08	169.17	1.74	.00	157.10	84.20	-2.44	.00	635.00	205.00
	4435.000	166.90	167.05	170.55	1.71	.01	157.10	85.37	-2.44	.00	635.00	205.00
*	4235.000	164.23	164.23	166.43	1.86	.25	157.10	93.25	.00	.00	635.00	200.00
*	4235.000	165.43	165.43	168.19	1.73	.18	157.10	86.33	.00	.00	635.00	200.00
*	4235.000	166.11	166.11	169.17	1.66	.16	157.10	83.17	.00	.00	635.00	200.00
*	4235.000	167.08	167.08	170.55	1.57	.18	157.10	78.67	.00	.00	635.00	200.00
*	4235.000	161.61	162.86	166.07	.13	.23	156.50	241.44	-75.00	25.00	514.20	8.00
*	4235.000	162.87	164.17	167.86	.11	.22	156.50	181.16	-75.00	25.00	514.20	8.00
	4235.000	163.63	164.92	168.86	.10	.22	156.50	156.82	-75.00	25.00	514.20	8.00
	4235.000	164.77	165.96	170.26	.08	.20	156.50	128.76	-75.00	25.00	514.20	8.00
	4163.300	162.28	162.86	165.43	.25	.39	156.50	135.66	.00	25.00	514.20	13.60
*	4163.300	163.55	164.17	167.39	.16	.67	156.50	117.31	.00	25.00	514.20	13.60
*	4163.300	164.24	164.92	168.49	.15	.48	156.50	110.90	.00	25.00	514.20	13.60
*	4163.300	165.40	165.99	169.98	.13	.62	156.50	95.57	.00	25.00	514.20	13.60
*	4163.200	155.79	157.88	163.34	1.65	.44	151.50	573.84	-107.30	35.00	522.20	46.60
*	4163.200	156.70	159.20	165.53	1.35	.50	151.50	463.16	-107.30	35.00	522.20	46.60
*	4163.200	157.22	159.96	166.73	1.23	.53	151.50	418.20	-107.30	35.00	522.20	46.60
*	4163.200	157.99	160.99	168.33	1.07	.58	151.50	364.16	-107.30	35.00	522.20	46.60
	4163.100	155.88	157.87	162.99	.22	.13	151.50	520.37	.00	35.00	522.20	4.00
	4163.100	156.76	159.19	165.25	.18	.10	151.50	434.35	.00	35.00	522.20	4.00
	4163.100	157.29	159.95	166.47	.16	.10	151.50	394.31	.00	35.00	522.20	4.00
	4163.100	158.06	160.99	168.10	.14	.09	151.50	346.59	.00	35.00	522.20	4.00
	4163.000	156.06	157.87	162.37	.38	.24	151.50	426.63	.00	35.00	522.20	8.00
	4163.000	156.93	159.19	164.72	.32	.21	151.50	375.75	.00	35.00	522.20	8.00
	4163.000	157.46	159.95	165.97	.30	.20	151.50	347.46	.00	35.00	522.20	8.00
	4163.000	158.22	161.03	167.65	.26	.18	151.50	312.60	.00	35.00	522.20	8.00
	4091.300	156.42	157.90	161.42	.56	.40	151.50	289.22	.00	35.00	522.20	15.90
	4091.300	157.29	159.22	163.83	.52	.38	151.50	281.09	.00	35.00	522.20	15.90
	4091.300	157.79	159.98	165.13	.49	.35	151.50	271.78	.00	35.00	522.20	15.90
	4091.300	158.56	161.02	166.87	.45	.34	151.50	253.20	.00	35.00	522.20	15.90
*	4091.200	148.84	151.17	158.31	2.66	.45	145.00	910.07	-146.73	44.00	562.60	44.30
*	4091.200	149.55	152.44	161.00	2.34	.49	145.00	773.59	-146.73	44.00	562.60	44.30
*	4091.200	149.96	153.16	162.44	2.18	.51	145.00	711.41	-146.73	44.00	562.60	44.30

*	4091.200	150.57	154.17	164.35	1.97	.55	145.00	635.14	-146.73	44.00	562.60	44.30

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	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
	4091.100	148.93	151.18	157.79	.34	.18	145.00	814.06	.00	44.00	562.60	4.00
	4091.100	149.62	152.45	160.54	.30	.16	145.00	714.38	.00	44.00	562.60	4.00
	4091.100	150.04	153.16	162.01	.28	.15	145.00	664.97	.00	44.00	562.60	4.00
	4091.100	150.65	154.17	163.97	.25	.14	145.00	599.92	.00	44.00	562.60	4.00
	4091.000	149.08	151.17	156.88	.59	.32	145.00	659.17	.00	44.00	562.60	8.00
	4091.000	149.77	152.44	159.72	.53	.29	145.00	612.36	.00	44.00	562.60	8.00
	4091.000	150.18	153.16	161.24	.50	.28	145.00	582.54	.00	44.00	562.60	8.00
	4091.000	150.77	154.16	163.26	.46	.25	145.00	539.65	.00	44.00	562.60	8.00
	3979.300	149.41	151.17	155.52	.85	.51	145.00	438.52	.00	44.00	562.60	15.90
	3979.300	150.07	152.44	158.39	.84	.49	145.00	455.29	.00	44.00	562.60	15.90
	3979.300	150.47	153.16	159.95	.81	.47	145.00	450.91	.00	44.00	562.60	15.90
	3979.300	151.06	154.16	162.04	.77	.46	145.00	434.95	.00	44.00	562.60	15.90
	3973.200	143.15	145.23	150.66	4.72	.14	139.00	611.08	-66.74	54.00	567.80	89.90
	3973.200	143.84	146.48	153.58	4.67	.14	139.00	584.20	-66.74	54.00	567.80	89.90
	3973.200	144.22	147.20	155.21	4.59	.15	139.00	569.33	-66.74	54.00	567.80	89.90
	3973.200	144.78	148.21	157.46	4.41	.17	139.00	545.92	-66.74	54.00	567.80	89.90
	3973.100	143.25	145.20	150.24	.26	.16	139.00	541.88	.00	54.00	567.80	4.60
	3973.100	143.92	146.48	153.17	.26	.15	139.00	535.89	.00	54.00	567.80	4.60
	3973.100	144.31	147.20	154.82	.25	.14	139.00	528.62	.00	54.00	567.80	4.60
	3973.100	144.86	148.21	157.08	.24	.14	139.00	513.37	.00	54.00	567.80	4.60
	3973.000	143.42	145.20	149.61	.39	.24	139.00	442.20	.00	54.00	567.80	8.00
	3973.000	144.09	146.48	152.53	.40	.24	139.00	460.40	.00	54.00	567.80	8.00
	3973.000	144.46	147.20	154.18	.40	.24	139.00	464.26	.00	54.00	567.80	8.00
	3973.000	145.00	148.21	156.46	.39	.23	139.00	461.23	.00	54.00	567.80	8.00
*	3972.300	146.70	146.70	149.05	.23	1.38	142.00	89.74	115.38	54.00	567.80	26.00
*	3972.300	147.61	147.99	150.99	.26	1.83	142.00	101.73	115.38	54.00	567.80	26.00
*	3972.300	148.37	148.68	152.04	.24	2.14	142.00	93.42	115.38	54.00	567.80	26.00
*	3972.300	148.22	149.69	154.09	.69	1.67	142.00	154.26	115.38	54.00	567.80	26.00
*	3972.200	146.70	146.70	149.05	.23	.23	142.00	89.46	.00	54.00	567.80	26.00
*	3972.200	147.97	147.97	150.95	.22	1.50	142.00	82.78	.00	54.00	567.80	26.00
*	3972.200	148.68	148.68	152.02	.21	.14	142.00	79.70	.00	54.00	567.80	26.00
*	3972.200	149.02	149.69	153.63	.27	.55	142.00	103.31	.00	54.00	567.80	26.00
*	3972.100	146.70	146.70	149.05	.45	.35	142.00	89.52	.00	54.00	567.80	50.00
*	3972.100	147.97	147.97	150.95	.41	.04	142.00	82.52	.00	54.00	567.80	50.00
*	3972.100	148.69	148.69	152.02	.40	.35	142.00	79.42	.00	54.00	567.80	50.00
*	3972.100	149.70	149.70	153.52	.38	3.21	142.00	75.77	.00	54.00	567.80	50.00

1

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=   6100.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6100.000  PROFILE=  4  CRITICAL DEPTH ASSUMED

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CAUTION SECNO=   5905.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5905.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   5905.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5905.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
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CAUTION SECNO=   5905.000  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
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CAUTION SECNO=   5672.100  PROFILE=  1  CRITICAL DEPTH ASSUMED
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   11NOV90      11:54:27                                                                    PAGE   45


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   11NOV90      11:54:27                                                                    PAGE   46

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CAUTION SECNO=   4235.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
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CAUTION SECNO=   4235.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   4235.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
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CAUTION SECNO=   4235.000  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=   4235.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=   4163.300  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=   4163.300  PROFILE=  3  WSEL ASSUMED BASED ON MIN DIFF
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WARNING SECNO=   4163.200  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=   3972.300  PROFILE=  2  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=   3972.300  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
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   11NOV90      11:54:27                                                          PAGE   47


CAUTION SECNO=   3972.300  PROFILE=  3  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=   3972.300  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
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CAUTION SECNO=   3972.200  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
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CAUTION SECNO=   3972.100  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
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CAUTION SECNO=   3972.100  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   3972.100  PROFILE=  4  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   3972.100  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL
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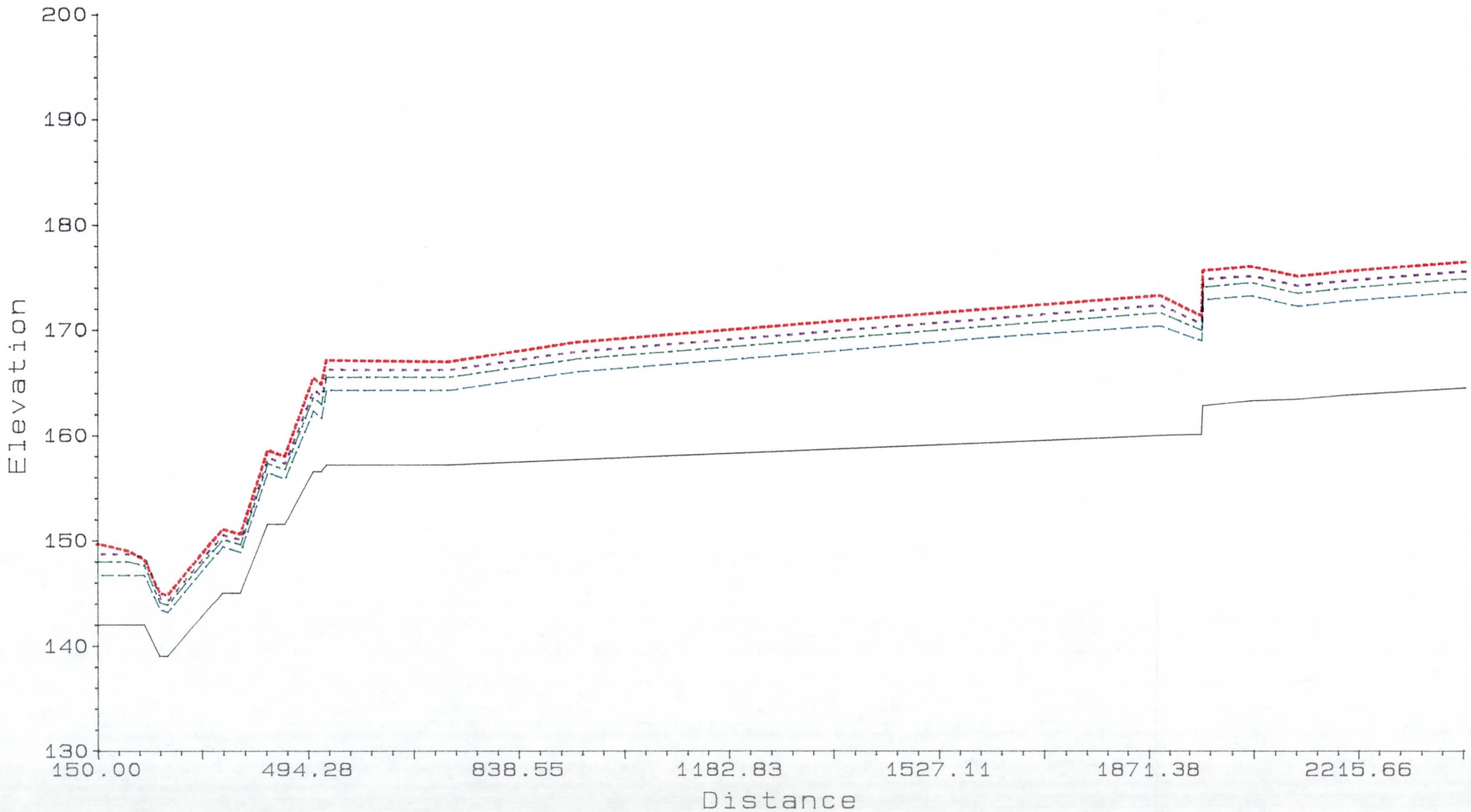
REVS6IBW.DAT
FILL IN PLACE



```
1*****************************************************
 *  WATER SURFACE PROFILES                           *
 *  VERSION OF SEPTEMBER 1988                        *
 *  ERROR: 01,02,03                                  *
 *  UPDATED:  APRIL 1990                             *
 *  RUN DATE    11NOV90    TIME   11:49:29           *
 *****************************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS     *
*  THE HYDROLOGIC ENGINEERING CENTER *
*  609 SECOND STREET, SUITE D       *
*  DAVIS, CALIFORNIA 95616-4687     *
*           (916) 756-1104          *
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

END OF BANNER

1

11NOV90 11:49:29 PAGE 1

THIS RUN EXECUTED 11NOV90 11:49:29

```
*************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
*************************************************
```

```
T1      ADJUSTED SLA-TEMPE AZ - TO FINAL ADOPTED PLANS DATED 11/7/90
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T1      SUBCRITICAL RUN - NO FILL IN PLACE
T1      PROFILE BEG AT LEVEL 1 OF THE RIO SALADO, IBW DROP STRUCTURE TO SALT R.
T2      STRT BASED ON CRITICAL DEPTH
T3      REVIBW.DAT              PAZ-DMJM03-13      FCDMC 11/15/90
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	-1	0	0	30000	161.81	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1	0	-1	0	0	0	-1	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

```
     38        1       55       26       56       13       14       15        8        4
     53       54        0       38        1        2        3       11       12       42
      5       33       21       22       39

J6  IHLEQ    ICOPY    SUBDIV   STRTDS   RMILE

     1



NC   0.040    0.040    0.032      0.1      0.3
X1    3972        6       54    567.8
GR     170        0    159.5       25      142       54      142    567.8    159.5    596.8
GR     170    621.8

X1   3972.1                              150      150      150

X1   3972.2                               50       50       50

X1   3972.3                               26       26       26
       LEVEL 4
1
   11NOV90     11:49:29                                                                PAGE    2



X1    3973        7       54    567.8       26       26       26
GR     170        0    159.5       25      142       54      139    310.9      142    567.8
GR   159.5    596.8      170    621.8

X1   3973.1                                8        8        8

X1   3973.2        7       54    567.8      4.6      4.6      4.6
GR     170        0    159.5       25      142       54    137.4    310.9      142    567.8
GR   159.5    596.8      170    621.8

X1   3979.3                             89.9     89.9     89.9
       LEVEL 3

X1    4091        7       44    562.6     15.9     15.9     15.9
GR     170        0    159.5       25      148       44      145    303.3      148    562.6
GR   159.5    581.6      170    606.6

X1   4091.1                                8        8        8

X1   4091.2        7       44    562.6        4        4        4
GR     170        0    159.5       25      148       44    143.9    303.3      148    562.6
GR   159.5    581.6      170    606.6

X1   4091.3                             44.3     44.3     44.3
       LEVEL 2

X1    4163        7       35    522.2     15.9     15.9     15.9
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```
GR      170        0     159.5       25     154.5       35     151.5     278.6     154.5     522.2
GR    159.5    532.2       170    557.2

X1   4163.1                                 8         8         8

X1   4163.2        7        35    522.2       4         4         4
GR      170        0     159.5       25     154.5       35     150.5     278.6     154.5     522.2
GR    159.5    532.2       170    557.2

X1   4163.3                                46.6      46.6      46.6
        LEVEL 1

X1     4235        5        25    514.2      13.6      13.6      13.6
GR      170        0     159.5       25     156.5     269.6     159.5     514.2       170     539.2

X1     4235                                 8         8         8


X1   4435.0       12         0      635       200       200       200         0         0         0
GR    169.8      0.0     162.0     40.0     160.0     210.0     158.0     240.0     157.1     255.0
GR    157.1    380.0     158.0    390.0     160.0     410.0     161.0     460.0     161.0     580.0
GR    162.0    600.0     170.0    635.0
1
   11NOV90      11:49:29                                                                    PAGE     3


X1     4640        8    9687.6  10312.5       205       205       205         0         0         0
GR    170.0   9687.6    162.67   9730.0    162.67    9885.0     157.6    9900.0     157.6   10020.0
GR   162.67  10035.0    162.67  10270.0     170.0   10312.5

X1     4980        8    9690.1  10309.9       340       340       340         0         0         0
GR   171.21   9690.1    164.56   9730.0    164.56    9852.0     158.4    9870.0     158.4    9990.0
GR   164.56  10008.0    164.56  10270.0    171.21   10309.9

X1     5320        8    9692.7  10307.4       340       340       340         0         0         0
GR   172.67   9692.7    166.45   9730.0    166.45    9838.0     159.2    9860.0     159.2    9980.0
GR   166.45  10002.0    166.45  10270.0    172.67   10307.4

X1     5600        8    9682.0  10318.0       280       280       280         0         0         0
GR    176.0   9682.0     168.0   9730.0     168.0    9836.0     159.9    9860.0     159.9    9980.0
GR    168.0  10004.0     168.0  10270.0     176.0   10318.0

X1     5670        8      9622    10258        70        70        70         0         0         0
GR    176.4   9622.0     168.4   9670.0     168.4    9846.0     160.0    9880.0     160.0   10000.0
GR    168.4  10034.0     168.4  10210.0     176.4   10258.0

X1   5672.1       19    9682.0  10318.0         2         2         2         0         0         0
BT       -9   9714.4    171.00   171.00    9730.0    170.18    168.40    9791.0    169.12    168.40
BT            9895.4    168.94   168.40    9895.5    168.94    166.94   10034.5    168.94    166.94
BT           10034.6    168.94   168.40   10270.0    170.42    168.40   10285.6    171.00    171.00
GR   176.40   9682.0    171.00   9714.4    168.40    9730.0    168.40    9791.0    168.40    9895.4
GR   162.72   9895.5    162.72   9937.0    166.94    9937.1    166.94    9938.9    162.72    9939.0
GR   162.72   9991.0    166.94   9991.1    166.94    9992.9    162.72    9993.0    162.72   10034.5
```

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GR   168.40    10034.6     168.40    10270.0     171.00    10285.6     176.40    10318.0

X1   5750.1         19     9682.0    10318.0         78         78         78          0          0          0
BT       -9     9717.0     171.00     171.00     9730.0     170.57     168.83     9791.0     169.54     168.83
BT            9895.4     169.36     168.83     9895.5     169.36     167.36    10034.5     169.36     167.36
BT           10034.6     169.36     168.83    10270.0     170.80     168.83    10283.0     171.00     171.00
GR   176.83     9682.0     171.00     9717.0     168.83     9730.0     168.83     9791.0     168.83     9895.4
GR   163.19     9895.5     163.19     9937.0     167.36     9937.1     167.36     9938.9     163.19     9939.0
GR   163.19     9991.0     167.36     9991.1     167.36     9992.9     163.19     9993.0     163.19    10034.5
GR   168.83    10034.6     168.83    10270.0     171.00    10283.0     176.83    10318.0

X1     5825         8     9683.5    10316.5         75         75         75          0          0          0
GR   177.01     9683.5     169.25     9730.0     169.25     9916.0     163.34     9940.0     163.34    10060.0
GR   169.25    10084.0     169.25    10270.0     177.01    10316.5

X1     5905         8     9685.0    10315.0         80         80         80          0          0          0
GR   177.20     9685.0     169.70     9730.0     169.70     9916.0     163.73     9940.0     163.73    10060.0
GR   169.70    10084.0     169.70    10270.0     177.20    10315.0

X1     6100         8     9688.1    10311.9        195        195        195          0          0          0
GR   177.76     9688.1     170.78     9730.0     170.78     9915.0     164.41     9940.0     164.41    10060.0
GR   170.78    10085.0     170.78    10270.0     177.76    10311.9
1
   11NOV90      11:49:29                                                                          PAGE     4


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *PROF 1

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
 PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
 DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=      .100 CEHV=      .300
 *SECNO 3972.000
 3720 CRITICAL DEPTH ASSUMED
  3972.000      4.72    146.72    146.72    161.81    149.05      2.34       .00       .00    142.00
    30000.      103.    29794.      103.       18.     2423.       18.        0.        0.    142.00
       .00      5.59     12.30      5.59      .040      .032      .040      .000    142.00     46.19
   .008867        0.        0.        0.         0        13         0       .00    529.43    575.61
0
 *SECNO 3972.100

 3301 HV CHANGED MORE THAN HVINS
```

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3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77

 3972.100     6.64   148.64   146.70      .00   149.81     1.17      .64      .12   142.00
   30000.     145.   29711.     145.      37.    3412.      37.      10.       2.   142.00
      .00     3.96     8.71     3.96     .040     .032     .040     .000   142.00    43.00
  .002817     150.     150.     150.        3        5        0      .00   535.81   578.80
0
 *SECNO 3972.200
 3972.200     6.85   148.85   146.72      .00   149.95     1.10      .13      .01   142.00
   30000.     149.   29702.     149.      39.    3522.      39.      14.       2.   142.00
      .01     3.83     8.43     3.83     .040     .032     .040     .000   142.00    42.64
  .002533      50.      50.      50.        2       15        0      .00   536.52   579.16
0
 *SECNO 3972.300
 3972.300     6.95   148.95   146.70      .00   150.02     1.06      .06      .00   142.00
   30000.     151.   29697.     151.      40.    3572.      40.      16.       3.   142.00
      .01     3.78     8.31     3.78     .040     .032     .040     .000   142.00    42.48
  .002415      26.      26.      26.        2       14        0      .00   536.84   579.32
0
1
   11NOV90      11:49:29                                                                    PAGE    5


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 3973.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.52

 3973.000    10.45   149.45   145.21      .00   150.10      .65      .04      .04   142.00
   30000.     120.   29760.     120.      46.    4601.      46.      19.       3.   142.00
      .01     2.60     6.47     2.60     .040     .032     .040     .000   139.00    41.65
  .001043      26.      26.      26.        2       11        0      .00   538.51   580.15
0
 *SECNO 3973.100
 3973.100    10.46   149.46   145.20      .00   150.11      .64      .01      .00   142.00
   30000.     120.   29760.     120.      46.    4606.      46.      20.       3.   142.00
      .01     2.60     6.46     2.60     .040     .032     .040     .000   139.00    41.63
  .001039       8.       8.       8.        0       14        0      .00   538.54   580.17
0
 *SECNO 3973.200
 3973.200    12.19   149.59   144.39      .00   150.12      .53      .00      .01   142.00
   30000.     107.   29787.     107.      48.    5082.      48.      20.       3.   142.00
      .01     2.23     5.86     2.23     .040     .032     .040     .000   137.40    41.42
  .000750       5.       5.       5.        2       19        0      .00   538.96   580.38
0
 *SECNO 3979.300
 3979.300    12.27   149.67   144.44      .00   150.19      .52      .07      .00   142.00
   30000.     108.   29784.     108.      49.    5123.      49.      31.       4.   142.00
      .01     2.22     5.81     2.22     .040     .032     .040     .000   137.40    41.29
```

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   .000730      90.      90.      90.       0      11       0     .00   539.22   580.51
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4091.000     6.19   151.19   151.19     .00   153.54     2.34     .14      .48   148.00
    30000.      36.   29927.      36.      8.    2433.       8.     32.       5.   148.00
       .01     4.32    12.30     4.32    .040     .032     .040    .000   145.00    38.73
   .008928      16.      16.      16.       0       8       0     .00   529.15   567.87
0
1
    11NOV90      11:49:29                                                                    PAGE     6


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS

  4091.100     6.82   151.82   151.18     .00   153.64     1.82     .06      .05   148.00
    30000.      48.   29905.      48.     12.    2758.      12.     33.       5.   148.00
       .01     3.95    10.84     3.95    .040     .032     .040    .000   145.00    37.69
   .005873       8.       8.       8.       9       5       0     .00   531.22   568.91
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.43

  4091.200     8.64   152.54   150.60     .00   153.72     1.19     .02      .06   148.00
    30000.      53.   29895.      53.     17.    3413.      17.     33.       5.   148.00
       .01     3.10     8.76     3.10    .040     .032     .040    .000   143.90    36.51
   .002884       4.       4.       4.       3       5       0     .00   533.57   570.09
0
 *SECNO 4091.300
  4091.300     8.83   152.73   150.62     .00   153.85     1.12     .12      .01   148.00
    30000.      56.   29888.      56.     18.    3516.      18.     37.       5.   148.00
       .02     3.04     8.50     3.04    .040     .032     .040    .000   143.90    36.18
   .002611      44.      44.      44.       0      15       0     .00   534.23   570.42
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS
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7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4163.000     6.37   157.87   157.87      .00   160.33     2.46      .14      .35   154.50
   30000.      52.   29895.      52.      11.    2373.      11.      38.       5.   154.50
      .02     4.61    12.60     4.61     .040     .032     .040     .000   151.50    28.26
  .008914      16.      16.      16.        0       19        0      .00   500.68   528.94
0
1
   11NOV90      11:49:29                                                                    PAGE    7


   SECNO     DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q         QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME      VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE     XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


*SECNO 4163.100

3301 HV CHANGED MORE THAN HVINS

 4163.100     7.05   158.55   157.88      .00   160.44     1.89      .06      .06   154.50
   30000.      69.   29863.      69.      16.    2700.      16.      38.       6.   154.50
      .02     4.19    11.06     4.19     .040     .032     .040     .000   151.50    26.91
  .005782       8.       8.       8.        9        5        0      .00   503.37   530.29
0
*SECNO 4163.200

3301 HV CHANGED MORE THAN HVINS

 4163.200     8.74   159.24   157.40      .00   160.52     1.28      .02      .06   154.50
   30000.      75.   29849.      75.      22.    3280.      22.      39.       6.   154.50
      .02     3.37     9.10     3.37     .040     .032     .040     .000   150.50    25.54
  .003021       4.       4.       4.        3        8        0      .00   506.13   531.66
0
*SECNO 4163.300
 4163.300     8.96   159.46   157.37      .00   160.66     1.20      .13      .01   154.50
   30000.      81.   29839.      81.      24.    3385.      24.      42.       6.   154.50
      .02     3.29     8.81     3.29     .040     .032     .040     .000   150.50    25.10
  .002717      47.      47.      47.        1       15        0      .00   507.00   532.10
0
*SECNO 4235.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 4235.000     6.36   162.86   162.86      .00   165.30     2.45      .12      .33   159.50
   30000.      63.   29874.      63.      13.    2376.      13.      43.       6.   159.50
      .02     4.69    12.57     4.69     .040     .032     .040     .000   156.50    17.01
  .008909      14.      14.      14.        0       19        0      .00   505.19   522.19
0
*SECNO 4235.000
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3301 HV CHANGED MORE THAN HVINS

1
   11NOV90      11:49:29                                                                                                PAGE    8


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


  4235.000     7.03   163.53   162.87      .00   165.42     1.88      .06      .06   159.50
   30000.       82.   29835.      82.      19.    2704.      19.      44.       6.    159.50
      .02      4.27    11.03     4.27     .040     .032     .040     .000   156.50    15.41
  .005775       8.       8.       8.        9        5        0      .00   508.38   523.79
0
 *SECNO 4435.000
  4435.000     7.88   164.98   164.24      .00   166.57     1.60     1.13      .03   169.80
   30000.        0.   30000.       0.       0.    2959.       0.      57.       9.    170.00
      .02       .00    10.14      .00     .000     .032     .000     .000   157.10    24.72
  .005541      200.     200.     200.        2        5        0      .00   588.31   613.03
0
 *SECNO 4640.000

 3301 HV CHANGED MORE THAN HVINS

  4640.000     8.44   166.04   165.91      .00   168.16     2.12     1.42      .16   170.00
   30000.        0.   30000.       0.       0.    2570.       0.      70.      12.    170.00
      .03       .00    11.68      .00     .000     .032     .000     .000   157.60  9710.51
  .008712      205.     205.     205.        2        8        0      .00   579.02 10289.53
0
 *SECNO 4980.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.46

  4980.000    10.41   168.81   167.51      .00   170.13     1.32     1.89      .08   171.21
   30000.        0.   30000.       0.       0.    3251.       0.      92.      16.    171.21
      .04       .00     9.23      .00     .000     .032     .000     .000   158.40  9704.52
  .004090      340.     340.     340.        2        8        0      .00   590.95 10295.48
0
 *SECNO 5320.000
  5320.000    11.00   170.20   169.21      .00   171.62     1.42     1.46      .03   172.67
   30000.        0.   30000.       0.       0.    3141.       0.     117.      21.    172.67
      .05       .00     9.55      .00     .000     .032     .000     .000   159.20  9707.49
  .004528      340.     340.     340.        3       10        0      .00   585.09 10292.57
0
1
   11NOV90      11:49:29                                                                                                PAGE    9
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5600.000
  5600.000    11.57    171.47    170.50       .00    172.91      1.44      1.28       .01    176.00
    30000.       0.    30000.       0.        0.     3111.        0.      137.       25.     176.00
       .06      .00      9.64      .00      .000      .032      .000      .000    159.90   9709.20
   .004644     280.      280.     280.         2        10         0       .00    581.61  10290.80
0
 *SECNO 5670.000
  5670.000    11.91    171.91    170.73       .00    173.22      1.31       .30       .01    176.40
    30000.       0.    30000.       0.        0.     3266.        0.      143.       25.     176.40
       .06      .00      9.19      .00      .000      .032      .000      .000    160.00   9648.91
   .003950      70.       70.      70.         2        10         0       .00    582.18  10231.09
0
 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    10.08    172.80    172.80       .00    175.01      2.21       .03       .26    176.40
    30000.       0.    30000.       0.        0.     2515.        0.      143.       25.     176.40
       .06      .00     11.93      .00      .000      .032      .000      .000    162.72   9703.60
   .016641       2.        2.       2.         0         9         0   -751.23    592.79  10296.40
0
 *SECNO 5750.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.59


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

  5750.100    11.40    174.59    173.19       .00    175.84      1.25       .74       .10    176.83
    30000.       0.    30000.       0.        0.     3343.        0.      148.       27.     176.83
       .06      .00      8.97      .00      .000      .032      .000      .000    163.19   9695.44
   .006599      78.       78.      78.         3        12         0   -736.07    609.12  10304.56
0
1
   11NOV90      11:49:29                                                                          PAGE   10


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
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   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *SECNO 5825.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.03

  5825.000    12.02   175.36   172.18      .00   176.09      .73      .19      .05   177.01
    30000.       0.   30000.       0.       0.    4372.       0.     155.      28.    177.01
       .06      .00     6.86      .00     .000     .032     .000     .000   163.34  9693.41
   .001599      75.      75.      75.        2       19        0      .00   613.19 10306.59
0
 *SECNO 5905.000
  5905.000    11.71   175.44   172.62      .00   176.25      .81      .14      .02   177.20
    30000.       0.   30000.       0.       0.    4158.       0.     162.      29.    177.20
       .07      .00     7.21      .00     .000     .032     .000     .000   163.73  9695.55
   .001872      80.      80.      80.        2       19        0      .00   608.91 10304.45
0
 *SECNO 6100.000
  6100.000    11.34   175.75   173.58      .00   176.74      .99      .43      .06   177.76
    30000.       0.   30000.       0.       0.    3754.       0.     180.      31.    177.76
       .07      .00     7.99      .00     .000     .032     .000     .000   164.41  9700.18
   .002580     195.     195.     195.        2       19        0      .00   599.63 10299.82
0
1
   11NOV90      11:49:29                                                                    PAGE   11


 T1      ADJUSTED SLA-TEMPE - BY FCDMC BASED ON ADOPTED PLANS 11/7/90
 T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
 T1      SUBCRITICAL RUN - NO FILL IN PLACE
 T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T2      STRT BASED ON CRITICAL DEPTH
 T3      IBW1RIO.DAT             PAZ-DMJMO3-13

 J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

       0        0        0        0       -1        0        0     43000    164.35     0

 J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      2        0       -1        0        0        0       -1        0        0        0

1
   11NOV90      11:49:29                                                                    PAGE   12


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN     SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID    ENDST
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*PROF 2

IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=     .100 CEHV=     .300
*SECNO 3972.000
3720 CRITICAL DEPTH ASSUMED
 3972.000     5.97   147.97   147.97   164.35   150.95     2.98      .00      .00   142.00
   43000.     186.   42627.     186.      30.    3067.      30.       0.       0.   142.00
      .00     6.32    13.90     6.32     .040     .032     .040     .000   142.00    44.11
  .008275       0.       0.       0.        0       13        0      .00   533.58   577.69
0
*SECNO 3972.100

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.68

 3972.100     8.15   150.15   147.97      .00   151.73     1.59      .65      .14   142.00
   43000.     254.   42493.     254.      55.    4186.      55.      13.       2.   142.00
      .00     4.61    10.15     4.61     .040     .032     .040     .000   142.00    40.50
  .002915     150.     150.     150.        3        5        0      .00   540.80   581.30
0
*SECNO 3972.200
 3972.200     8.39   150.39   147.98      .00   151.88     1.49      .14      .01   142.00
   43000.     261.   42478.     261.      58.    4310.      58.      18.       2.   142.00
      .01     4.48     9.86     4.48     .040     .032     .040     .000   142.00    40.10
  .002643      50.      50.      50.        2       15        0      .00   541.60   581.70
0
*SECNO 3972.300
 3972.300     8.50   150.50   147.99      .00   151.95     1.45      .07      .00   142.00
   43000.     264.   42471.     264.      60.    4367.      60.      20.       3.   142.00
      .01     4.42     9.73     4.42     .040     .032     .040     .000   142.00    39.92
  .002529      26.      26.      26.        2       15        0      .00   541.97   581.88
0
1
   11NOV90      11:49:29                                                                  PAGE   13


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN       SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID      ENDST


*SECNO 3973.000
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3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45

 3973.000    12.11   151.11   146.49      .00   152.05      .94      .04      .05   142.00
   43000.     221.   42559.     221.      69.    5454.      69.      23.       3.   142.00
      .01     3.20     7.80     3.20     .040     .032     .040     .000   139.00    38.89
  .001210      26.      26.      26.        2       11        0      .00   544.01   582.91
0
 *SECNO 3973.100
 3973.100    12.12   151.12   146.48      .00   152.06      .94      .01      .00   142.00
   43000.     221.   42558.     221.      69.    5459.      69.      24.       3.   142.00
      .01     3.20     7.80     3.20     .040     .032     .040     .000   139.00    38.88
  .001206       8.       8.       8.        0       14        0      .00   544.04   582.92
0
 *SECNO 3973.200
 3973.200    13.89   151.29   145.67      .00   152.08      .79      .00      .01   142.00
   43000.     201.   42599.     201.      71.    5954.      71.      25.       3.   142.00
      .01     2.81     7.15     2.81     .040     .032     .040     .000   137.40    38.61
  .000905       5.       5.       5.        2       19        0      .00   544.58   583.19
0
 *SECNO 3979.300
 3979.300    13.98   151.38   145.67      .00   152.16      .78      .08      .00   142.00
   43000.     203.   42594.     203.      73.    6003.      73.      38.       4.   142.00
      .01     2.79     7.10     2.79     .040     .032     .040     .000   137.40    38.45
  .000881      90.      90.      90.        0       14        0      .00   544.90   583.35
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 4091.000     7.44   152.44   152.44      .00   155.43     2.99      .13      .61   148.00
   43000.      85.   42831.      85.      16.    3081.      16.      39.       5.   148.00
      .01     5.20    13.90     5.20     .040     .032     .040     .000   145.00    36.66
  .008325      16.      16.      16.        0       11        0      .00   533.28   569.94
0
1
   11NOV90      11:49:29                                                                    PAGE   14


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS
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```
 4091.100     8.19   153.19   152.45      .00   155.55     2.36      .05      .06   148.00
   43000.      105.   42790.     105.      22.   3465.      22.      40.       5.   148.00
      .01     4.73    12.35     4.73     .040     .032     .040     .000   145.00    35.44
  .005622       8.       8.       8.       9        5        0      .00   535.72   571.16
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS

 4091.200    10.12   154.02   151.92      .00   155.64     1.62      .02      .07   148.00
   43000.      114.   42772.     114.      30.   4182.      30.      40.       5.   148.00
      .01     3.82    10.23     3.82     .040     .032     .040     .000   143.90    34.06
  .003000       4.       4.       4.       3        8        0      .00   538.47   572.54
0
 *SECNO 4091.300
 4091.300    10.35   154.25   151.89      .00   155.77     1.53      .13      .01   148.00
   43000.      120.   42759.     120.      32.   4304.      32.      45.       5.   148.00
      .01     3.73     9.94     3.73     .040     .032     .040     .000   143.90    33.68
  .002725      44.      44.      44.       2       15        0      .00   539.25   572.92
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 4163.000     7.71   159.21   159.21      .00   162.30     3.09      .13      .43   154.50
   43000.      122.   42756.     122.      22.   3024.      22.      46.       5.   154.50
      .01     5.50    14.14     5.50     .040     .032     .040     .000   151.50    25.59
  .008128      16.      16.      16.       0       15        0      .00   506.03   531.61
0
 *SECNO 4163.100

 3301 HV CHANGED MORE THAN HVINS

1
   11NOV90      11:49:29                                                                    PAGE   15


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 4163.100     8.49   159.99   159.20      .00   162.41     2.43      .05      .07   154.50
   43000.      158.   42684.     158.      30.   3403.      30.      47.       6.   154.50
      .01     5.25    12.54     5.25     .040     .032     .040     .000   151.50    23.85
  .005464       8.       8.       8.      10        5        0      .00   509.51   533.35
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS
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 4163.200    10.27   160.77   158.73      .00   162.50     1.73      .02      .07   154.50
   43000.      178.   42644.      178.      40.    4025.      40.      47.       6.   154.50
      .01     4.50    10.59     4.50     .040     .032     .040     .000   150.50    22.00
  .003116       4.       4.       4.        3        8        0      .00   513.21   535.20
0
 *SECNO 4163.300
 4163.300    10.53   161.03   158.69      .00   162.65     1.62      .14      .01   154.50
   43000.      190.   42619.      190.      43.    4154.      43.      52.       6.   154.50
      .01     4.42    10.26     4.42     .040     .032     .040     .000   150.50    21.37
  .002803      47.      47.      47.        2       15        0      .00   514.47   535.83
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 4235.000     7.67   164.17   164.17      .00   167.26     3.09      .11      .40   159.50
   43000.      146.   42708.      146.      26.    3020.      26.      53.       6.   159.50
      .02     5.61    14.14     5.61     .040     .032     .040     .000   156.50    13.87
  .008187      14.      14.      14.        0       19        0      .00   511.46   525.33
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

 4235.000     8.44   164.94   164.19      .00   167.38     2.44      .05      .06   159.50
   43000.      179.   42642.      179.      35.    3389.      35.      53.       6.   159.50
      .02     5.10    12.58     5.10     .040     .032     .040     .000   156.50    12.08
  .005558       8.       8.       8.        9        5        0      .00   515.05   527.12
0
1
   11NOV90      11:49:29                                                                  PAGE   16


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4435.000

 3301 HV CHANGED MORE THAN HVINS

 4435.000     9.47   166.57   165.39      .00   168.45     1.88     1.01      .06   169.80
   43000.        0.   43000.       0.       0.    3912.       0.      70.       9.   170.00
      .02      .00    10.99      .00     .000     .032     .000     .000   157.10    16.52
  .004647     200.     200.     200.        2        5        0      .00   603.51   620.03
0
 *SECNO 4640.000

 3301 HV CHANGED MORE THAN HVINS
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 4640.000     9.70   167.30   167.17      .00   169.92     2.62     1.25      .22   170.00
   43000.       0.   43000.       0.       0.    3310.       0.      87.      12.    170.00
      .02      .00    12.99      .00     .000     .032     .000     .000   157.60  9703.21
  .007958     205.     205.     205.        2        5        0      .00   593.65 10296.86
0
 *SECNO 4980.000

 3301 HV CHANGED MORE THAN HVINS

 4980.000    11.72   170.12   168.71      .00   171.88     1.76     1.88      .09   171.21
   43000.       0.   43000.       0.       0.    4038.       0.     116.      16.    171.21
      .03      .00    10.65      .00     .000     .032     .000     .000   158.40  9696.64
  .004228     340.     340.     340.        3        8        0      .00   606.72 10303.36
0
 *SECNO 5320.000
 5320.000    12.35   171.55   170.27      .00   173.40     1.85     1.49      .03   172.67
   43000.       0.   43000.       0.       0.    3939.       0.     147.      21.    172.67
      .04      .00    10.92      .00     .000     .032     .000     .000   159.20  9699.42
  .004539     340.     340.     340.        3       11        0      .00   601.24 10300.66
0
 *SECNO 5600.000
 5600.000    12.91   172.81   171.56      .00   174.69     1.89     1.29      .01   176.00
   43000.       0.   43000.       0.       0.    3902.       0.     172.      25.    176.00
      .05      .00    11.02      .00     .000     .032     .000     .000   159.90  9701.15
  .004652     280.     280.     280.        2       11        0      .00   597.70 10298.85
0
1
   11NOV90      11:49:29                                                                    PAGE   17


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5670.000
 5670.000    13.28   173.28   171.74      .00   175.01     1.73      .30      .02   176.40
   43000.       0.   43000.       0.       0.    4075.       0.     179.      26.    176.40
      .05      .00    10.55      .00     .000     .032     .000     .000   160.00  9640.69
  .004027      70.      70.      70.        2       15        0      .00   598.63 10239.31
0
 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 5672.100    11.25   173.97   173.97      .00   176.74     2.78      .03      .30   176.40
   43000.       0.   43000.       0.       0.    3215.       0.     179.      26.    176.40
      .05      .00    13.37      .00     .000     .032     .000     .000   162.72  9696.59
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   .015383       2.       2.       2.       0       12       0  -751.23   606.81 10303.41
0
 *SECNO 5750.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.52


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

  5750.100    12.74   175.93   174.43      .00   177.58     1.66      .73      .11   176.83
    43000.       0.   43000.       0.       0.    4165.       0.     185.      27.    176.83
       .05      .00    10.32      .00     .000     .032     .000     .000   163.19  9687.44
   .006668      78.      78.      78.        3       12       0  -736.07   625.12 10312.56
0
 *SECNO 5825.000

 3301 HV CHANGED MORE THAN HVINS

1
    11NOV90      11:49:29                                                                    PAGE   18


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.92

  5825.000    13.49   176.83   173.40      .00   177.86     1.03      .21      .06   177.01
    43000.       0.   43000.       0.       0.    5291.       0.     194.      28.    177.01
       .06      .00     8.13      .00     .000     .032     .000     .000   163.34  9684.56
   .001808      75.      75.      75.        2       15       0      .00   630.88 10315.44
0
 *SECNO 5905.000
  5905.000    13.20   176.93   173.84      .00   178.04     1.11      .15      .03   177.20
    43000.       0.   43000.       0.       0.    5075.       0.     203.      29.    177.20
       .06      .00     8.47      .00     .000     .032     .000     .000   163.73  9686.64
   .002058      80.      80.      80.        2       19       0      .00   626.72 10313.36
0
 *SECNO 6100.000
  6100.000    12.83   177.24   174.88      .00   178.56     1.32      .46      .06   177.76
    43000.       0.   43000.       0.       0.    4665.       0.     225.      32.    177.76
       .06      .00     9.22      .00     .000     .032     .000     .000   164.41  9691.20
   .002674     195.     195.     195.        2       16       0      .00   617.60 10308.80
0
1
    11NOV90      11:49:29                                                                    PAGE   19
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T1      ADJUSTED SLA-TEMPE - BY FCDMC BASED ON ADOPTED PLANS 11/7/90
T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
T1      SUBCRITICAL RUN - NO FILL IN PLACE
T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
T2      STRT BASED ON CRITICAL DEPTH
T3      IBW1RIO.DAT             PAZ-DMJM03-13

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

      0        0        0        0       -1        0        0    51000   165.60     0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

      3        0       -1        0        0        0       -1        0        0        0

1
   11NOV90      11:49:29                                                                    PAGE   20


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *PROF 3

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
 PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
 DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 3972.000
 3720 CRITICAL DEPTH ASSUMED
  3972.000     6.70   148.70   148.70   165.60   152.02     3.32      .00      .00   142.00
    51000.     248.   50504.     248.      37.    3441.      37.       0.       0.   142.00
       .00     6.67    14.68     6.67     .040     .032     .040     .000   142.00    42.90
   .007910       0.       0.       0.        0       13        0      .00   536.00   578.90
0
 *SECNO 3972.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.63

  3972.100     8.98   150.98   148.69      .00   152.81     1.83      .65      .15   142.00
    51000.     331.   50338.     331.      67.    4612.      67.      14.       2.   142.00
       .00     4.96    10.91     4.96     .040     .032     .040     .000   142.00    39.13
   .002961     150.     150.     150.        3        5        0      .00   543.55   582.67
```

```
0
 *SECNO 3972.200
  3972.200     9.24   151.24   148.69      .00   152.96     1.72      .14      .01   142.00
    51000.     341.   50318.     341.      71.    4751.      71.      20.       2.   142.00
       .01     4.81    10.59     4.81     .040     .032     .040     .000   142.00    38.68
   .002679      50.      50.      50.        1       15        0      .00   544.45   583.12
0
 *SECNO 3972.300
  3972.300     9.35   151.35   148.70      .00   153.04     1.68      .07      .00   142.00
    51000.     345.   50311.     345.      72.    4805.      72.      23.       3.   142.00
       .01     4.76    10.47     4.76     .040     .032     .040     .000   142.00    38.50
   .002581      26.      26.      26.        2       15        0      .00   544.79   583.30
0
1
    11NOV90      11:49:29                                                                    PAGE   21


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

  3973.000    13.02   152.02   147.21      .00   153.14     1.11      .04      .06   142.00
    51000.     294.   50412.     294.      83.    5924.      83.      26.       3.   142.00
       .01     3.52     8.51     3.52     .040     .032     .040     .000   139.00    37.38
   .001289      26.      26.      26.        2       11        0      .00   547.04   584.42
0
 *SECNO 3973.100
  3973.100    13.04   152.04   147.20      .00   153.15     1.11      .01      .00   142.00
    51000.     294.   50412.     294.      84.    5929.      84.      27.       3.   142.00
       .01     3.52     8.50     3.52     .040     .032     .040     .000   139.00    37.36
   .001286       8.       8.       8.        0       14        0      .00   547.07   584.44
0
 *SECNO 3973.200
  3973.200    14.82   152.22   146.40      .00   153.17      .95      .01      .02   142.00
    51000.     270.   50461.     270.      87.    6434.      87.      28.       3.   142.00
       .01     3.11     7.84     3.11     .040     .032     .040     .000   137.40    37.06
   .000981       5.       5.       5.        2       19        0      .00   547.68   584.74
0
 *SECNO 3979.300
  3979.300    14.93   152.33   146.40      .00   153.26      .93      .09      .00   142.00
    51000.     273.   50454.     273.      88.    6486.      88.      41.       4.   142.00
       .01     3.09     7.78     3.09     .040     .032     .040     .000   137.40    36.89
   .000954      90.      90.      90.        0       14        0      .00   548.02   584.91
0
 *SECNO 4091.000
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3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

4091.000	8.16	153.16	153.16	.00	156.50	3.33	.13	.67	148.00
51000.	124.	50752.	124.	22.	3456.	22.	43.	5.	148.00
.01	5.63	14.68	5.63	.040	.032	.040	.000	145.00	35.47
.007971	16.	16.	16.	0	11	0	.00	535.67	571.13

0
1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4091.100

3301 HV CHANGED MORE THAN HVINS

4091.100	8.98	153.98	153.17	.00	156.62	2.64	.05	.07	148.00
51000.	151.	50698.	151.	30.	3878.	30.	44.	5.	148.00
.01	5.11	13.07	5.11	.040	.032	.040	.000	145.00	34.12
.005418	8.	8.	8.	10	5	0	.00	538.35	572.48

0
*SECNO 4091.200

3301 HV CHANGED MORE THAN HVINS

4091.200	10.95	154.85	152.64	.00	156.71	1.87	.02	.08	148.00
51000.	162.	50676.	162.	39.	4609.	39.	44.	5.	148.00
.01	4.19	11.00	4.19	.040	.032	.040	.000	143.90	32.70
.003045	4.	4.	4.	3	8	0	.00	541.19	573.90

0
*SECNO 4091.300

4091.300	11.19	155.09	152.60	.00	156.85	1.76	.13	.01	148.00
51000.	170.	50660.	170.	41.	4738.	41.	49.	5.	148.00
.01	4.10	10.69	4.10	.040	.032	.040	.000	143.90	32.29
.002775	44.	44.	44.	2	15	0	.00	542.02	574.31

0
*SECNO 4163.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

4163.000	8.45	159.95	159.95	.00	163.40	3.45	.12	.46	154.50
51000.	186.	50629.	186.	30.	3388.	30.	51.	6.	154.50
.01	6.23	14.94	6.23	.040	.032	.040	.000	151.50	23.92
.007801	16.	16.	16.	0	15	0	.00	509.36	533.28

0
*SECNO 4163.100

3301 HV CHANGED MORE THAN HVINS

1
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
4163.100	9.29	160.79	159.96	.00	163.52	2.73	.05	.07	154.50
51000.	235.	50529.	235.	40.	3794.	40.	51.	6.	154.50
.01	5.91	13.32	5.91	.040	.032	.040	.000	151.50	21.93
.005327	8.	8.	8.	10	5	0	.00	513.33	535.27

0
*SECNO 4163.200

3301 HV CHANGED MORE THAN HVINS

4163.200	11.12	161.62	159.48	.00	163.61	1.99	.02	.07	154.50
51000.	258.	50483.	258.	51.	4440.	51.	52.	6.	154.50
.01	5.02	11.37	5.02	.040	.032	.040	.000	150.50	19.97
.003150	4.	4.	4.	3	8	0	.00	517.26	537.23

0
*SECNO 4163.300

4163.300	11.39	161.89	159.45	.00	163.76	1.87	.14	.01	154.50
51000.	274.	50452.	274.	56.	4576.	56.	57.	6.	154.50
.01	4.91	11.02	4.91	.040	.032	.040	.000	150.50	19.30
.002844	47.	47.	47.	2	15	0	.00	518.60	537.90

0
*SECNO 4235.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

4235.000	8.44	164.94	164.94	.00	168.36	3.42	.11	.43	159.50
51000.	213.	50574.	213.	35.	3394.	35.	58.	6.	159.50
.01	6.05	14.90	6.05	.040	.032	.040	.000	156.50	12.05
.007779	14.	14.	14.	0	15	0	.00	515.10	527.15

0
*SECNO 4235.000

3301 HV CHANGED MORE THAN HVINS

4235.000	9.25	165.75	164.92	.00	168.48	2.73	.05	.07	159.50
51000.	256.	50488.	256.	46.	3790.	46.	59.	6.	159.50
.01	5.51	13.32	5.51	.040	.032	.040	.000	156.50	10.13
.005369	8.	8.	8.	10	5	0	.00	518.95	529.07

```
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4435.000

 3301 HV CHANGED MORE THAN HVINS

  4435.000    10.37    167.47    166.12       .00    169.51      2.03       .96       .07    169.80
    51000.       0.    51000.       0.        0.     4457.        0.       78.        9.    170.00
       .02      .00     11.44       .00      .000      .032      .000      .000    157.10     11.93
   .004316     200.      200.      200.         3         8         0       .00    612.02    623.95
0
 *SECNO 4640.000

 3301 HV CHANGED MORE THAN HVINS

  4640.000    10.47    168.07    167.77       .00    170.91      2.84      1.16       .24    170.00
    51000.       0.    51000.       0.        0.     3774.        0.       97.       12.    170.00
       .02      .00     13.51       .00      .000      .032      .000      .000    157.60   9698.72
   .007378     205.      205.      205.         2         5         0       .00    602.63  10301.35
0
 *SECNO 4980.000

 3301 HV CHANGED MORE THAN HVINS

  4980.000    12.42    170.82    169.39       .00    172.84      2.03      1.86       .08    171.21
    51000.       0.    51000.       0.        0.     4463.        0.      129.       17.    171.21
       .03      .00     11.43       .00      .000      .032      .000      .000    158.40   9692.47
   .004339     340.      340.      340.         3         8         0       .00    615.07  10307.53
0
 *SECNO 5320.000
  5320.000    13.08    172.28    170.96       .00    174.38      2.10      1.51       .02    172.67
    51000.       0.    51000.       0.        0.     4381.        0.      164.       21.    172.67
       .04      .00     11.64       .00      .000      .032      .000      .000    159.20   9695.05
   .004567     340.      340.      340.         3        11         0       .00    610.00  10305.05
0
 *SECNO 5600.000
  5600.000    13.64    173.54    172.25       .00    175.68      2.14      1.29       .01    176.00
    51000.       0.    51000.       0.        0.     4345.        0.      192.       25.    176.00
       .05      .00     11.74       .00      .000      .032      .000      .000    159.90   9696.73
   .004663     280.      280.      280.         2        11         0       .00    606.53  10303.27
0
1
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5670.000
  5670.000    14.04    174.04    172.44       .00    176.00      1.97       .30       .02    176.40
    51000.       0.    51000.       0.        0.     4529.        0.      199.       26.     176.40
       .05      .00     11.26       .00      .000      .032      .000      .000    160.00   9636.17
   .004064      70.       70.       70.         2        15         0       .00    607.66  10243.83
0
 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    11.97    174.69    174.69       .00    177.71      3.02       .03       .30    176.40
    51000.       0.    51000.       0.        0.     3658.        0.      199.       26.     176.40
       .05      .00     13.94       .00      .000      .032      .000      .000    162.72   9692.25
   .014261       2.        2.        2.         0        12         0   -751.23    615.51  10307.75
0
 *SECNO 5750.100

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

  5750.100    13.45    176.64    175.05       .00    178.54      1.90       .72       .11    176.83
    51000.       0.    51000.       0.        0.     4610.        0.      207.       27.     176.83
       .05      .00     11.06       .00      .000      .032      .000      .000    163.19   9683.20
   .006772      78.       78.       78.         3        15         0   -736.07    633.60  10316.80
0
 *SECNO 5825.000
 3280 CROSS SECTION   5825.00 EXTENDED       .62 FEET

1
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
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3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.89

 5825.000    14.29   177.63   174.08      .00   178.83     1.20      .22      .07   177.01
   51000.       0.   51000.       0.       0.    5793.       0.     216.      29.    177.01
      .05      .00     8.80      .00     .000     .032     .000     .000   163.34  9683.50
  .001893      75.      75.      75.        2       15        0      .00   633.00 10316.50
0
 *SECNO 5905.000
 3280 CROSS SECTION   5905.00 EXTENDED       .52 FEET

 5905.000    13.99   177.72   174.52      .00   179.02     1.30      .16      .03   177.20
   51000.       0.   51000.       0.       0.    5576.       0.     226.      30.    177.20
      .05      .00     9.15      .00     .000     .032     .000     .000   163.73  9685.00
  .002136      80.      80.      80.        2       19        0      .00   630.00 10315.00
0
 *SECNO 6100.000
 3280 CROSS SECTION   6100.00 EXTENDED       .28 FEET

 6100.000    13.63   178.04   175.48      .00   179.56     1.52      .47      .07   177.76
   51000.       0.   51000.       0.       0.    5162.       0.     250.      33.    177.76
      .06      .00     9.88      .00     .000     .032     .000     .000   164.41  9688.10
  .002724     195.     195.     195.        2       15        0      .00   623.80 10311.90
0
1
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 T1      ADJUSTED SLA-TEMPE - BY FCDMC BASED ON ADOPTED PLANS 11/7/90
 T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
 T1      SUBCRITICAL RUN - NO FILL IN PLACE
 T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T2      STRT BASED ON CRITICAL DEPTH
 T3      IBW1RIO.DAT             PAZ-DMJM03-13

 J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS     Q        WSEL      FQ

       0        0        0        0       -1        0        0     63000    168.01       0

 J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC     IBW      CHNIM     ITRACE

      15        0       -1        0        0        0       -1        0        0         0

1
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
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*PROF 4

IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
DETAILS.

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV=     .100 CEHV=     .300
*SECNO 3972.000
3720 CRITICAL DEPTH ASSUMED
 3972.000     7.72   149.72   149.72   168.01   153.52     3.80      .00      .00   142.00
   63000.     352.   62295.     352.      49.    3966.      49.       0.       0.   142.00
      .00     7.14    15.71     7.14     .040     .032     .040     .000   142.00    41.21
  .007497       0.       0.       0.        0       13        0      .00   539.39   580.59
0
*SECNO 3972.100

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.58

 3972.100    10.14   152.14   149.69      .00   154.32     2.18      .64      .16   142.00
   63000.     461.   62077.     461.      85.    5211.      85.      16.       2.   142.00
      .00     5.41    11.91     5.41     .040     .032     .040     .000   142.00    37.19
  .002997     150.     150.     150.        4        5        0      .00   547.41   584.61
0
*SECNO 3972.200
 3972.200    10.41   152.41   149.69      .00   154.47     2.07      .14      .01   142.00
   63000.     473.   62054.     473.      90.    5346.      90.      23.       3.   142.00
      .00     5.27    11.61     5.27     .040     .032     .040     .000   142.00    36.76
  .002751      50.      50.      50.        0       15        0      .00   548.28   585.04
0
*SECNO 3972.300
 3972.300    10.53   152.53   149.70      .00   154.55     2.02      .07      .01   142.00
   63000.     479.   62042.     479.      92.    5413.      92.      26.       3.   142.00
      .01     5.21    11.46     5.21     .040     .032     .040     .000   142.00    36.54
  .002638      26.      26.      26.        2       15        0      .00   548.71   585.26
0
1
   11NOV90      11:49:29                                                                  PAGE   29


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


*SECNO 3973.000
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3301 HV CHANGED MORE THAN HVINS

 3973.000    14.29   153.29   148.23      .00   154.66     1.37      .05      .06   142.00
   63000.      418.   62164.      418.     106.    6576.     106.      30.       3.   142.00
      .01     3.95     9.45     3.95     .040     .032     .040     .000   139.00    35.28
  .001384      26.      26.      26.        2       11        0      .00   551.25   586.52
0
 *SECNO 3973.100
 3973.100    14.30   153.30   148.21      .00   154.67     1.37      .01      .00   142.00
   63000.      418.   62163.      418.     106.    6579.     106.      31.       3.   142.00
      .01     3.95     9.45     3.95     .040     .032     .040     .000   139.00    35.27
  .001382       8.       8.       8.        0       14        0      .00   551.27   586.53
0
 *SECNO 3973.200
 3973.200    16.12   153.52   147.41      .00   154.70     1.18      .01      .02   142.00
   63000.      388.   62225.      388.     110.    7099.     110.      32.       3.   142.00
      .01     3.53     8.76     3.53     .040     .032     .040     .000   137.40    34.91
  .001075       5.       5.       5.        2       19        0      .00   551.97   586.89
0
 *SECNO 3979.300
 3979.300    16.23   153.63   147.41      .00   154.79     1.16      .10      .00   142.00
   63000.      392.   62215.      392.     112.    7156.     112.      47.       4.   142.00
      .01     3.50     8.69     3.50     .040     .032     .040     .000   137.40    34.73
  .001046      90.      90.      90.        0       14        0      .00   552.34   587.07
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 4091.000     9.19   154.19   154.19      .00   158.00     3.81      .12      .74   148.00
   63000.      195.   62610.      195.      32.    3986.      32.      49.       5.   148.00
      .01     6.17    15.71     6.17     .040     .032     .040     .000   145.00    33.78
  .007541      16.      16.      16.        0       11        0      .00   539.04   572.82
0
1
   11NOV90      11:49:29                                                                PAGE   30


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS

 4091.100    10.05   155.05   154.17      .00   158.12     3.07      .05      .07   148.00
   63000.      231.   62538.      231.      41.    4431.      41.      50.       5.   148.00
      .01     5.64    14.11     5.64     .040     .032     .040     .000   145.00    32.36
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   .005287       8.       8.       8.       10        5        0      .00   541.88   574.24
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS

  4091.200    12.11   156.01   153.65      .00   158.22     2.22      .02      .09   148.00
    63000.     248.   62505.     248.      53.    5215.      53.      50.       5.   148.00
       .01     4.68    11.99     4.68     .040     .032     .040     .000   143.90    30.77
   .003069       4.       4.       4.        4        8        0      .00   545.05   575.83
0
 *SECNO 4091.300
  4091.300    12.36   156.26   153.61      .00   158.36     2.11      .13      .01   148.00
    63000.     258.   62484.     258.      56.    5344.      56.      56.       5.   148.00
       .01     4.58    11.69     4.58     .040     .032     .040     .000   143.90    30.36
   .002827      44.      44.      44.        2       15        0      .00   545.88   576.24
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4163.000     9.49   160.99   160.99      .00   164.95     3.96      .12      .52   154.50
    63000.     306.   62389.     306.      43.    3893.      43.      57.       6.   154.50
       .01     7.18    16.03     7.18     .040     .032     .040     .000   151.50    21.45
   .007457      16.      16.      16.        0       15        0      .00   514.29   535.75
0
 *SECNO 4163.100

 3301 HV CHANGED MORE THAN HVINS

1
    11NOV90      11:49:29                                                                    PAGE   31


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


  4163.100    10.41   161.91   161.00      .00   165.08     3.17      .05      .08   154.50
    63000.     371.   62258.     371.      56.    4340.      56.      58.       6.   154.50
       .01     6.63    14.34     6.63     .040     .032     .040     .000   151.50    19.27
   .005166       8.       8.       8.       10        5        0      .00   518.67   537.93
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS

  4163.200    12.32   162.82   160.54      .00   165.17     2.35      .02      .08   154.50
    63000.     401.   62197.     401.      71.    5028.      71.      58.       6.   154.50
       .01     5.63    12.37     5.63     .040     .032     .040     .000   150.50    17.09
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   .003158      4.       4.       4.       4       8       0     .00   523.01   540.11
0
 *SECNO 4163.300
  4163.300    12.60   163.10   160.50     .00   165.33    2.23     .14      .01   154.50
    63000.     420.   62159.     420.     76.    5165.     76.     64.       6.   154.50
       .01     5.50    12.04     5.50    .040     .032    .040    .000   150.50    16.43
   .002884      47.      47.      47.       2      15       0     .00   524.35   540.77
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     9.47   165.97   165.97     .00   169.90    3.94     .10      .48   159.50
    63000.     331.   62338.     331.     50.    3898.     50.     66.       6.   159.50
       .01     6.64    15.99     6.64    .040     .032    .040    .000   156.50     9.60
   .007455      14.      14.      14.       0      15       0     .00   520.00   529.60
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

  4235.000    10.37   166.87   165.97     .00   170.03    3.16     .05      .08   159.50
    63000.     391.   62218.     391.     65.    4339.     65.     66.       7.   159.50
       .01     6.05    14.34     6.05    .040     .032    .040    .000   156.50     7.45
   .005193       8.       8.       8.      10       5       0     .00   524.29   531.75
0
1
    11NOV90      11:49:29                                                                    PAGE   32


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4435.000

 3301 HV CHANGED MORE THAN HVINS

  4435.000    11.69   168.79   167.08     .00   171.01    2.22     .89      .09   169.80
    63000.       0.   63000.       0.      0.    5271.      0.     89.       9.   170.00
       .02      .00    11.95      .00    .000     .032    .000    .000   157.10     5.17
   .003868     200.     200.     200.       3       8       0     .00   624.54   629.71
0
 *SECNO 4640.000

 3301 HV CHANGED MORE THAN HVINS

  4640.000    11.63   169.23   168.76     .00   172.31    3.08    1.03      .26   170.00
    63000.       0.   63000.       0.      0.    4474.      0.    112.      12.   170.00
       .02      .00    14.08      .00    .000     .032    .000    .000   157.60  9692.08
```

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  .006577     205.     205.     205.        3       11        0      .00   615.93 10308.01
0
 *SECNO 4980.000
 3280 CROSS SECTION   4980.00 EXTENDED       .54 FEET


 3301 HV CHANGED MORE THAN HVINS

  4980.000    13.35   171.75   170.35      .00   174.18     2.42     1.81      .07   171.21
    63000.       0.   63000.       0.       0.    5042.       0.     149.      17.    171.21
       .03      .00    12.50      .00     .000     .032     .000     .000   158.40  9690.10
  .004465     340.     340.     340.        3        8        0      .00   619.80 10309.90
0
 *SECNO 5320.000
 3280 CROSS SECTION   5320.00 EXTENDED       .59 FEET

  5320.000    14.05   173.25   171.93      .00   175.74     2.48     1.54      .02   172.67
    63000.       0.   63000.       0.       0.    4982.       0.     188.      22.    172.67
       .04      .00    12.65      .00     .000     .032     .000     .000   159.20  9692.70
  .004600     340.     340.     340.        3       11        0      .00   614.70 10307.40
0
 *SECNO 5600.000
  5600.000    14.64   174.54   173.22      .00   177.05     2.52     1.31      .01   176.00
    63000.       0.   63000.       0.       0.    4948.       0.     220.      26.    176.00
       .04      .00    12.73      .00     .000     .032     .000     .000   159.90  9690.82
  .004733     280.     280.     280.        1       11        0      .00   618.36 10309.18
0
1
    11NOV90      11:49:29                                                                    PAGE   33


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5670.000
  5670.000    15.08   175.08   173.40      .00   177.38     2.31      .31      .02   176.40
    63000.       0.   63000.       0.       0.    5169.       0.     228.      27.    176.40
       .04      .00    12.19      .00     .000     .032     .000     .000   160.00  9629.92
  .004105      70.      70.      70.        2       15        0      .00   620.16 10250.08
0
 *SECNO 5672.100

 3301 HV CHANGED MORE THAN HVINS


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    12.85   175.57   175.57      .00   179.06     3.48      .03      .34   176.40
    63000.       0.   63000.       0.       0.    4206.       0.     228.      27.    176.40
```

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      .04      .00    14.98      .00     .000     .032     .000     .000   162.72  9686.96
   .013883       2.       2.       2.        0       15        0  -751.23   626.09 10313.04
0
 *SECNO 5750.100
 3280 CROSS SECTION   5750.10 EXTENDED       .84 FEET


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44


 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

  5750.100    14.48   177.67   176.00      .00   179.89     2.22      .70      .13   176.83
    63000.       0.   63000.       0.       0.    5268.       0.     237.      28.    176.83
      .05      .00    11.96      .00     .000     .032     .000     .000   163.19  9682.00
   .006661      78.      78.      78.        4       15        0  -736.07   636.00 10318.00
0
 *SECNO 5825.000
 3280 CROSS SECTION   5825.00 EXTENDED      1.72 FEET

1
    11NOV90      11:49:29                                                                    PAGE   34


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.83

  5825.000    15.39   178.73   175.04      .00   180.19     1.46      .23      .08   177.01
    63000.       0.   63000.       0.       0.    6493.       0.     247.      29.    177.01
      .05      .00     9.70      .00     .000     .032     .000     .000   163.34  9683.50
   .001984      75.      75.      75.        2       15        0      .00   633.00 10316.50
0
 *SECNO 5905.000
 3280 CROSS SECTION   5905.00 EXTENDED      1.63 FEET

  5905.000    15.09   178.82   175.47      .00   180.39     1.57      .17      .03   177.20
    63000.       0.   63000.       0.       0.    6271.       0.     258.      30.    177.20
      .05      .00    10.05      .00     .000     .032     .000     .000   163.73  9685.00
   .002213      80.      80.      80.        2       19        0      .00   630.00 10315.00
0
 *SECNO 6100.000
 3280 CROSS SECTION   6100.00 EXTENDED      1.38 FEET
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6100.000	14.73	179.14	176.44	.00	180.95	1.80	.48	.07	177.76
63000.	0.	63000.	0.	0.	5849.	0.	286.	33.	177.76
.06	.00	10.77	.00	.000	.032	.000	.000	164.41	9688.10
.002752	195.	195.	195.	2	15	0	.00	623.80	10311.90

0

1

THIS RUN EXECUTED 11NOV90 11:49:51

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**************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

REVIBW.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	3972.000	146.72	5.59	12.30	5.59	102.95	29794.10	102.95	4.72	529.43	46.19	575.61
*	3972.000	147.97	6.32	13.90	6.32	186.43	42627.13	186.43	5.97	533.58	44.11	577.69
*	3972.000	148.70	6.67	14.68	6.67	247.87	50504.25	247.87	6.70	536.00	42.90	578.90
*	3972.000	149.72	7.14	15.71	7.14	352.39	62295.21	352.39	7.72	539.39	41.21	580.59
*	3972.100	148.64	3.96	8.71	3.96	144.57	29710.87	144.57	6.64	535.81	43.00	578.80
*	3972.100	150.15	4.61	10.15	4.61	253.68	42492.64	253.68	8.15	540.80	40.50	581.30
*	3972.100	150.98	4.96	10.91	4.96	331.09	50337.82	331.09	8.98	543.55	39.13	582.67
*	3972.100	152.14	5.41	11.91	5.41	461.35	62077.30	461.35	10.14	547.41	37.19	584.61
	3972.200	148.85	3.83	8.43	3.83	149.18	29701.65	149.18	6.85	536.52	42.64	579.16
	3972.200	150.39	4.48	9.86	4.48	261.10	42477.80	261.10	8.39	541.60	40.10	581.70
	3972.200	151.24	4.81	10.59	4.81	340.96	50318.07	340.96	9.24	544.45	38.68	583.12
	3972.200	152.41	5.27	11.61	5.27	473.11	62053.79	473.11	10.41	548.28	36.76	585.04
	3972.300	148.95	3.78	8.31	3.78	151.30	29697.41	151.30	6.95	536.84	42.48	579.32
	3972.300	150.50	4.42	9.73	4.42	264.49	42471.02	264.49	8.50	541.97	39.92	581.88
	3972.300	151.35	4.76	10.47	4.76	344.74	50310.53	344.74	9.35	544.79	38.50	583.30
	3972.300	152.53	5.21	11.46	5.21	478.93	62042.15	478.93	10.53	548.71	36.54	585.26
*	3973.000	149.45	2.60	6.47	2.60	119.77	29760.45	119.78	10.45	538.51	41.65	580.15
*	3973.000	151.11	3.20	7.80	3.20	220.55	42558.90	220.55	12.11	544.01	38.89	582.91
*	3973.000	152.02	3.52	8.51	3.52	293.75	50412.49	293.75	13.02	547.04	37.38	584.42

3973.000	153.29	3.95	9.45	3.95	418.14	62163.71	418.14	14.29	551.25	35.28	586.52
3973.100	149.46	2.60	6.46	2.60	119.99	29760.02	119.99	10.46	538.54	41.63	580.17
3973.100	151.12	3.20	7.80	3.20	220.83	42558.34	220.83	12.12	544.04	38.88	582.92
3973.100	152.04	3.52	8.50	3.52	294.04	50411.91	294.05	13.04	547.07	37.36	584.44
3973.100	153.30	3.95	9.45	3.95	418.42	62163.14	418.42	14.30	551.27	35.27	586.53
3973.200	149.59	2.23	5.86	2.23	106.60	29786.81	106.60	12.19	538.96	41.42	580.38
3973.200	151.29	2.81	7.15	2.81	200.55	42598.90	200.55	13.89	544.58	38.61	583.19
3973.200	152.22	3.11	7.84	3.11	269.57	50460.86	269.57	14.82	547.68	37.06	584.74
3973.200	153.52	3.53	8.76	3.53	387.73	62224.54	387.73	16.12	551.97	34.91	586.89

1

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	3979.300	149.67	2.22	5.81	2.22	108.15	29783.70	108.15	12.27	539.22	41.29	580.51
	3979.300	151.38	2.79	7.10	2.79	203.24	42593.51	203.24	13.98	544.90	38.45	583.35
	3979.300	152.33	3.09	7.78	3.09	273.03	50453.95	273.03	14.93	548.02	36.89	584.91
	3979.300	153.63	3.50	8.69	3.50	392.40	62215.20	392.40	16.23	552.34	34.73	587.07
*	4091.000	151.19	4.32	12.30	4.32	36.37	29927.26	36.37	6.19	529.15	38.73	567.87
*	4091.000	152.44	5.20	13.90	5.20	84.74	42830.51	84.74	7.44	533.28	36.66	569.94
*	4091.000	153.16	5.63	14.68	5.63	123.99	50752.02	123.99	8.16	535.67	35.47	571.13
*	4091.000	154.19	6.17	15.71	6.17	195.15	62609.70	195.15	9.19	539.04	33.78	572.82
	4091.100	151.82	3.95	10.84	3.95	47.55	29904.90	47.55	6.82	531.22	37.69	568.91
	4091.100	153.19	4.73	12.35	4.73	104.97	42790.05	104.97	8.19	535.72	35.44	571.16
	4091.100	153.98	5.11	13.07	5.11	150.99	50698.02	150.99	8.98	538.35	34.12	572.48
	4091.100	155.05	5.64	14.11	5.64	231.04	62537.91	231.04	10.05	541.88	32.36	574.24
*	4091.200	152.54	3.10	8.76	3.10	52.62	29894.76	52.62	8.64	533.57	36.51	570.09
	4091.200	154.02	3.82	10.23	3.82	114.13	42771.73	114.13	10.12	538.47	34.06	572.54
	4091.200	154.85	4.19	11.00	4.19	161.92	50676.15	161.92	10.95	541.19	32.70	573.90
	4091.200	156.01	4.68	11.99	4.68	247.58	62504.84	247.58	12.11	545.05	30.77	575.83
	4091.300	152.73	3.04	8.50	3.04	56.13	29887.74	56.13	8.83	534.23	36.18	570.42
	4091.300	154.25	3.73	9.94	3.73	120.47	42759.07	120.46	10.35	539.25	33.68	572.92
	4091.300	155.09	4.10	10.69	4.10	170.08	50659.84	170.08	11.19	542.02	32.29	574.31
	4091.300	156.26	4.58	11.69	4.58	257.86	62484.28	257.86	12.36	545.88	30.36	576.24
*	4163.000	157.87	4.61	12.60	4.61	52.39	29895.22	52.39	6.37	500.68	28.26	528.94
*	4163.000	159.21	5.50	14.14	5.50	121.86	42756.29	121.86	7.71	506.03	25.59	531.61
*	4163.000	159.95	6.23	14.94	6.23	185.55	50628.89	185.55	8.45	509.36	23.92	533.28
*	4163.000	160.99	7.18	16.03	7.18	305.52	62388.95	305.52	9.49	514.29	21.45	535.75
	4163.100	158.55	4.19	11.06	4.19	68.51	29862.98	68.51	7.05	503.37	26.91	530.29
	4163.100	159.99	5.25	12.54	5.25	158.02	42683.96	158.02	8.49	509.51	23.85	533.35
	4163.100	160.79	5.91	13.32	5.91	235.49	50529.03	235.49	9.29	513.33	21.93	535.27
	4163.100	161.91	6.63	14.34	6.63	371.23	62257.54	371.23	10.41	518.67	19.27	537.93
	4163.200	159.24	3.37	9.10	3.37	75.38	29849.24	75.38	8.74	506.13	25.54	531.66

	4163.200	160.77	4.50	10.59	4.50	177.94	42644.13	177.94	10.27	513.21	22.00	535.20
	4163.200	161.62	5.02	11.37	5.02	258.32	50483.36	258.32	11.12	517.26	19.97	537.23
	4163.200	162.82	5.63	12.37	5.63	401.42	62197.16	401.42	12.32	523.01	17.09	540.11
	4163.300	159.46	3.29	8.81	3.29	80.54	29838.92	80.54	8.96	507.00	25.10	532.10
	4163.300	161.03	4.42	10.26	4.42	190.34	42619.32	190.34	10.53	514.47	21.37	535.83
	4163.300	161.89	4.91	11.02	4.91	273.82	50452.36	273.82	11.39	518.60	19.30	537.90
	4163.300	163.10	5.50	12.04	5.50	420.49	62159.02	420.49	12.60	524.35	16.43	540.77
*	4235.000	162.86	4.69	12.57	4.69	62.97	29874.07	62.97	6.36	505.19	17.01	522.19
*	4235.000	164.17	5.61	14.14	5.61	145.83	42708.34	145.83	7.67	511.46	13.87	525.33
*	4235.000	164.94	6.05	14.90	6.05	212.93	50574.15	212.93	8.44	515.10	12.05	527.15
*	4235.000	165.97	6.64	15.99	6.64	330.84	62338.32	330.84	9.47	520.00	9.60	529.60

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	4235.000	163.53	4.27	11.03	4.27	82.37	29835.26	82.37	7.03	508.38	15.41	523.79
	4235.000	164.94	5.10	12.58	5.10	179.06	42641.88	179.06	8.44	515.05	12.08	527.12
	4235.000	165.75	5.51	13.32	5.51	255.99	50488.02	255.99	9.25	518.95	10.13	529.07
	4235.000	166.87	6.05	14.34	6.05	391.19	62217.63	391.19	10.37	524.29	7.45	531.75
	4435.000	164.98	.00	10.14	.00	.00	30000.00	.00	7.88	588.31	24.72	613.03
	4435.000	166.57	.00	10.99	.00	.00	43000.00	.00	9.47	603.51	16.52	620.03
	4435.000	167.47	.00	11.44	.00	.00	51000.00	.00	10.37	612.02	11.93	623.95
	4435.000	168.79	.00	11.95	.00	.00	63000.00	.00	11.69	624.54	5.17	629.71
	4640.000	166.04	.00	11.68	.00	.00	30000.00	.00	8.44	579.02	9710.51	10289.53
	4640.000	167.30	.00	12.99	.00	.00	43000.00	.00	9.70	593.65	9703.21	10296.86
	4640.000	168.07	.00	13.51	.00	.00	51000.00	.00	10.47	602.63	9698.72	10301.35
	4640.000	169.23	.00	14.08	.00	.00	63000.00	.00	11.63	615.93	9692.08	10308.01
*	4980.000	168.81	.00	9.23	.00	.00	30000.00	.00	10.41	590.95	9704.52	10295.48
	4980.000	170.12	.00	10.65	.00	.00	43000.00	.00	11.72	606.72	9696.64	10303.36
	4980.000	170.82	.00	11.43	.00	.00	51000.00	.00	12.42	615.07	9692.47	10307.53
	4980.000	171.75	.00	12.50	.00	.00	63000.00	.00	13.35	619.80	9690.10	10309.90
	5320.000	170.20	.00	9.55	.00	.00	30000.00	.00	11.00	585.09	9707.49	10292.57
	5320.000	171.55	.00	10.92	.00	.00	43000.00	.00	12.35	601.24	9699.42	10300.66
	5320.000	172.28	.00	11.64	.00	.00	51000.00	.00	13.08	610.00	9695.05	10305.05
	5320.000	173.25	.00	12.65	.00	.00	63000.00	.00	14.05	614.70	9692.70	10307.40
	5600.000	171.47	.00	9.64	.00	.00	30000.00	.00	11.57	581.61	9709.20	10290.80
	5600.000	172.81	.00	11.02	.00	.00	43000.00	.00	12.91	597.70	9701.15	10298.85
	5600.000	173.54	.00	11.74	.00	.00	51000.00	.00	13.64	606.53	9696.73	10303.27
	5600.000	174.54	.00	12.73	.00	.00	63000.00	.00	14.64	618.36	9690.82	10309.18
	5670.000	171.91	.00	9.19	.00	.00	30000.00	.00	11.91	582.18	9648.91	10231.09
	5670.000	173.28	.00	10.55	.00	.00	43000.00	.00	13.28	598.63	9640.69	10239.31
	5670.000	174.04	.00	11.26	.00	.00	51000.00	.00	14.04	607.66	9636.17	10243.83
	5670.000	175.08	.00	12.19	.00	.00	63000.00	.00	15.08	620.16	9629.92	10250.08

*	5672.100	172.80	.00	11.93	.00	.00	30000.00	.00	10.08	592.79	9703.60	10296.40
*	5672.100	173.97	.00	13.37	.00	.00	43000.00	.00	11.25	606.81	9696.59	10303.41
*	5672.100	174.69	.00	13.94	.00	.00	51000.00	.00	11.97	615.51	9692.25	10307.75
*	5672.100	175.57	.00	14.98	.00	.00	63000.00	.00	12.85	626.09	9686.96	10313.04
*	5750.100	174.59	.00	8.97	.00	.00	30000.00	.00	11.40	609.12	9695.44	10304.56
*	5750.100	175.93	.00	10.32	.00	.00	43000.00	.00	12.74	625.12	9687.44	10312.56
*	5750.100	176.64	.00	11.06	.00	.00	51000.00	.00	13.45	633.60	9683.20	10316.80
*	5750.100	177.67	.00	11.96	.00	.00	63000.00	.00	14.48	636.00	9682.00	10318.00
*	5825.000	175.36	.00	6.86	.00	.00	30000.00	.00	12.02	613.19	9693.41	10306.59
*	5825.000	176.83	.00	8.13	.00	.00	43000.00	.00	13.49	630.88	9684.56	10315.44
*	5825.000	177.63	.00	8.80	.00	.00	51000.00	.00	14.29	633.00	9683.50	10316.50
*	5825.000	178.73	.00	9.70	.00	.00	63000.00	.00	15.39	633.00	9683.50	10316.50

SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
5905.000	175.44	.00	7.21	.00	.00	30000.00	.00	11.71	608.91	9695.55	10304.45
5905.000	176.93	.00	8.47	.00	.00	43000.00	.00	13.20	626.72	9686.64	10313.36
5905.000	177.72	.00	9.15	.00	.00	51000.00	.00	13.99	630.00	9685.00	10315.00
5905.000	178.82	.00	10.05	.00	.00	63000.00	.00	15.09	630.00	9685.00	10315.00
6100.000	175.75	.00	7.99	.00	.00	30000.00	.00	11.34	599.63	9700.18	10299.82
6100.000	177.24	.00	9.22	.00	.00	43000.00	.00	12.83	617.60	9691.20	10308.80
6100.000	178.04	.00	9.88	.00	.00	51000.00	.00	13.63	623.80	9688.10	10311.90
6100.000	179.14	.00	10.77	.00	.00	63000.00	.00	14.73	623.80	9688.10	10311.90

REVIBW.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
*	3972.000	146.72	146.72	149.05	.00	.00	142.00	88.67	.00	54.00	567.80	.00
*	3972.000	147.97	147.97	150.95	.00	.00	142.00	82.75	.00	54.00	567.80	.00
*	3972.000	148.70	148.70	152.02	.00	.00	142.00	79.10	.00	54.00	567.80	.00
*	3972.000	149.72	149.72	153.52	.00	.00	142.00	74.97	.00	54.00	567.80	.00
*	3972.100	148.64	146.70	149.81	.64	.12	142.00	28.17	.00	54.00	567.80	150.00
*	3972.100	150.15	147.97	151.73	.65	.14	142.00	29.15	.00	54.00	567.80	150.00
*	3972.100	150.98	148.69	152.81	.65	.15	142.00	29.61	.00	54.00	567.80	150.00
*	3972.100	152.14	149.69	154.32	.64	.16	142.00	29.97	.00	54.00	567.80	150.00
	3972.200	148.85	146.72	149.95	.13	.01	142.00	25.33	.00	54.00	567.80	50.00

	3972.200	150.39	147.98	151.88	.14	.01	142.00	26.43	.00	54.00	567.80	50.00
	3972.200	151.24	148.69	152.96	.14	.01	142.00	26.79	.00	54.00	567.80	50.00
	3972.200	152.41	149.69	154.47	.14	.01	142.00	27.51	.00	54.00	567.80	50.00
	3972.300	148.95	146.70	150.02	.06	.00	142.00	24.15	.00	54.00	567.80	26.00
	3972.300	150.50	147.99	151.95	.07	.00	142.00	25.29	.00	54.00	567.80	26.00
	3972.300	151.35	148.70	153.04	.07	.00	142.00	25.81	.00	54.00	567.80	26.00
	3972.300	152.53	149.70	154.55	.07	.01	142.00	26.38	.00	54.00	567.80	26.00
*	3973.000	149.45	145.21	150.10	.04	.04	139.00	10.43	-115.38	54.00	567.80	26.00
*	3973.000	151.11	146.49	152.05	.04	.05	139.00	12.10	-115.38	54.00	567.80	26.00
*	3973.000	152.02	147.21	153.14	.04	.06	139.00	12.89	-115.38	54.00	567.80	26.00
	3973.000	153.29	148.23	154.66	.05	.06	139.00	13.84	-115.38	54.00	567.80	26.00
	3973.100	149.46	145.20	150.11	.01	.00	139.00	10.39	.00	54.00	567.80	8.00
	3973.100	151.12	146.48	152.06	.01	.00	139.00	12.06	.00	54.00	567.80	8.00
	3973.100	152.04	147.20	153.15	.01	.00	139.00	12.86	.00	54.00	567.80	8.00
	3973.100	153.30	148.21	154.67	.01	.00	139.00	13.82	.00	54.00	567.80	8.00
	3973.200	149.59	144.39	150.12	.00	.01	137.40	7.50	-347.83	54.00	567.80	4.60
	3973.200	151.29	145.67	152.08	.00	.01	137.40	9.05	-347.83	54.00	567.80	4.60
	3973.200	152.22	146.40	153.17	.01	.02	137.40	9.81	-347.83	54.00	567.80	4.60
	3973.200	153.52	147.41	154.70	.01	.02	137.40	10.75	-347.83	54.00	567.80	4.60
	3979.300	149.67	144.44	150.19	.07	.00	137.40	7.30	.00	54.00	567.80	89.90
	3979.300	151.38	145.67	152.16	.08	.00	137.40	8.81	.00	54.00	567.80	89.90
	3979.300	152.33	146.40	153.26	.09	.00	137.40	9.54	.00	54.00	567.80	89.90
	3979.300	153.63	147.41	154.79	.10	.00	137.40	10.46	.00	54.00	567.80	89.90
*	4091.000	151.19	151.19	153.54	.14	.48	145.00	89.28	477.99	44.00	562.60	15.90
*	4091.000	152.44	152.44	155.43	.13	.61	145.00	83.25	477.99	44.00	562.60	15.90
*	4091.000	153.16	153.16	156.50	.13	.67	145.00	79.71	477.99	44.00	562.60	15.90
*	4091.000	154.19	154.19	158.00	.12	.74	145.00	75.41	477.99	44.00	562.60	15.90

	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
	4091.100	151.82	151.18	153.64	.06	.05	145.00	58.73	.00	44.00	562.60	8.00
	4091.100	153.19	152.45	155.55	.05	.06	145.00	56.22	.00	44.00	562.60	8.00
	4091.100	153.98	153.17	156.62	.05	.07	145.00	54.18	.00	44.00	562.60	8.00
	4091.100	155.05	154.17	158.12	.05	.07	145.00	52.87	.00	44.00	562.60	8.00
*	4091.200	152.54	150.60	153.72	.02	.06	143.90	28.84	-275.00	44.00	562.60	4.00
	4091.200	154.02	151.92	155.64	.02	.07	143.90	30.00	-275.00	44.00	562.60	4.00
	4091.200	154.85	152.64	156.71	.02	.08	143.90	30.45	-275.00	44.00	562.60	4.00
	4091.200	156.01	153.65	158.22	.02	.09	143.90	30.69	-275.00	44.00	562.60	4.00
	4091.300	152.73	150.62	153.85	.12	.01	143.90	26.11	.00	44.00	562.60	44.30
	4091.300	154.25	151.89	155.77	.13	.01	143.90	27.25	.00	44.00	562.60	44.30
	4091.300	155.09	152.60	156.85	.13	.01	143.90	27.75	.00	44.00	562.60	44.30
	4091.300	156.26	153.61	158.36	.13	.01	143.90	28.27	.00	44.00	562.60	44.30

*	4163.000	157.87	157.87	160.33	.14	.35	151.50	89.14	477.99	35.00	522.20	15.90
*	4163.000	159.21	159.21	162.30	.13	.43	151.50	81.28	477.99	35.00	522.20	15.90
*	4163.000	159.95	159.95	163.40	.12	.46	151.50	78.01	477.99	35.00	522.20	15.90
*	4163.000	160.99	160.99	164.95	.12	.52	151.50	74.57	477.99	35.00	522.20	15.90
	4163.100	158.55	157.88	160.44	.06	.06	151.50	57.82	.00	35.00	522.20	8.00
	4163.100	159.99	159.20	162.41	.05	.07	151.50	54.64	.00	35.00	522.20	8.00
	4163.100	160.79	159.96	163.52	.05	.07	151.50	53.27	.00	35.00	522.20	8.00
	4163.100	161.91	161.00	165.08	.05	.08	151.50	51.66	.00	35.00	522.20	8.00
	4163.200	159.24	157.40	160.52	.02	.06	150.50	30.21	-250.00	35.00	522.20	4.00
	4163.200	160.77	158.73	162.50	.02	.07	150.50	31.16	-250.00	35.00	522.20	4.00
	4163.200	161.62	159.48	163.61	.02	.07	150.50	31.50	-250.00	35.00	522.20	4.00
	4163.200	162.82	160.54	165.17	.02	.08	150.50	31.58	-250.00	35.00	522.20	4.00
	4163.300	159.46	157.37	160.66	.13	.01	150.50	27.17	.00	35.00	522.20	46.60
	4163.300	161.03	158.69	162.65	.14	.01	150.50	28.03	.00	35.00	522.20	46.60
	4163.300	161.89	159.45	163.76	.14	.01	150.50	28.44	.00	35.00	522.20	46.60
	4163.300	163.10	160.50	165.33	.14	.01	150.50	28.84	.00	35.00	522.20	46.60
*	4235.000	162.86	162.86	165.30	.12	.33	156.50	89.09	441.18	25.00	514.20	13.60
*	4235.000	164.17	164.17	167.26	.11	.40	156.50	81.87	441.18	25.00	514.20	13.60
*	4235.000	164.94	164.94	168.36	.11	.43	156.50	77.79	441.18	25.00	514.20	13.60
*	4235.000	165.97	165.97	169.90	.10	.48	156.50	74.55	441.18	25.00	514.20	13.60
	4235.000	163.53	162.87	165.42	.06	.06	156.50	57.75	.00	25.00	514.20	8.00
	4235.000	164.94	164.19	167.38	.05	.06	156.50	55.58	.00	25.00	514.20	8.00
	4235.000	165.75	164.92	168.48	.05	.07	156.50	53.69	.00	25.00	514.20	8.00
	4235.000	166.87	165.97	170.03	.05	.08	156.50	51.93	.00	25.00	514.20	8.00
	4435.000	164.98	164.24	166.57	1.13	.03	157.10	55.41	3.00	.00	635.00	200.00
	4435.000	166.57	165.39	168.45	1.01	.06	157.10	46.47	3.00	.00	635.00	200.00
	4435.000	167.47	166.12	169.51	.96	.07	157.10	43.16	3.00	.00	635.00	200.00
	4435.000	168.79	167.08	171.01	.89	.09	157.10	38.68	3.00	.00	635.00	200.00

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	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
	4640.000	166.04	165.91	168.16	1.42	.16	157.60	87.12	2.44	9687.60	10312.50	205.00
	4640.000	167.30	167.17	169.92	1.25	.22	157.60	79.58	2.44	9687.60	10312.50	205.00
	4640.000	168.07	167.77	170.91	1.16	.24	157.60	73.78	2.44	9687.60	10312.50	205.00
	4640.000	169.23	168.76	172.31	1.03	.26	157.60	65.77	2.44	9687.60	10312.50	205.00
*	4980.000	168.81	167.51	170.13	1.89	.08	158.40	40.90	2.35	9690.10	10309.90	340.00
	4980.000	170.12	168.71	171.88	1.88	.09	158.40	42.28	2.35	9690.10	10309.90	340.00
	4980.000	170.82	169.39	172.84	1.86	.08	158.40	43.39	2.35	9690.10	10309.90	340.00
	4980.000	171.75	170.35	174.18	1.81	.07	158.40	44.65	2.35	9690.10	10309.90	340.00
	5320.000	170.20	169.21	171.62	1.46	.03	159.20	45.28	2.35	9692.70	10307.40	340.00
	5320.000	171.55	170.27	173.40	1.49	.03	159.20	45.39	2.35	9692.70	10307.40	340.00

	5320.000	172.28	170.96	174.38	1.51	.02	159.20	45.67	2.35	9692.70	10307.40	340.00
	5320.000	173.25	171.93	175.74	1.54	.02	159.20	46.00	2.35	9692.70	10307.40	340.00
	5600.000	171.47	170.50	172.91	1.28	.01	159.90	46.44	2.50	9682.00	10318.00	280.00
	5600.000	172.81	171.56	174.69	1.29	.01	159.90	46.52	2.50	9682.00	10318.00	280.00
	5600.000	173.54	172.25	175.68	1.29	.01	159.90	46.63	2.50	9682.00	10318.00	280.00
	5600.000	174.54	173.22	177.05	1.31	.01	159.90	47.33	2.50	9682.00	10318.00	280.00
	5670.000	171.91	170.73	173.22	.30	.01	160.00	39.50	1.43	9622.00	10258.00	70.00
	5670.000	173.28	171.74	175.01	.30	.02	160.00	40.27	1.43	9622.00	10258.00	70.00
	5670.000	174.04	172.44	176.00	.30	.02	160.00	40.64	1.43	9622.00	10258.00	70.00
	5670.000	175.08	173.40	177.38	.31	.02	160.00	41.05	1.43	9622.00	10258.00	70.00
*	5672.100	172.80	172.80	175.01	.03	.26	162.72	166.41	1360.00	9682.00	10318.00	2.00
*	5672.100	173.97	173.97	176.74	.03	.30	162.72	153.83	1360.00	9682.00	10318.00	2.00
*	5672.100	174.69	174.69	177.71	.03	.30	162.72	142.61	1360.00	9682.00	10318.00	2.00
*	5672.100	175.57	175.57	179.06	.03	.34	162.72	138.83	1360.00	9682.00	10318.00	2.00
*	5750.100	174.59	173.19	175.84	.74	.10	163.19	65.99	6.03	9682.00	10318.00	78.00
*	5750.100	175.93	174.43	177.58	.73	.11	163.19	66.68	6.03	9682.00	10318.00	78.00
*	5750.100	176.64	175.05	178.54	.72	.11	163.19	67.72	6.03	9682.00	10318.00	78.00
*	5750.100	177.67	176.00	179.89	.70	.13	163.19	66.61	6.03	9682.00	10318.00	78.00
*	5825.000	175.36	172.18	176.09	.19	.05	163.34	15.99	2.00	9683.50	10316.50	75.00
*	5825.000	176.83	173.40	177.86	.21	.06	163.34	18.08	2.00	9683.50	10316.50	75.00
*	5825.000	177.63	174.08	178.83	.22	.07	163.34	18.93	2.00	9683.50	10316.50	75.00
*	5825.000	178.73	175.04	180.19	.23	.08	163.34	19.84	2.00	9683.50	10316.50	75.00
	5905.000	175.44	172.62	176.25	.14	.02	163.73	18.72	4.87	9685.00	10315.00	80.00
	5905.000	176.93	173.84	178.04	.15	.03	163.73	20.58	4.87	9685.00	10315.00	80.00
	5905.000	177.72	174.52	179.02	.16	.03	163.73	21.36	4.87	9685.00	10315.00	80.00
	5905.000	178.82	175.47	180.39	.17	.03	163.73	22.13	4.87	9685.00	10315.00	80.00
	6100.000	175.75	173.58	176.74	.43	.06	164.41	25.80	3.49	9688.10	10311.90	195.00
	6100.000	177.24	174.88	178.56	.46	.06	164.41	26.74	3.49	9688.10	10311.90	195.00
	6100.000	178.04	175.48	179.56	.47	.07	164.41	27.24	3.49	9688.10	10311.90	195.00
	6100.000	179.14	176.44	180.95	.48	.07	164.41	27.52	3.49	9688.10	10311.90	195.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 3972.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3972.000 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3972.000 PROFILE= 3 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 3972.000 PROFILE= 4 CRITICAL DEPTH ASSUMED

WARNING SECNO= 3972.100 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 3972.100 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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WARNING SECNO=   3972.100  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3972.100  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   3973.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3973.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   3973.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   4091.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4091.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4091.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4091.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4091.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   4091.200  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   4163.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4163.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4163.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4163.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4163.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=   4235.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4235.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4235.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   4980.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   5672.100  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   5672.100  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  3  MINIMUM SPECIFIC ENERGY
1
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CAUTION SECNO=   5672.100  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   5672.100  PROFILE=  4  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   5750.100  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5750.100  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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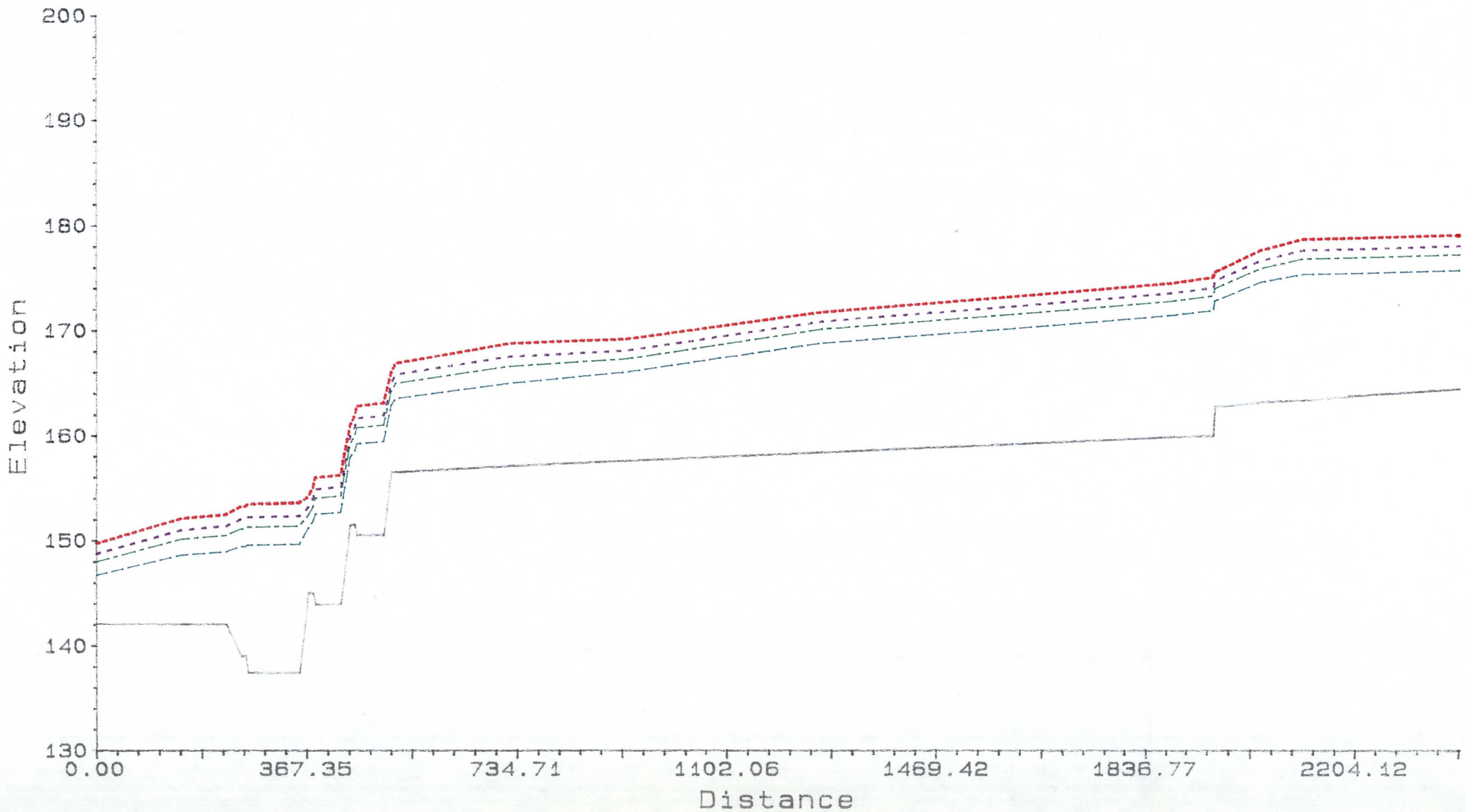
WARNING SECNO=   5750.100  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   5825.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   5825.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

REVIBW.DAT
NO FILL IN PLACE



```
1*****************************************************                                  ********************************
*******
        *  WATER SURFACE PROFILES                          *                                  *  U.S. ARMY CORPS OF ENGINEERS
*
        *  VERSION OF SEPTEMBER 1988                       *                                  *  THE HYDROLOGIC ENGINEERING CE
NTER  *
        *  ERROR: 01,02,03                                 *                                  *  609 SECOND STREET, SUITE D
*
        *  UPDATED:  APRIL 1990                            *                                  *  DAVIS, CALIFORNIA 95616-4687
*
        *  RUN DATE    11NOV90    TIME   11:53:06          *                                  *           (916) 756-1104
*
        *****************************************************                                  ********************************
*******



                                          X     X  XXXXXXX   XXXXX              XXXXX
                                          X     X  X        X     X            X     X
                                          X     X  X        X                        X
                                          XXXXXXX  XXXX     X          XXXXX    XXXXX
                                          X     X  X        X                  X
                                          X     X  X        X     X            X
                                          X     X  XXXXXXX   XXXXX             XXXXXXX
        END OF BANNER
       1
          11NOV90      11:53:06                                                                                    PAGE    1



                                                                                  THIS RUN EXECUTED 11NOV90    11:53:06
        ************************************************
          HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

          ERROR CORR -  01,02,03
          MODIFICATION -
        ************************************************


        T1      ADJUSTED SLA-TEMPE AZ - TO FINAL ADOPTED PLANS DATED 11/7/90
        T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
        T1      SUPERCRITICAL RUN --- NO FILL IN PLACE
        T1      PROFILE BEG AT LEVEL 1 OF THE RIO SALADO, IBW DROP STRUCTURE TO SALT R.
        T2      STRT BASED ON CRITICAL DEPTH
        T3      REVSIBW.DAT              PAZ-DMJM03-13      FCDMC 11/15/90


        J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

              0         0         0         1        -1         0         0     30000    175.75         0

        J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

              1         0        -1         0         0         0        -1         0         0         0
```

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	1	55	26	56	13	14	15	8	4
53	54	0	38	1	2	3	11	12	42
5	33	21	22	39					

J6	IHLEQ	ICOPY	SUBDIV	STRTDS	RMILE
	1				

NC	0.040	0.040	0.032	0.1	0.3					
X1	6100	8	9688.1	10311.9	195	195	195	0	0	0
GR	177.76	9688.1	170.78	9730.0	170.78	9915.0	164.41	9940.0	164.41	10060.0
GR	170.78	10085.0	170.78	10270.0	177.76	10311.9				
X1	5905	8	9685.0	10315.0	80	80	80	0	0	0
GR	177.20	9685.0	169.70	9730.0	169.70	9916.0	163.73	9940.0	163.73	10060.0
GR	169.70	10084.0	169.70	10270.0	177.20	10315.0				
X1	5825	8	9683.5	10316.5	75	75	75	0	0	0
GR	177.01	9683.5	169.25	9730.0	169.25	9916.0	163.34	9940.0	163.34	10060.0
GR	169.25	10084.0	169.25	10270.0	177.01	10316.5				

X1	5750.1	19	9682.0	10318.0	78	78	78	0	0	0
BT	-9	9717.0	171.00	171.00	9730.0	170.57	168.83	9791.0	169.54	168.83
BT		9895.4	169.36	168.83	9895.5	169.36	167.36	10034.5	169.36	167.36
BT		10034.6	169.36	168.83	10270.0	170.80	168.83	10283.0	171.00	171.00
GR	176.83	9682.0	171.00	9717.0	168.83	9730.0	168.83	9791.0	168.83	9895.4
GR	163.19	9895.5	163.19	9937.0	167.36	9937.1	167.36	9938.9	163.19	9939.0
GR	163.19	9991.0	167.36	9991.1	167.36	9992.9	163.19	9993.0	163.19	10034.5
GR	168.83	10034.6	168.83	10270.0	171.00	10283.0	176.83	10318.0		
X1	5672.1	19	9682.0	10318.0	2	2	2	0	0	0
BT	-9	9714.4	171.00	171.00	9730.0	170.18	168.40	9791.0	169.12	168.40
BT		9895.4	168.94	168.40	9895.5	168.94	166.94	10034.5	168.94	166.94
BT		10034.6	168.94	168.40	10270.0	170.42	168.40	10285.6	171.00	171.00
GR	176.40	9682.0	171.00	9714.4	168.40	9730.0	168.40	9791.0	168.40	9895.4
GR	162.72	9895.5	162.72	9937.0	166.94	9937.1	166.94	9938.9	162.72	9939.0
GR	162.72	9991.0	166.94	9991.1	166.94	9992.9	162.72	9993.0	162.72	10034.5
GR	168.40	10034.6	168.40	10270.0	171.00	10285.6	176.40	10318.0		
X1	5670	8	9622	10258	70	70	70	0	0	0
GR	176.4	9622.0	168.4	9670.0	168.4	9846.0	160.0	9880.0	160.0	10000.0
GR	168.4	10034.0	168.4	10210.0	176.4	10258.0				
X1	5600	8	9682.0	10318.0	280	280	280	0	0	0
GR	176.0	9682.0	168.0	9730.0	168.0	9836.0	159.9	9860.0	159.9	9980.0
GR	168.0	10004.0	168.0	10270.0	176.0	10318.0				

```
X1     5320        8     9692.7    10307.4      340       340       340         0         0         0
GR   172.67   9692.7     166.45     9730.0   166.45    9838.0     159.2    9860.0     159.2    9980.0
GR   166.45  10002.0     166.45    10270.0   172.67   10307.4

X1     4980        8     9690.1    10309.9      340       340       340         0         0         0
GR   171.21   9690.1     164.56     9730.0   164.56    9852.0     158.4    9870.0     158.4    9990.0
GR   164.56  10008.0     164.56    10270.0   171.21   10309.9

X1     4640        8     9687.6    10312.5      205       205       205         0         0         0
GR     170   9687.6     162.67     9730.0   162.67    9885.0     157.6    9900.0     157.6   10020.0
GR   162.67  10035.0     162.67    10270.0      170   10312.5

X1   4435.0       12          0        635      200       200       200         0         0         0
GR   169.8      0.0      162.0       40.0    160.0     210.0     158.0     240.0     157.1     255.0
GR   157.1    380.0      158.0      390.0    160.0     410.0     161.0     460.0     161.0     580.0
GR   162.0    600.0      170.0      635.0

X1     4235                                      8         8         8

       LEVEL 1
1
   11NOV90      11:53:06                                                                          PAGE    3

X1     4235        5         25      514.2     13.6      13.6      13.6
GR     170         0      159.5         25    156.5     269.6     159.5     514.2       170     539.2

X1   4163.3                                    46.6      46.6      46.6

X1   4163.2        7         35      522.2        4         4         4
GR     170         0      159.5         25    154.5        35     150.5     278.6     154.5     522.2
GR   159.5     532.2       170      557.2

X1   4163.1                                      8         8         8

       LEVEL 2

X1     4163        7         35      522.2     15.9      15.9      15.9
GR     170         0      159.5         25    154.5        35     151.5     278.6     154.5     522.2
GR   159.5     532.2       170      557.2

X1   4091.3                                    44.3      44.3      44.3

X1   4091.2        7         44      562.6        4         4         4
GR     170         0      159.5         25      148        44     143.9     303.3       148     562.6
GR   159.5     581.6       170      606.6
```

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X1   4091.1                                   8        8        8

       LEVEL 3

X1     4091        7       44     562.6     15.9     15.9     15.9
GR      170        0    159.5        25      148       44      145    303.3      148    562.6
GR    159.5    581.6      170     606.6


X1   3979.3                                  89.9     89.9     89.9


X1   3973.2        7       54     567.8      4.6      4.6      4.6
GR      170        0    159.5        25      142       54    137.4    310.9      142    567.8
GR    159.5    596.8      170     621.8


X1   3973.1                                   8        8        8

1
   11NOV90      11:53:06                                                                    PAGE    4


X1     3973        7       54     567.8       26       26       26
GR      170        0    159.5        25      142       54      139    310.9      142    567.8
GR    159.5    596.8      170     621.8


X1   3972.3        6       54     567.8       26       26       26
GR      170        0    159.5        25      142       54      142    567.8    159.5    596.8
GR      170    621.8


X1   3972.2                                  50       50       50


X1   3972.1                                 150      150      150

       LEVEL 4

1
   11NOV90      11:53:06                                                                    PAGE    5


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN     SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID    ENDST


*PROF 1
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 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SE
E
 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 6100.000
 3720 CRITICAL DEPTH ASSUMED
  6100.000     9.16   173.57   173.57   175.75   175.85     2.27      .00      .00   177.76
    30000.       0.   30000.       0.       0.    2479.       0.       0.       0.    177.76
       .00      .00    12.10      .00     .000     .032     .000     .000   164.41  9713.23
   .009685       0.       0.       0.        0       14        0      .00   573.55 10286.77
0
 *SECNO 5905.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5905.000     8.95   172.68   172.68      .00   174.88     2.19     1.79      .65   177.20
    30000.       0.   30000.       0.       0.    2525.       0.      11.       3.    177.20
       .00      .00    11.88      .00     .000     .032     .000     .000   163.73  9712.10
   .009166     195.     195.     195.       20        8        0      .00   575.81 10287.90
0
 *SECNO 5825.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5825.000     8.83   172.17   172.17      .00   174.44     2.27      .78      .30   177.01
    30000.       0.   30000.       0.       0.    2479.       0.      16.       4.    177.01
       .01      .00    12.10      .00     .000     .032     .000     .000   163.34  9712.50
   .009718      80.      80.      80.       20        5        0      .00   575.00 10287.50
0
 *SECNO 5750.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
    11NOV90      11:53:06                                                                                                PAGE    6


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5750.100    10.00   173.19   173.19      .00   175.42     2.24     1.27      .24   176.83
    30000.       0.   30000.       0.       0.    2500.       0.      20.       5.    176.83
       .01      .00    12.00      .00     .000     .032     .000     .000   163.19  9703.86
   .016945      75.      75.      75.       20       12        0  -736.07   592.28 10296.14
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0
 *SECNO 5672.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    10.08   172.80   172.80      .00   175.01     2.21     1.30     2.71   176.40
    30000.       0.   30000.       0.       0.    2515.       0.      25.       6.    176.40
       .01      .00    11.93      .00     .000     .032     .000     .000   162.72  9703.60
   .016641      78.      78.      78.       20        9        0  -751.23   592.79 10296.40
0
 *SECNO 5670.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.59

  5670.000     8.90   168.90   170.50      .00   174.60     5.70      .06      .35   176.40
    30000.       0.   30000.       0.       0.    1566.       0.      25.       6.    176.40
       .01      .00    19.16      .00     .000     .032     .000     .000   160.00  9666.99
   .041968       2.       2.       2.        9        8        0      .00   546.02 10213.01
0
 *SECNO 5600.000

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5600.000    10.43   170.33   170.33      .00   172.64     2.31      .69     1.92   176.00
    30000.       0.   30000.       0.       0.    2457.       0.      28.       7.    176.00
       .01      .00    12.21      .00     .000     .032     .000     .000   159.90  9716.02
   .009877      70.      70.      70.       20       11        0      .00   567.96 10283.98
0
1
    11NOV90      11:53:06                                                                          PAGE    7


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5320.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5320.000    10.01   169.21   169.21      .00   171.33     2.12     2.41     1.15   172.67
    30000.       0.   30000.       0.       0.    2568.       0.      44.      10.    172.67
       .02      .00    11.68      .00     .000     .032     .000     .000   159.20  9713.42
```

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   .008620     280.     280.     280.       20       10        0      .00   573.20 10286.62
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000     9.09   167.49   167.49      .00   169.76     2.26     3.29     -.15   171.21
    30000.       0.   30000.       0.       0.    2485.       0.      64.      15.    171.21
       .03      .00    12.07      .00     .000     .032     .000     .000   158.40  9712.41
   .009666     340.     340.     340.       20       15        0      .00   575.18 10287.59
0
 *SECNO 4640.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000     8.31   165.91   165.91      .00   168.16     2.24     3.26     4.38   170.00
    30000.       0.   30000.       0.       0.    2495.       0.      83.      19.    170.00
       .03      .00    12.02      .00     .000     .032     .000     .000   157.60  9711.25
   .009575     340.     340.     340.       20       15        0      .00   577.53 10288.79
0
 *SECNO 4435.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4435.000     7.11   164.21   164.21      .00   166.43     2.22     1.94      .09   169.80
    30000.       0.   30000.       0.       0.    2507.       0.      95.      22.    170.00
       .04      .00    11.97      .00     .000     .032     .000     .000   157.10    28.69
   .009467     205.     205.     205.       20       15        0      .00   580.96   609.65
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
1
    11NOV90      11:53:06                                                                    PAGE     8


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3720 CRITICAL DEPTH ASSUMED
  4235.000     7.13   164.23   164.23      .00   166.43     2.20     1.86      .25   169.80
    30000.       0.   30000.       0.       0.    2519.       0.     107.      25.    170.00
       .04      .00    11.91      .00     .000     .032     .000     .000   157.10    28.59
   .009325     200.     200.     200.       20        5        0      .00   581.15   609.74
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.61
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 4235.000     5.11   161.61   162.86      .00   166.07     4.46      .13      .23   159.50
   30000.      30.   29940.      30.       5.    1764.       5.     107.      25.    159.50
      .04     5.66    16.97     5.66     .040     .032     .040     .000   156.50    19.98
  .024144       8.       8.       8.        7       11        0      .00   499.23   519.22
0
 *SECNO 4163.300

 3301 HV CHANGED MORE THAN HVINS

 4163.300     5.78   162.28   162.86      .00   165.43     3.15      .25      .39   159.50
   30000.      47.   29906.      47.       9.    2096.       9.     108.      25.    159.50
      .04     5.11    14.27     5.11     .040     .032     .040     .000   156.50    18.37
  .013566      14.      14.      14.        4       11        0      .00   502.46   520.83
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.15

 4163.200     4.72   155.22   157.37      .00   163.17     7.95     1.77      .48   154.50
   30000.       2.   29995.       2.       1.    1325.       1.     109.      25.    154.50
      .04     4.37    22.63     4.37     .040     .032     .040     .000   150.50    33.56
  .062581      47.      47.      47.        9       11        0      .00   490.08   523.64
0
1
   11NOV90      11:53:06                                                                    PAGE    9


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.100
 4163.100     4.81   155.31   157.37      .00   162.80     7.49      .24      .14   154.50
   30000.       3.   29994.       3.       1.    1365.       1.     109.      25.    154.50
      .04     4.47    21.97     4.47     .040     .032     .040     .000   150.50    33.40
  .056645       4.       4.       4.        3       14        0      .00   490.41   523.80
0
 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 4163.000     4.70   156.20   157.88      .00   161.90     5.70      .36      .54   154.50
   30000.      17.   29966.      17.       3.    1563.       3.     110.      26.    154.50
      .04     5.89    19.17     5.89     .040     .032     .040     .000   151.50    31.58
  .036000       8.       8.       8.        5       11        0      .00   494.04   525.62
0
 *SECNO 4091.300
```

3301 HV CHANGED MORE THAN HVINS

4091.300	5.16	156.66	157.89	.00	161.04	4.38	.46	.40	154.50
30000.	26.	29949.	26.	5.	1782.	5.	110.	26.	154.50
.04	5.53	16.81	5.53	.040	.032	.040	.000	151.50	30.69
.023255	16.	16.	16.	4	11	0	.00	495.83	526.51

0

*SECNO 4091.200

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.01

4091.200	4.37	148.27	150.63	.00	157.92	9.65	2.59	.53	148.00
30000.	0.	30000.	0.	0.	1203.	0.	112.	26.	148.00
.05	.11	24.94	.11	.040	.032	.040	.000	143.90	43.55
.093894	44.	44.	44.	8	11	0	.00	519.49	563.05

0

*SECNO 4091.100

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3301 HV CHANGED MORE THAN HVINS

4091.100	4.45	148.35	150.62	.00	157.38	9.02	.35	.19	148.00
30000.	0.	29999.	0.	0.	1245.	0.	112.	26.	148.00
.05	3.03	24.10	3.03	.040	.032	.040	.000	143.90	43.42
.083859	4.	4.	4.	4	14	0	.00	519.76	563.18

0

*SECNO 4091.000

3301 HV CHANGED MORE THAN HVINS

4091.000	4.22	149.22	151.20	.00	156.23	7.01	.54	.60	148.00
30000.	7.	29986.	7.	1.	1411.	1.	112.	26.	148.00
.05	5.66	21.26	5.66	.040	.032	.040	.000	145.00	41.98
.055170	8.	8.	8.	4	11	0	.00	522.63	564.62

0

*SECNO 3979.300

3301 HV CHANGED MORE THAN HVINS

3979.300	4.58	149.58	151.17	.00	155.05	5.48	.71	.46	148.00
30000.	11.	29978.	11.	2.	1595.	2.	113.	27.	148.00
.05	5.46	18.79	5.46	.040	.032	.040	.000	145.00	41.40

```
   .036594      16.      16.      16.       7      14       0     .00   523.81   565.20
0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

  3973.200     4.89   142.29   144.40     .00   150.19    7.90    4.63     .24   142.00
    30000.       0.    30000.       0.      0.    1330.      0.    116.     28.   142.00
       .05      .10    22.55      .10    .040     .032    .040    .000   137.40    53.52
   .066329      90.      90.      90.       7      14       0     .00   514.76   568.28
0
 *SECNO 3973.100

 3301 HV CHANGED MORE THAN HVINS

1
    11NOV90      11:53:06                                                                                    PAGE   11


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


  3973.100     4.98   142.38   144.39     .00   149.74    7.35     .29     .16   142.00
    30000.       0.    29999.       0.      0.    1379.      0.    116.     28.   142.00
       .05     2.70    21.76     2.70    .040     .032    .040    .000   137.40    53.36
   .058882       5.       5.       5.       4      14       0     .00   515.07   568.44
0
 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS

  3973.000     4.79   143.79   145.20     .00   148.66    4.86     .33     .75   142.00
    30000.      14.    29971.      14.      3.    1693.      3.    116.     28.   142.00
       .05     5.37    17.71     5.37    .040     .032    .040    .000   139.00    51.03
   .029653       8.       8.       8.       9      11       0     .00   519.75   570.77
0
 *SECNO 3972.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  3972.300     4.68   146.68   146.68     .00   149.05    2.37     .24     .86   142.00
    30000.     102.    29796.     102.     18.    2405.     18.    117.     28.   142.00
       .05     5.63    12.39     5.63    .040     .032    .040    .000   142.00    46.24
   .009093      26.      26.      26.      20       5       0     .00   529.31   575.56
0
 *SECNO 3972.200
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
```

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 3720 CRITICAL DEPTH ASSUMED
  3972.200     4.71   146.71   146.71      .00   149.05     2.34      .23      .22   142.00
    30000.     103.   29794.     103.      18.    2418.      18.     119.      28.    142.00
       .05     5.60    12.32     5.60     .040     .032     .040     .000   142.00    46.20
   .008925      26.      26.      26.       20        5        0      .00   529.40   575.60
0
 *SECNO 3972.100
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    11NOV90      11:53:06                                                                                    PAGE   12


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


  3972.100     4.70   146.70   146.70      .00   149.05     2.35      .45      .35   142.00
    30000.     103.   29795.     103.      18.    2416.      18.     122.      29.    142.00
       .05     5.60    12.33     5.60     .040     .032     .040     .000   142.00    46.21
   .008956      50.      50.      50.       20        5        0      .00   529.38   575.59
0
1
    11NOV90      11:53:06                                                                                    PAGE   13


 T1       SIMONS, LI & ASSOCIATES, INC. -- TEMPE, ARIZONA
 T1       ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPTED PLANS OF 11/7/90
 T1       PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T1       SUPERCRITICAL RUN
 T2       STRT BASED ON CRITICAL DEPTH
 T3       IBW1RIO.DAT              PAZ-DMJM03-13

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

        0        0         0         1        -1         0         0     43000    177.24        0

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       2        0        -1         0         0         0        -1         0         0         0

1
    11NOV90      11:53:06                                                                                    PAGE   14


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST
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 *PROF 2

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SE
E

 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 6100.000
 3720 CRITICAL DEPTH ASSUMED
  6100.000    10.39   174.80   174.80   177.24   177.62     2.82      .00      .00   177.76
    43000.       0.   43000.       0.       0.    3191.       0.       0.       0.    177.76
       .00      .00    13.47      .00     .000     .032     .000     .000   164.41  9705.87
   .008878       0.       0.       0.        0       14        0      .00   588.26 10294.13
0
 *SECNO 5905.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5905.000    10.17   173.90   173.90      .00   176.65     2.75     1.67      .50   177.20
    43000.       0.   43000.       0.       0.    3231.       0.      14.       3.    177.20
       .00      .00    13.31      .00     .000     .032     .000     .000   163.73  9704.82
   .008553     195.     195.     195.       20        8        0      .00   590.36 10295.18
0
 *SECNO 5825.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5825.000    10.06   173.40   173.40      .00   176.21     2.82      .71      .05   177.01
    43000.       0.   43000.       0.       0.    3192.       0.      20.       4.    177.01
       .01      .00    13.47      .00     .000     .032     .000     .000   163.34  9705.16
   .008892      80.      80.      80.       20        5        0      .00   589.68 10294.84
0
 *SECNO 5750.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
    11NOV90      11:53:06                                                                                          PAGE   15


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5750.100    11.24   174.43   174.43      .00   177.16     2.73     1.12     1.86   176.83
    43000.       0.   43000.       0.       0.    3245.       0.      26.       5.    176.83
       .01      .00    13.25      .00     .000     .032     .000     .000   163.19  9696.41
```

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   .014929      75.      75.      75.       20       12        0  -736.07   607.19 10303.59
0
 *SECNO 5672.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    11.25   173.97   173.97      .00   176.74     2.78     1.20     1.98   176.40
    43000.       0.   43000.       0.       0.    3215.       0.      32.       6.    176.40
       .01      .00    13.37      .00     .000     .032     .000     .000   162.72  9696.59
   .015383      78.      78.      78.       20       12        0  -751.23   606.81 10303.41
0
 *SECNO 5670.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.46

  5670.000     9.89   169.89   171.74      .00   176.33     6.44      .05      .37   176.40
    43000.       0.   43000.       0.       0.    2111.       0.      32.       6.    176.40
       .01      .00    20.37      .00     .000     .032     .000     .000   160.00  9661.06
   .032793       2.       2.       2.        8        8        0      .00   557.88 10218.94
0
 *SECNO 5600.000

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5600.000    11.66   171.56   171.56      .00   174.43     2.86      .63     1.67   176.00
    43000.       0.   43000.       0.       0.    3167.       0.      36.       7.    176.00
       .01      .00    13.58      .00     .000     .032     .000     .000   159.90  9708.62
   .009010      70.      70.      70.       20       11        0      .00   582.77 10291.38
0
1
    11NOV90      11:53:06                                                                    PAGE   16


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5320.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5320.000    11.07   170.27   170.27      .00   173.11     2.84     2.51      .81   172.67
    43000.       0.   43000.       0.       0.    3179.       0.      56.      11.    172.67
```

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      .02      .00    13.52      .00     .000     .032     .000     .000   159.20  9707.10
   .008953     280.     280.     280.       20       11        0      .00   585.87 10292.96
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000    10.31   168.71   168.71      .00   171.52     2.82     3.03     3.97   171.21
    43000.       0.   43000.       0.       0.    3193.       0.      81.      15.   171.21
      .02      .00    13.47      .00     .000     .032     .000     .000   158.40  9705.11
   .008898     340.     340.     340.       20       11        0      .00   589.78 10294.89
0
 *SECNO 4640.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000     9.52   167.12   167.12      .00   169.92     2.80     3.00     3.38   170.00
    43000.       0.   43000.       0.       0.    3204.       0.     106.      20.   170.00
      .03      .00    13.42      .00     .000     .032     .000     .000   157.60  9704.24
   .008830     340.     340.     340.       20       11        0      .00   591.58 10295.82
0
 *SECNO 4435.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4435.000     8.31   165.41   165.41      .00   168.19     2.78     1.79      .31   169.80
    43000.       0.   43000.       0.       0.    3213.       0.     121.      23.   170.00
      .03      .00    13.38      .00     .000     .032     .000     .000   157.10    22.52
   .008734     205.     205.     205.       20       15        0      .00   592.40   614.91
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
1
    11NOV90      11:53:06                                                                    PAGE   17


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3720 CRITICAL DEPTH ASSUMED
  4235.000     8.33   165.43   165.43      .00   168.19     2.76     1.73      .18   169.80
    43000.       0.   43000.       0.       0.    3225.       0.     136.      25.   170.00
      .04      .00    13.33      .00     .000     .032     .000     .000   157.10    22.42
   .008633     200.     200.     200.       20        5        0      .00   592.58   615.00
0
 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS
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3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45

 4235.000     6.37   162.87   164.17      .00   167.86     4.99      .11      .22   159.50
   43000.      91.   42818.      91.      14.    2384.      14.     137.      25.    159.50
      .04     6.71    17.96     6.71     .040     .032     .040     .000   156.50    16.97
  .018116       8.       8.       8.        7       11        0      .00   505.26   522.23
0
 *SECNO 4163.300

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
 4163.300     7.05   163.55   164.17      .00   167.39     3.84      .16      .67   159.50
   43000.     119.   42762.     119.      19.    2713.      19.     137.      26.    159.50
      .04     6.10    15.76     6.10     .040     .032     .040     .000   156.50    15.37
  .011731      14.      14.      14.       20       11        0      .00   508.47   523.83
0
 *SECNO 4163.200

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.07

 4163.200     5.61   156.11   158.74      .00   165.40     9.28     1.44      .54   154.50
   43000.      17.   42966.      17.       3.    1756.       3.     140.      26.    154.50
      .04     6.67    24.46     6.67     .040     .032     .040     .000   150.50    31.79
  .050203      47.      47.      47.       10        8        0      .00   493.62   525.41
0
1
   11NOV90      11:53:06                                                                    PAGE   18


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.100
 4163.100     5.68   156.18   158.69      .00   165.09     8.91      .19      .11   154.50
   43000.      19.   42962.      19.       3.    1793.       3.     140.      26.    154.50
      .04     6.65    23.96     6.65     .040     .032     .040     .000   150.50    31.64
  .046885       4.       4.       4.        3       14        0      .00   493.92   525.56
0
 *SECNO 4163.000

3301 HV CHANGED MORE THAN HVINS

 4163.000     5.58   157.08   159.21      .00   164.26     7.17      .31      .52   154.50
   43000.      50.   42900.      50.       7.    1994.       7.     140.      26.    154.50
      .04     7.42    21.51     7.42     .040     .032     .040     .000   151.50    29.81
  .032783       8.       8.       8.        5       11        0      .00   497.57   527.39
```

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0
 *SECNO 4091.300

 3301 HV CHANGED MORE THAN HVINS

  4091.300     5.99   157.49   159.21      .00   163.44     5.96      .45      .36   154.50
    43000.      62.   42875.      62.       9.    2186.       9.     141.      26.    154.50
       .04     6.99    19.61     6.99     .040     .032     .040     .000   151.50    29.02
   .024087      16.      16.      16.        4       11        0      .00   499.15   528.18
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.81

  4091.200     5.08   148.98   151.91      .00   160.59    11.61     2.29      .57   148.00
    43000.       5.   42991.       5.       1.    1572.       1.     143.      27.    148.00
       .04     5.86    27.35     5.86     .040     .032     .040     .000   143.90    42.38
   .079096      44.      44.      44.       10       11        0      .00   521.84   564.22
0
 *SECNO 4091.100
1
    11NOV90      11:53:06                                                                    PAGE   19


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST



 3301 HV CHANGED MORE THAN HVINS

  4091.100     5.15   149.05   151.89      .00   160.13    11.07      .30      .16   148.00
    43000.       5.   42989.       5.       1.    1610.       1.     143.      27.    148.00
       .04     5.90    26.71     5.90     .040     .032     .040     .000   143.90    42.26
   .073044       4.       4.       4.        4       14        0      .00   522.08   564.34
0
 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

  4091.000     4.91   149.91   152.44      .00   159.05     9.13      .50      .58   148.00
    43000.      23.   42955.      23.       3.    1770.       3.     143.      27.    148.00
       .04     7.49    24.26     7.49     .040     .032     .040     .000   145.00    40.84
   .053125       8.       8.       8.        5       14        0      .00   524.92   565.76
0
 *SECNO 3979.300

 3301 HV CHANGED MORE THAN HVINS
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 3979.300     5.23   150.23   152.44      .00   157.87     7.64      .73      .45   148.00
   43000.      29.   42941.      29.       4.    1935.       4.     144.      27.   148.00
      .04     7.15    22.20     7.15     .040     .032     .040     .000   145.00    40.32
  .039495      16.      16.      16.        8       14        0      .00   525.97   566.28
0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

 3973.200     5.58   142.98   145.68      .00   153.07    10.09     4.55      .24   142.00
   43000.       4.   42992.       4.       1.    1686.       1.     148.      28.   142.00
      .04     5.18    25.49     5.18     .040     .032     .040     .000   137.40    52.37
  .061802      90.      90.      90.        8       14        0      .00   517.05   569.43
0
 *SECNO 3973.100

 3301 HV CHANGED MORE THAN HVINS

1
   11NOV90      11:53:06                                                                    PAGE   20


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN      SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID     ENDST


 3973.100     5.67   143.07   145.67      .00   152.65     9.58      .27      .15   142.00
   43000.       5.   42990.       5.       1.    1731.       1.     148.      28.   142.00
      .04     5.25    24.84     5.25     .040     .032     .040     .000   137.40    52.23
  .056652       5.       5.       5.        4       14        0      .00   517.34   569.57
0
 *SECNO 3973.000

 3301 HV CHANGED MORE THAN HVINS

 3973.000     5.38   144.38   146.49      .00   151.57     7.20      .36      .71   142.00
   43000.      33.   42934.      33.       5.    1993.       5.     148.      28.   142.00
      .04     7.07    21.54     7.07     .040     .032     .040     .000   139.00    50.06
  .035312       8.       8.       8.        8       11        0      .00   521.68   571.74
0
 *SECNO 3972.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 3972.300     5.98   147.98   147.98      .00   150.95     2.97      .21      .93   142.00
   43000.     187.   42627.     187.      30.    3070.      30.     150.      29.   142.00
      .04     6.31    13.88     6.31     .040     .032     .040     .000   142.00    44.10
  .008244      26.      26.      26.       20        8        0      .00   533.60   577.70
0
```

```
 *SECNO 3972.200
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  3972.200     5.97   147.97   147.97      .00   150.95     2.98      .21      .04   142.00
    43000.     187.   42627.     187.      30.    3068.      30.     152.      29.    142.00
       .04     6.31    13.89     6.31     .040     .032     .040     .000   142.00    44.10
   .008259      26.      26.      26.       20        5        0      .00   533.59   577.70
0
 *SECNO 3972.100
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    11NOV90      11:53:06                                                                                PAGE   21


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


  3972.100     5.97   147.97   147.97      .00   150.95     2.98      .41      .04   142.00
    43000.     187.   42627.     187.      30.    3069.      30.     155.      30.    142.00
       .04     6.31    13.89     6.31     .040     .032     .040     .000   142.00    44.10
   .008257      50.      50.      50.       20        5        0      .00   533.59   577.70
0
1
    11NOV90      11:53:06                                                                                PAGE   22


 T1       ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPTED PLANS OF 11/7/90
 T1       INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
 T1       SUPERCRITICAL RUN
 T1       PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T2       STRT BASED ON CRITICAL DEPTH
 T3       IBW1RIO.DAT              PAZ-DMJM03-13

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0         0         0         1        -1         0         0     51000    178.04       0

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      3         0        -1         0         0         0        -1         0         0         0

1
    11NOV90      11:53:06                                                                                PAGE   23


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
```

```
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 *PROF 3

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SE
E
 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=     .100 CEHV=     .300
 *SECNO 6100.000
 3720 CRITICAL DEPTH ASSUMED
  6100.000    11.07   175.48   175.48   178.04   178.61     3.12      .00      .00   177.76
    51000.       0.   51000.       0.       0.    3596.       0.       0.       0.    177.76
       .00      .00    14.18      .00     .000     .032     .000     .000   164.41  9701.77
   .008545       0.       0.       0.        0       14        0      .00   596.46 10298.23
0
 *SECNO 5905.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5905.000    10.85   174.58   174.58      .00   177.63     3.06     1.61      .46   177.20
    51000.       0.   51000.       0.       0.    3636.       0.      16.       3.    177.20
       .00      .00    14.03      .00     .000     .032     .000     .000   163.73  9700.74
   .008275     195.     195.     195.       20        8        0      .00   598.52 10299.26
0
 *SECNO 5825.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5825.000    10.74   174.08   174.08      .00   177.20     3.12      .68      .05   177.01
    51000.       0.   51000.       0.       0.    3599.       0.      23.       4.    177.01
       .01      .00    14.17      .00     .000     .032     .000     .000   163.34  9701.06
   .008545      80.      80.      80.       20        5        0      .00   597.88 10298.94
0
 *SECNO 5750.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
   11NOV90      11:53:06                                                                                                PAGE   24


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
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 5750.100    11.86   175.05   175.05      .00   178.13     3.08     1.10     1.68   176.83
   51000.       0.   51000.       0.       0.    3623.       0.      29.       5.   176.83
      .01      .00    14.07      .00     .000     .032     .000     .000   163.19  9692.69
  .014696      75.      75.      75.       20       15        0  -736.07   614.63 10307.31
0
 *SECNO 5672.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 5672.100    11.97   174.69   174.69      .00   177.71     3.02     1.11     1.71   176.40
   51000.       0.   51000.       0.       0.    3658.       0.      36.       6.   176.40
      .01      .00    13.94      .00     .000     .032     .000     .000   162.72  9692.25
  .014261      78.      78.      78.       20       12        0  -751.23   615.51 10307.75
0
 *SECNO 5670.000

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.43

 5670.000    10.46   170.46   172.43      .00   177.29     6.83      .04      .38   176.40
   51000.       0.   51000.       0.       0.    2432.       0.      36.       6.   176.40
      .01      .00    20.97      .00     .000     .032     .000     .000   160.00  9657.63
  .029258       2.       2.       2.        8        8        0      .00   564.74 10222.37
0
 *SECNO 5600.000

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
 5600.000    12.35   172.25   172.25      .00   175.42     3.16      .61     1.47   176.00
   51000.       0.   51000.       0.       0.    3572.       0.      41.       7.   176.00
      .01      .00    14.28      .00     .000     .032     .000     .000   159.90  9704.47
  .008649      70.      70.      70.       20       11        0      .00   591.05 10295.53
0
1
    11NOV90      11:53:06                                                                    PAGE   25


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5320.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
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 3720 CRITICAL DEPTH ASSUMED
  5320.000    11.76   170.96   170.96      .00   174.10     3.14     2.41      .70   172.67
    51000.       0.   51000.       0.       0.    3586.       0.      64.      11.    172.67
       .02      .00    14.22      .00     .000     .032     .000     .000   159.20  9702.97
   .008595     280.     280.     280.       20       11        0      .00   594.14 10297.11
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000    10.99   169.39   169.39      .00   172.51     3.12     2.91     3.52   171.21
    51000.       0.   51000.       0.       0.    3598.       0.      92.      15.    171.21
       .02      .00    14.17      .00     .000     .032     .000     .000   158.40  9701.02
   .008565     340.     340.     340.       20       11        0      .00   597.96 10298.98
0
 *SECNO 4640.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000    10.20   167.80   167.80      .00   170.90     3.10     2.89     3.05   170.00
    51000.       0.   51000.       0.       0.    3608.       0.     120.      20.    170.00
       .03      .00    14.14      .00     .000     .032     .000     .000   157.60  9700.32
   .008513     340.     340.     340.       20       11        0      .00   599.43 10299.75
0
 *SECNO 4435.000
 7185 MINIMUM SPECIFIC ENERGY
  4435.000     8.97   166.07   166.08      .00   169.17     3.09     1.74      .00   169.80
    51000.       0.   51000.       0.       0.    3615.       0.     137.      23.    170.00
       .03      .00    14.11      .00     .000     .032     .000     .000   157.10    19.06
   .008420     205.     205.     205.        2       15        0      .00   598.80   617.86
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     9.01   166.11   166.11      .00   169.17     3.07     1.66      .16   169.80
    51000.       0.   51000.       0.       0.    3628.       0.     153.      26.    170.00
       .04      .00    14.06      .00     .000     .032     .000     .000   157.10    18.94
   .008317     200.     200.     200.       20        5        0      .00   599.02   617.97
0
1
    11NOV90      11:53:06                                                                    PAGE   26


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS
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 4235.000     7.13   163.63   164.92      .00   168.86     5.24      .10      .22   159.50
   51000.     145.   50710.     145.      20.    2755.      20.     154.      26.   159.50
      .04     7.15    18.41     7.15     .040     .032     .040     .000   156.50    15.16
  .015682       8.       8.       8.        5       11        0      .00   508.87   524.04
0
 *SECNO 4163.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
 4163.300     7.74   164.24   164.92      .00   168.49     4.24      .15      .48   159.50
   51000.     177.   50647.     177.      27.    3054.      27.     155.      26.   159.50
      .04     6.59    16.58     6.59     .040     .032     .040     .000   156.50    13.71
  .011090      14.      14.      14.       20       11        0      .00   511.79   525.49
0
 *SECNO 4163.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.02

 4163.200     6.12   156.62   159.49      .00   166.60     9.98     1.31      .57   154.50
   51000.      34.   50931.      34.       4.    2008.       4.     158.      26.   154.50
      .04     7.62    25.37     7.62     .040     .032     .040     .000   150.50    30.76
  .045175      47.      47.      47.       11        8        0      .00   495.68   526.44
0
 *SECNO 4163.100
 4163.100     6.19   156.69   159.46      .00   166.32     9.63      .18      .10   154.50
   51000.      36.   50927.      36.       5.    2043.       5.     158.      26.   154.50
      .04     7.57    24.93     7.57     .040     .032     .040     .000   150.50    30.61
  .042604       4.       4.       4.        2       14        0      .00   495.97   526.59
0
1
   11NOV90      11:53:06                                                                    PAGE   27


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 4163.000     6.11   157.61   159.97      .00   165.52     7.91      .29      .52   154.50
   51000.      79.   50842.      79.      10.    2250.      10.     158.      27.   154.50
      .04     8.14    22.60     8.14     .040     .032     .040     .000   151.50    28.76
  .030786       8.       8.       8.        5       11        0      .00   499.67   528.44
0
 *SECNO 4091.300
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 3301 HV CHANGED MORE THAN HVINS

  4091.300     6.51   158.01   159.97      .00   164.73     6.72      .43      .36   154.50
    51000.      94.   50811.      94.      12.    2439.      12.     159.      27.    154.50
       .04     7.69    20.84     7.69     .040     .032     .040     .000   151.50    27.99
   .023512      16.      16.      16.        3       11        0      .00   501.22   529.21
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.75

  4091.200     5.50   149.40   152.62      .00   162.02    12.62     2.12      .59   148.00
    51000.      11.   50977.      11.       2.    1788.       2.     161.      27.    148.00
       .04     7.09    28.52     7.09     .040     .032     .040     .000   143.90    41.69
   .072418      44.      44.      44.       11       11        0      .00   523.22   564.91
0
 *SECNO 4091.100

 3301 HV CHANGED MORE THAN HVINS

  4091.100     5.57   149.47   152.61      .00   161.59    12.12      .28      .15   148.00
    51000.      13.   50975.      13.       2.    1824.       2.     161.      27.    148.00
       .04     7.09    27.94     7.09     .040     .032     .040     .000   143.90    41.58
   .067686       4.       4.       4.        4       14        0      .00   523.45   565.02
0
1
    11NOV90      11:53:06                                                                    PAGE   28


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4091.000

 3301 HV CHANGED MORE THAN HVINS

  4091.000     5.32   150.32   153.16      .00   160.55    10.23      .47      .57   148.00
    51000.      37.   50925.      37.       4.    1983.       4.     162.      27.    148.00
       .04     8.37    25.68     8.37     .040     .032     .040     .000   145.00    40.16
   .051130       8.       8.       8.        5       14        0      .00   526.28   566.44
0
 *SECNO 3979.300

 3301 HV CHANGED MORE THAN HVINS

  3979.300     5.63   150.63   153.15      .00   159.39     8.76      .72      .44   148.00
    51000.      46.   50909.      46.       6.    2141.       6.     162.      28.    148.00
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      .04     7.99    23.78     7.99     .040     .032     .040     .000   145.00    39.66
   .039582     16.      16.      16.        7       14        0      .00   527.29   566.94
0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

  3973.200     5.97   143.37   146.41      .00   154.68    11.31     4.46      .25   142.00
    51000.      10.   50980.      10.       2.    1889.       2.     167.      29.   142.00
      .04     6.37    26.99     6.37     .040     .032     .040     .000   137.40    51.72
   .059582     90.      90.      90.        8       14        0      .00   518.36   570.08
0
 *SECNO 3973.100

 3301 HV CHANGED MORE THAN HVINS

  3973.100     6.06   143.46   146.40      .00   154.27    10.81      .26      .15   142.00
    51000.      11.   50977.      11.       2.    1932.       2.     167.      29.   142.00
      .04     6.38    26.39     6.38     .040     .032     .040     .000   137.40    51.58
   .055225      5.       5.       5.        4       14        0      .00   518.64   570.22
0
 *SECNO 3973.000
1
    11NOV90      11:53:06                                                                  PAGE   29


    SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS   BANK ELEV
    Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA   LEFT/RIGHT
    TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
    SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST



 3301 HV CHANGED MORE THAN HVINS

  3973.000     5.73   144.73   147.21      .00   153.21     8.48      .36      .70   142.00
    51000.      49.   50902.      49.       6.    2176.       6.     167.      29.   142.00
      .04     7.94    23.39     7.94     .040     .032     .040     .000   139.00    49.47
   .037026      8.       8.       8.        7       11        0      .00   522.87   572.33
0
 *SECNO 3972.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
  3972.300     6.50   148.50   148.71      .00   152.03     3.52      .23     1.18   142.00
    51000.     241.   50519.     241.      35.    3341.      35.     169.      29.   142.00
      .04     6.87    15.12     6.87     .040     .032     .040     .000   142.00    43.22
   .008731     26.      26.      26.       20        8        0      .00   535.35   578.58
0
 *SECNO 3972.200
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
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 3720 CRITICAL DEPTH ASSUMED
  3972.200     6.68   148.68   148.68      .00   152.02     3.33      .21      .16   142.00
    51000.     247.   50505.     247.      37.    3434.      37.     171.      29.    142.00
       .04     6.68    14.71     6.68     .040     .032     .040     .000   142.00    42.92
   .007967      26.      26.      26.       20        8        0      .00   535.95   578.88
0
 *SECNO 3972.100
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  3972.100     6.69   148.69   148.69      .00   152.02     3.33      .40      .35   142.00
    51000.     248.   50505.     248.      37.    3437.      37.     175.      30.    142.00
       .04     6.68    14.69     6.68     .040     .032     .040     .000   142.00    42.91
   .007942      50.      50.      50.       20        5        0      .00   535.97   578.89
0
1
    11NOV90      11:53:06                                                                          PAGE   30


 T1      ADJUSTED SLA-TEMPE - BY FCD BASED ON ADOPETED PLANS OF 11/7/90
 T1      INDIAN BEND WASH IMPACT ANALYSIS FOR THE EAST PAPAGO FREEWAY
 T1      SUPERCRITICAL RUN
 T1      PROFILE BEGINS AT LEVEL I OF THE RIO SALADO, IBW DROP STRUCTURE
 T2      STRT BASED ON CRITICAL DEPTH
 T3      IBW1RIO.DAT             PAZ-DMJM03-13

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0         0         0         1        -1         0         0     63000    179.14       0

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15         0        -1         0         0         0        -1         0         0         0

1
    11NOV90      11:53:06                                                                          PAGE   31


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *PROF 4

 IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SE
E

 DOCUMENTATION FOR DETAILS.

 CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

 CCHV=      .100 CEHV=      .300
 *SECNO 6100.000
```

```
 3720 CRITICAL DEPTH ASSUMED
  6100.000    12.03   176.44   176.44   179.14   179.98     3.54      .00      .00   177.76
    63000.       0.   63000.       0.       0.    4172.       0.       0.       0.    177.76
       .00      .00    15.10      .00     .000     .032     .000     .000   164.41  9696.03
   .008152       0.       0.       0.        0       14        0      .00   607.95 10303.97
0
 *SECNO 5905.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5905.000    11.80   175.53   175.53      .00   179.00     3.48     1.55      .42   177.20
    63000.       0.   63000.       0.       0.    4210.       0.      19.       3.    177.20
       .00      .00    14.96      .00     .000     .032     .000     .000   163.73  9695.04
   .007941     195.     195.     195.       20        8        0      .00   609.93 10304.96
0
 *SECNO 5825.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5825.000    11.70   175.04   175.04      .00   178.57     3.53      .65      .06   177.01
    63000.       0.   63000.       0.       0.    4176.       0.      26.       4.    177.01
       .01      .00    15.09      .00     .000     .032     .000     .000   163.34  9695.33
   .008148      80.      80.      80.       20        5        0      .00   609.34 10304.67
0
 *SECNO 5750.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   169.36 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
1
    11NOV90      11:53:06                                                                                    PAGE   32


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5750.100    12.81   176.00   176.00      .00   179.47     3.47     1.03     1.43   176.83
    63000.       0.   63000.       0.       0.    4213.       0.      34.       5.    176.83
       .01      .00    14.95      .00     .000     .032     .000     .000   163.19  9686.98
   .013792      75.      75.      75.       20       15        0  -736.07   626.05 10313.02
0
 *SECNO 5672.100

 3370 NORMAL BRIDGE, NRD=   9 MIN ELTRD=   168.94 MAX ELLC=   171.00

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5672.100    12.85   175.57   175.57      .00   179.06     3.48     1.08     1.53   176.40
```

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   63000.       0.   63000.       0.       0.    4206.       0.      41.       6.    176.40
      .01      .00    14.98      .00     .000     .032     .000     .000   162.72  9686.96
  .013883      78.      78.      78.       20       15        0  -751.23   626.09 10313.04
0
 *SECNO 5670.000

 3301 HV CHANGED MORE THAN HVINS

  5670.000    11.27   171.27   173.40      .00   178.63     7.37      .04      .39    176.40
   63000.       0.   63000.       0.       0.    2893.       0.      41.       6.    176.40
      .01      .00    21.78      .00     .000     .032     .000     .000   160.00  9652.78
  .025631       2.       2.       2.        8        8        0      .00   574.44 10227.22
0
 *SECNO 5600.000

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5600.000    13.32   173.22   173.22      .00   176.80     3.58      .58     1.26    176.00
   63000.       0.   63000.       0.       0.    4147.       0.      47.       7.    176.00
      .01      .00    15.19      .00     .000     .032     .000     .000   159.90  9698.69
  .008236      70.      70.      70.       20       11        0      .00   602.62 10301.31
0
1
   11NOV90      11:53:06                                                                    PAGE   33


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 5320.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  5320.000    12.73   171.93   171.93      .00   175.48     3.55     2.28      .61    172.67
   63000.       0.   63000.       0.       0.    4168.       0.      74.      11.    172.67
      .01      .00    15.11      .00     .000     .032     .000     .000   159.20  9697.14
  .008150     280.     280.     280.       20       11        0      .00   605.80 10302.95
0
 *SECNO 4980.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4980.000    11.95   170.35   170.35      .00   173.88     3.53     2.77     3.08    171.21
   63000.       0.   63000.       0.       0.    4177.       0.     106.      16.    171.21
      .02      .00    15.08      .00     .000     .032     .000     .000   158.40  9695.27
  .008155     340.     340.     340.       20       11        0      .00   609.47 10304.73
0
 *SECNO 4640.000
```

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 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4640.000    11.15   168.75   168.75      .00   172.27     3.52     2.76     2.72   170.00
    63000.       0.   63000.       0.       0.    4183.       0.     139.      20.    170.00
       .03      .00    15.06      .00     .000     .032     .000     .000   157.60  9694.82
   .008131     340.     340.     340.       20       11        0      .00   610.44 10305.26
0
 *SECNO 4435.000
  4435.000     9.80   166.90   167.05      .00   170.55     3.65     1.71      .01   169.80
    63000.       0.   63000.       0.       0.    4108.       0.     158.      23.    170.00
       .03      .00    15.34      .00     .000     .032     .000     .000   157.10    14.86
   .008537     205.     205.     205.        2       11        0      .00   606.58   621.44
0
 *SECNO 4235.000
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
  4235.000     9.98   167.08   167.08      .00   170.55     3.47     1.57      .18   169.80
    63000.       0.   63000.       0.       0.    4215.       0.     178.      26.    170.00
       .03      .00    14.95      .00     .000     .032     .000     .000   157.10    13.96
   .007867     200.     200.     200.       20        5        0      .00   608.25   622.21
0
1
    11NOV90      11:53:06                                                                    PAGE   34


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4235.000

 3301 HV CHANGED MORE THAN HVINS

  4235.000     8.27   164.77   165.96      .00   170.26     5.49      .08      .20   159.50
    63000.     252.   62496.     252.      33.    3313.      33.     178.      26.    159.50
       .03     7.62    18.86     7.62     .040     .032     .040     .000   156.50    12.45
   .012876       8.       8.       8.        7       11        0      .00   514.31   526.75
0
 *SECNO 4163.300

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
  4163.300     8.90   165.40   165.99      .00   169.98     4.58      .13      .62   159.50
    63000.     293.   62413.     293.      41.    3620.      41.     179.      26.    159.50
       .03     7.08    17.24     7.08     .040     .032     .040     .000   156.50    10.95
   .009557      14.      14.      14.       20        8        0      .00   517.30   528.25
0
 *SECNO 4163.200
```

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3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.03

 4163.200     6.88   157.38   160.52      .00   168.22    10.84     1.14      .63   154.50
   63000.      72.   62856.      72.       8.    2377.       8.     183.      27.    154.50
      .04     8.70    26.45     8.70     .040     .032     .040     .000   150.50    29.24
  .039198      47.      47.      47.       10        8        0      .00   498.71   527.96
0
 *SECNO 4163.100
 4163.100     6.95   157.45   160.50      .00   167.97    10.52      .15      .09   154.50
   63000.      75.   62850.      75.       9.    2412.       9.     183.      27.    154.50
      .04     8.63    26.06     8.63     .040     .032     .040     .000   150.50    29.10
  .037320       4.       4.       4.        2       14        0      .00   499.00   528.10
0
1
   11NOV90      11:53:06                                                                    PAGE   35


   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST


 *SECNO 4163.000

 3301 HV CHANGED MORE THAN HVINS

 4163.000     6.89   158.39   161.01      .00   167.20     8.81      .26      .51   154.50
   63000.     136.   62727.     136.      15.    2628.      15.     183.      27.    154.50
      .04     8.99    23.87     8.99     .040     .032     .040     .000   151.50    27.21
  .027920       8.       8.       8.        5       11        0      .00   502.78   529.99
0
 *SECNO 4091.300

 3301 HV CHANGED MORE THAN HVINS

 4091.300     7.27   158.77   161.01      .00   166.47     7.70      .40      .33   154.50
   63000.     155.   62689.     155.      18.    2809.      18.     184.      27.    154.50
      .04     8.54    22.32     8.54     .040     .032     .040     .000   151.50    26.47
  .022341      16.      16.      16.        3       11        0      .00   504.26   530.73
0
 *SECNO 4091.200

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.70

 4091.200     6.10   150.00   153.63      .00   163.92    13.92     1.92      .62   148.00
   63000.      28.   62944.      28.       3.    2101.       3.     187.      28.    148.00
```

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      .04     8.50    29.96     8.50     .040     .032     .040     .000   143.90    40.69
   .064435      44.      44.      44.       12       11        0      .00   525.21   565.91
0
 *SECNO 4091.100
  4091.100     6.18   150.08   153.62      .00   163.53    13.45      .25      .14   148.00
    63000.      30.    62940.      30.       4.    2137.       4.     187.      28.   148.00
      .04     8.45    29.45     8.45     .040     .032     .040     .000   143.90    40.58
   .060869       4.       4.       4.        3       14        0      .00   525.44   566.02
0
 *SECNO 4091.000
1
    11NOV90      11:53:06                                                                    PAGE   36


    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS    BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA    LEFT/RIGHT
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN       SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID      ENDST



 3301 HV CHANGED MORE THAN HVINS

  4091.000     5.92   150.92   154.16      .00   162.55    11.63      .43      .55   148.00
    63000.      67.    62867.      67.       7.    2295.       7.     187.      28.   148.00
      .04     9.44    27.39     9.44     .040     .032     .040     .000   145.00    39.17
   .047901       8.       8.       8.        5       14        0      .00   528.27   567.43
0
 *SECNO 3979.300

 3301 HV CHANGED MORE THAN HVINS

  3979.300     6.22   151.22   154.16      .00   161.45    10.23      .68      .42   148.00
    63000.      77.    62846.      77.       9.    2445.       9.     188.      28.   148.00
      .04     9.04    25.70     9.04     .040     .032     .040     .000   145.00    38.69
   .038737      16.      16.      16.        6       14        0      .00   529.22   567.91
0
 *SECNO 3973.200

 3301 HV CHANGED MORE THAN HVINS

  3973.200     6.54   143.94   147.42      .00   156.90    12.96     4.28      .27   142.00
    63000.      24.    62951.      24.       3.    2178.       3.     193.      29.   142.00
      .04     7.80    28.90     7.80     .040     .032     .040     .000   137.40    50.79
   .056451      90.      90.      90.        9       14        0      .00   520.23   571.01
0
 *SECNO 3973.100
  3973.100     6.62   144.02   147.41      .00   156.51    12.49      .25      .14   142.00
    63000.      26.    62948.      26.       3.    2219.       3.     193.      29.   142.00
      .04     7.76    28.37     7.76     .040     .032     .040     .000   137.40    50.65
   .053073       5.       5.       5.        4       14        0      .00   520.49   571.15
0
 *SECNO 3973.000
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3301 HV CHANGED MORE THAN HVINS

 3973.000     6.27   145.27   148.24      .00   155.46    10.19      .36      .69   142.00
   63000.      80.   62840.      80.       9.    2450.       9.     194.      29.   142.00
      .04     9.06    25.65     9.06     .040     .032     .040     .000   139.00    48.58
  .037998       8.       8.       8.        7       11        0      .00   524.63   573.22
0
1
   11NOV90      11:53:06                                                                    PAGE   37


   SECNO    DEPTH    CWSEL    CRIWS    WSELK    EG       HV       HL       OLOSS    BANK ELEV
   Q        QLOB     QCH      QROB     ALOB     ACH      AROB     VOL      TWA    LEFT/RIGHT
   TIME     VLOB     VCH      VROB     XNL      XNCH     XNR      WTN      ELMIN      SSTA
   SLOPE    XLOBL    XLCH     XLOBR    ITRIAL   IDC      ICONT    CORAR    TOPWID     ENDST


*SECNO 3972.300

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
 3972.300     6.84   148.84   149.69      .00   153.69     4.86      .29     1.40   142.00
   63000.     313.   62375.     313.      39.    3513.      39.     196.      30.   142.00
      .04     8.07    17.75     8.07     .040     .032     .040     .000   142.00    42.67
  .011259      26.      26.      26.       20       11        0      .00   536.46   579.13
0
*SECNO 3972.200

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 3972.200     7.70   149.70   149.70      .00   153.52     3.81      .20     1.10   142.00
   63000.     352.   62297.     352.      49.    3958.      49.     198.      30.   142.00
      .04     7.15    15.74     7.15     .040     .032     .040     .000   142.00    41.24
  .007551      26.      26.      26.       20        8        0      .00   539.33   580.56
0
*SECNO 3972.100
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
 3972.100     7.69   149.69   149.69      .00   153.52     3.82      .38      .37   142.00
   63000.     351.   62298.     351.      49.    3953.      49.     203.      31.   142.00
      .04     7.16    15.76     7.16     .040     .032     .040     .000   142.00    41.25
  .007582      50.      50.      50.       20        5        0      .00   539.30   580.55
0
1
   11NOV90      11:53:06                                                                    PAGE   38
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THIS RUN EXECUTED 11NOV90 11:53:36

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**************************************************
  HEC2 RELEASE DATED SEP 88 UPDATED APR  1990

  ERROR CORR -  01,02,03
  MODIFICATION -
**************************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

REVIBW.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	6100.000	173.57	.00	12.10	.00	.00	30000.00	.00	9.16	573.55	9713.23	10286.77
*	6100.000	174.80	.00	13.47	.00	.00	43000.00	.00	10.39	588.26	9705.87	10294.13
*	6100.000	175.48	.00	14.18	.00	.00	51000.00	.00	11.07	596.46	9701.77	10298.23
*	6100.000	176.44	.00	15.10	.00	.00	63000.00	.00	12.03	607.95	9696.03	10303.97
*	5905.000	172.68	.00	11.88	.00	.00	30000.00	.00	8.95	575.81	9712.10	10287.90
*	5905.000	173.90	.00	13.31	.00	.00	43000.00	.00	10.17	590.36	9704.82	10295.18
*	5905.000	174.58	.00	14.03	.00	.00	51000.00	.00	10.85	598.52	9700.74	10299.26
*	5905.000	175.53	.00	14.96	.00	.00	63000.00	.00	11.80	609.93	9695.04	10304.96
*	5825.000	172.17	.00	12.10	.00	.00	30000.00	.00	8.83	575.00	9712.50	10287.50
*	5825.000	173.40	.00	13.47	.00	.00	43000.00	.00	10.06	589.68	9705.16	10294.84
*	5825.000	174.08	.00	14.17	.00	.00	51000.00	.00	10.74	597.88	9701.06	10298.94
*	5825.000	175.04	.00	15.09	.00	.00	63000.00	.00	11.70	609.34	9695.33	10304.67
*	5750.100	173.19	.00	12.00	.00	.00	30000.00	.00	10.00	592.28	9703.86	10296.14
*	5750.100	174.43	.00	13.25	.00	.00	43000.00	.00	11.24	607.19	9696.41	10303.59
*	5750.100	175.05	.00	14.07	.00	.00	51000.00	.00	11.86	614.63	9692.69	10307.31
*	5750.100	176.00	.00	14.95	.00	.00	63000.00	.00	12.81	626.05	9686.98	10313.02
*	5672.100	172.80	.00	11.93	.00	.00	30000.00	.00	10.08	592.79	9703.60	10296.40
*	5672.100	173.97	.00	13.37	.00	.00	43000.00	.00	11.25	606.81	9696.59	10303.41
*	5672.100	174.69	.00	13.94	.00	.00	51000.00	.00	11.97	615.51	9692.25	10307.75
*	5672.100	175.57	.00	14.98	.00	.00	63000.00	.00	12.85	626.09	9686.96	10313.04
*	5670.000	168.90	.00	19.16	.00	.00	30000.00	.00	8.90	546.02	9666.99	10213.01
*	5670.000	169.89	.00	20.37	.00	.00	43000.00	.00	9.89	557.88	9661.06	10218.94
*	5670.000	170.46	.00	20.97	.00	.00	51000.00	.00	10.46	564.74	9657.63	10222.37
	5670.000	171.27	.00	21.78	.00	.00	63000.00	.00	11.27	574.44	9652.78	10227.22
*	5600.000	170.33	.00	12.21	.00	.00	30000.00	.00	10.43	567.96	9716.02	10283.98
*	5600.000	171.56	.00	13.58	.00	.00	43000.00	.00	11.66	582.77	9708.62	10291.38
*	5600.000	172.25	.00	14.28	.00	.00	51000.00	.00	12.35	591.05	9704.47	10295.53
*	5600.000	173.22	.00	15.19	.00	.00	63000.00	.00	13.32	602.62	9698.69	10301.31

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	5320.000	169.21	.00	11.68	.00	.00	30000.00	.00	10.01	573.20	9713.42	10286.62
*	5320.000	170.27	.00	13.52	.00	.00	43000.00	.00	11.07	585.87	9707.10	10292.96
*	5320.000	170.96	.00	14.22	.00	.00	51000.00	.00	11.76	594.14	9702.97	10297.11
*	5320.000	171.93	.00	15.11	.00	.00	63000.00	.00	12.73	605.80	9697.14	10302.95
*	4980.000	167.49	.00	12.07	.00	.00	30000.00	.00	9.09	575.18	9712.41	10287.59
*	4980.000	168.71	.00	13.47	.00	.00	43000.00	.00	10.31	589.78	9705.11	10294.89
*	4980.000	169.39	.00	14.17	.00	.00	51000.00	.00	10.99	597.96	9701.02	10298.98
*	4980.000	170.35	.00	15.08	.00	.00	63000.00	.00	11.95	609.47	9695.27	10304.73
*	4640.000	165.91	.00	12.02	.00	.00	30000.00	.00	8.31	577.53	9711.25	10288.79
*	4640.000	167.12	.00	13.42	.00	.00	43000.00	.00	9.52	591.58	9704.24	10295.82
*	4640.000	167.80	.00	14.14	.00	.00	51000.00	.00	10.20	599.43	9700.32	10299.75
*	4640.000	168.75	.00	15.06	.00	.00	63000.00	.00	11.15	610.44	9694.82	10305.26
*	4435.000	164.21	.00	11.97	.00	.00	30000.00	.00	7.11	580.96	28.69	609.65
*	4435.000	165.41	.00	13.38	.00	.00	43000.00	.00	8.31	592.40	22.52	614.91
*	4435.000	166.07	.00	14.11	.00	.00	51000.00	.00	8.97	598.80	19.06	617.86
	4435.000	166.90	.00	15.34	.00	.00	63000.00	.00	9.80	606.58	14.86	621.44
*	4235.000	164.23	.00	11.91	.00	.00	30000.00	.00	7.13	581.15	28.59	609.74
*	4235.000	165.43	.00	13.33	.00	.00	43000.00	.00	8.33	592.58	22.42	615.00
*	4235.000	166.11	.00	14.06	.00	.00	51000.00	.00	9.01	599.02	18.94	617.97
*	4235.000	167.08	.00	14.95	.00	.00	63000.00	.00	9.98	608.25	13.96	622.21
*	4235.000	161.61	5.66	16.97	5.66	29.91	29940.19	29.91	5.11	499.23	19.98	519.22
*	4235.000	162.87	6.71	17.96	6.71	90.86	42818.29	90.86	6.37	505.26	16.97	522.23
	4235.000	163.63	7.15	18.41	7.15	145.25	50709.50	145.25	7.13	508.87	15.16	524.04
	4235.000	164.77	7.62	18.86	7.62	252.22	62495.56	252.22	8.27	514.31	12.45	526.75
	4163.300	162.28	5.11	14.27	5.11	47.17	29905.65	47.17	5.78	502.46	18.37	520.83
*	4163.300	163.55	6.10	15.76	6.10	118.86	42762.28	118.86	7.05	508.47	15.37	523.83
*	4163.300	164.24	6.59	16.58	6.59	176.57	50646.86	176.57	7.74	511.79	13.71	525.49
*	4163.300	165.40	7.08	17.24	7.08	293.30	62413.39	293.30	8.90	517.30	10.95	528.25
*	4163.200	155.22	4.37	22.63	4.37	2.26	29995.47	2.26	4.72	490.08	33.56	523.64
*	4163.200	156.11	6.67	24.46	6.67	17.19	42965.61	17.19	5.61	493.62	31.79	525.41
*	4163.200	156.62	7.62	25.37	7.62	34.29	50931.43	34.29	6.12	495.68	30.76	526.44
*	4163.200	157.38	8.70	26.45	8.70	72.12	62855.75	72.12	6.88	498.71	29.24	527.96
	4163.100	155.31	4.47	21.97	4.47	2.88	29994.25	2.88	4.81	490.41	33.40	523.80
	4163.100	156.18	6.65	23.96	6.65	18.75	42962.49	18.75	5.68	493.92	31.64	525.56
	4163.100	156.69	7.57	24.93	7.57	36.43	50927.14	36.43	6.19	495.97	30.61	526.59
	4163.100	157.45	8.63	26.06	8.63	75.17	62849.65	75.17	6.95	499.00	29.10	528.10
	4163.000	156.20	5.89	19.17	5.89	17.20	29965.59	17.20	4.70	494.04	31.58	525.62
	4163.000	157.08	7.42	21.51	7.42	49.92	42900.17	49.92	5.58	497.57	29.81	527.39

	4163.000	157.61	8.14	22.60	8.14	79.12	50841.77	79.12	6.11	499.67	28.76	528.44
	4163.000	158.39	8.99	23.87	8.99	136.29	62727.41	136.29	6.89	502.78	27.21	529.99

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	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
	4091.300	156.66	5.53	16.81	5.53	25.73	29948.53	25.73	5.16	495.83	30.69	526.51
	4091.300	157.49	6.99	19.61	6.99	62.45	42875.11	62.45	5.99	499.15	29.02	528.18
	4091.300	158.01	7.69	20.84	7.69	94.46	50811.08	94.46	6.51	501.22	27.99	529.21
	4091.300	158.77	8.54	22.32	8.54	155.40	62689.21	155.40	7.27	504.26	26.47	530.73
*	4091.200	148.27	.11	24.94	.11	.01	29999.99	.01	4.37	519.49	43.55	563.05
*	4091.200	148.98	5.86	27.35	5.86	4.65	42990.69	4.65	5.08	521.84	42.38	564.22
*	4091.200	149.40	7.09	28.52	7.09	11.44	50977.12	11.44	5.50	523.22	41.69	564.91
*	4091.200	150.00	8.50	29.96	8.50	28.14	62943.73	28.14	6.10	525.21	40.69	565.91
	4091.100	148.35	3.03	24.10	3.03	.31	29999.38	.31	4.45	519.76	43.42	563.18
	4091.100	149.05	5.90	26.71	5.90	5.42	42989.16	5.42	5.15	522.08	42.26	564.34
	4091.100	149.47	7.09	27.94	7.09	12.61	50974.78	12.61	5.57	523.45	41.58	565.02
	4091.100	150.08	8.45	29.45	8.45	29.96	62940.07	29.96	6.18	525.44	40.58	566.02
	4091.000	149.22	5.66	21.26	5.66	6.96	29986.08	6.96	4.22	522.63	41.98	564.62
	4091.000	149.91	7.49	24.26	7.49	22.66	42954.67	22.66	4.91	524.92	40.84	565.76
	4091.000	150.32	8.37	25.68	8.37	37.34	50925.32	37.34	5.32	526.28	40.16	566.44
	4091.000	150.92	9.44	27.39	9.44	66.73	62866.54	66.73	5.92	528.27	39.17	567.43
	3979.300	149.58	5.46	18.79	5.46	11.22	29977.56	11.22	4.58	523.81	41.40	565.20
	3979.300	150.23	7.15	22.20	7.15	29.40	42941.20	29.40	5.23	525.97	40.32	566.28
	3979.300	150.63	7.99	23.78	7.99	45.62	50908.76	45.62	5.63	527.29	39.66	566.94
	3979.300	151.22	9.04	25.70	9.04	77.22	62845.55	77.22	6.22	529.22	38.69	567.91
	3973.200	142.29	.10	22.55	.10	.01	29999.99	.01	4.89	514.76	53.52	568.28
	3973.200	142.98	5.18	25.49	5.18	4.14	42991.71	4.14	5.58	517.05	52.37	569.43
	3973.200	143.37	6.37	26.99	6.37	9.99	50980.02	9.99	5.97	518.36	51.72	570.08
	3973.200	143.94	7.80	28.90	7.80	24.30	62951.39	24.30	6.54	520.23	50.79	571.01
	3973.100	142.38	2.70	21.76	2.70	.33	29999.34	.33	4.98	515.07	53.36	568.44
	3973.100	143.07	5.25	24.84	5.25	4.97	42990.06	4.97	5.67	517.34	52.23	569.57
	3973.100	143.46	6.38	26.39	6.38	11.27	50977.46	11.27	6.06	518.64	51.58	570.22
	3973.100	144.02	7.76	28.37	7.76	26.21	62947.57	26.21	6.62	520.49	50.65	571.15
	3973.000	143.79	5.37	17.71	5.37	14.32	29971.36	14.32	4.79	519.75	51.03	570.77
	3973.000	144.38	7.07	21.54	7.07	33.13	42933.73	33.13	5.38	521.68	50.06	571.74
	3973.000	144.73	7.94	23.39	7.94	49.23	50901.53	49.23	5.73	522.87	49.47	572.33
	3973.000	145.27	9.06	25.65	9.06	80.21	62839.57	80.21	6.27	524.63	48.58	573.22
*	3972.300	146.68	5.63	12.39	5.63	102.19	29795.63	102.19	4.68	529.31	46.24	575.56
*	3972.300	147.98	6.31	13.88	6.31	186.64	42626.71	186.64	5.98	533.60	44.10	577.70
*	3972.300	148.50	6.87	15.12	6.87	240.75	50518.51	240.75	6.50	535.35	43.22	578.58
*	3972.300	148.84	8.07	17.75	8.07	312.56	62374.89	312.56	6.84	536.46	42.67	579.13

*	3972.200	146.71	5.60	12.32	5.60	102.75	29794.50	102.75	4.71	529.40	46.20	575.60
*	3972.200	147.97	6.31	13.89	6.31	186.54	42626.91	186.54	5.97	533.59	44.10	577.70
*	3972.200	148.68	6.68	14.71	6.68	247.35	50505.30	247.35	6.68	535.95	42.92	578.88
*	3972.200	149.70	7.15	15.74	7.15	351.64	62296.73	351.63	7.70	539.33	41.24	580.56

	SECNO	CWSEL	VLOB	VCH	VROB	QLOB	QCH	QROB	DEPTH	TOPWID	SSTA	ENDST
*	3972.100	146.70	5.60	12.33	5.60	102.65	29794.71	102.65	4.70	529.38	46.21	575.59
*	3972.100	147.97	6.31	13.89	6.31	186.56	42626.89	186.56	5.97	533.59	44.10	577.70
*	3972.100	148.69	6.68	14.69	6.68	247.58	50504.84	247.58	6.69	535.97	42.91	578.89
*	3972.100	149.69	7.16	15.76	7.16	351.22	62297.56	351.22	7.69	539.30	41.25	580.55

REVIBW.DAT

SUMMARY PRINTOUT

	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
*	6100.000	173.57	173.57	175.85	.00	.00	164.41	96.85	.00	9688.10	10311.90	.00
*	6100.000	174.80	174.80	177.62	.00	.00	164.41	88.78	.00	9688.10	10311.90	.00
*	6100.000	175.48	175.48	178.61	.00	.00	164.41	85.45	.00	9688.10	10311.90	.00
*	6100.000	176.44	176.44	179.98	.00	.00	164.41	81.52	.00	9688.10	10311.90	.00
*	5905.000	172.68	172.68	174.88	1.79	.65	163.73	91.66	-3.49	9685.00	10315.00	195.00
*	5905.000	173.90	173.90	176.65	1.67	.50	163.73	85.53	-3.49	9685.00	10315.00	195.00
*	5905.000	174.58	174.58	177.63	1.61	.46	163.73	82.75	-3.49	9685.00	10315.00	195.00
*	5905.000	175.53	175.53	179.00	1.55	.42	163.73	79.41	-3.49	9685.00	10315.00	195.00
*	5825.000	172.17	172.17	174.44	.78	.30	163.34	97.18	-4.87	9683.50	10316.50	80.00
*	5825.000	173.40	173.40	176.21	.71	.05	163.34	88.92	-4.87	9683.50	10316.50	80.00
*	5825.000	174.08	174.08	177.20	.68	.05	163.34	85.45	-4.87	9683.50	10316.50	80.00
*	5825.000	175.04	175.04	178.57	.65	.06	163.34	81.48	-4.87	9683.50	10316.50	80.00
*	5750.100	173.19	173.19	175.42	1.27	.24	163.19	169.45	-2.00	9682.00	10318.00	75.00
*	5750.100	174.43	174.43	177.16	1.12	1.86	163.19	149.29	-2.00	9682.00	10318.00	75.00
*	5750.100	175.05	175.05	178.13	1.10	1.68	163.19	146.96	-2.00	9682.00	10318.00	75.00
*	5750.100	176.00	176.00	179.47	1.03	1.43	163.19	137.92	-2.00	9682.00	10318.00	75.00
*	5672.100	172.80	172.80	175.01	1.30	2.71	162.72	166.41	-6.03	9682.00	10318.00	78.00
*	5672.100	173.97	173.97	176.74	1.20	1.98	162.72	153.83	-6.03	9682.00	10318.00	78.00
*	5672.100	174.69	174.69	177.71	1.11	1.71	162.72	142.61	-6.03	9682.00	10318.00	78.00
*	5672.100	175.57	175.57	179.06	1.08	1.53	162.72	138.83	-6.03	9682.00	10318.00	78.00
*	5670.000	168.90	170.50	174.60	.06	.35	160.00	419.68	-1360.00	9622.00	10258.00	2.00
*	5670.000	169.89	171.74	176.33	.05	.37	160.00	327.93	-1360.00	9622.00	10258.00	2.00

*	5670.000	170.46	172.43	177.29	.04	.38	160.00	292.58	-1360.00	9622.00	10258.00	2.00
	5670.000	171.27	173.40	178.63	.04	.39	160.00	256.31	-1360.00	9622.00	10258.00	2.00
*	5600.000	170.33	170.33	172.64	.69	1.92	159.90	98.77	-1.43	9682.00	10318.00	70.00
*	5600.000	171.56	171.56	174.43	.63	1.67	159.90	90.10	-1.43	9682.00	10318.00	70.00
*	5600.000	172.25	172.25	175.42	.61	1.47	159.90	86.49	-1.43	9682.00	10318.00	70.00
*	5600.000	173.22	173.22	176.80	.58	1.26	159.90	82.36	-1.43	9682.00	10318.00	70.00
*	5320.000	169.21	169.21	171.33	2.41	1.15	159.20	86.20	-2.50	9692.70	10307.40	280.00
*	5320.000	170.27	170.27	173.11	2.51	.81	159.20	89.53	-2.50	9692.70	10307.40	280.00
*	5320.000	170.96	170.96	174.10	2.41	.70	159.20	85.95	-2.50	9692.70	10307.40	280.00
*	5320.000	171.93	171.93	175.48	2.28	.61	159.20	81.50	-2.50	9692.70	10307.40	280.00
*	4980.000	167.49	167.49	169.76	3.29	-.15	158.40	96.66	-2.35	9690.10	10309.90	340.00
*	4980.000	168.71	168.71	171.52	3.03	3.97	158.40	88.98	-2.35	9690.10	10309.90	340.00
*	4980.000	169.39	169.39	172.51	2.91	3.52	158.40	85.65	-2.35	9690.10	10309.90	340.00
*	4980.000	170.35	170.35	173.88	2.77	3.08	158.40	81.55	-2.35	9690.10	10309.90	340.00

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	SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
*	4640.000	165.91	165.91	168.16	3.26	4.38	157.60	95.75	-2.35	9687.60	10312.50	340.00
*	4640.000	167.12	167.12	169.92	3.00	3.38	157.60	88.30	-2.35	9687.60	10312.50	340.00
*	4640.000	167.80	167.80	170.90	2.89	3.05	157.60	85.13	-2.35	9687.60	10312.50	340.00
*	4640.000	168.75	168.75	172.27	2.76	2.72	157.60	81.31	-2.35	9687.60	10312.50	340.00
*	4435.000	164.21	164.21	166.43	1.94	.09	157.10	94.67	-2.44	.00	635.00	205.00
*	4435.000	165.41	165.41	168.19	1.79	.31	157.10	87.34	-2.44	.00	635.00	205.00
*	4435.000	166.07	166.08	169.17	1.74	.00	157.10	84.20	-2.44	.00	635.00	205.00
	4435.000	166.90	167.05	170.55	1.71	.01	157.10	85.37	-2.44	.00	635.00	205.00
*	4235.000	164.23	164.23	166.43	1.86	.25	157.10	93.25	.00	.00	635.00	200.00
*	4235.000	165.43	165.43	168.19	1.73	.18	157.10	86.33	.00	.00	635.00	200.00
*	4235.000	166.11	166.11	169.17	1.66	.16	157.10	83.17	.00	.00	635.00	200.00
*	4235.000	167.08	167.08	170.55	1.57	.18	157.10	78.67	.00	.00	635.00	200.00
*	4235.000	161.61	162.86	166.07	.13	.23	156.50	241.44	-75.00	25.00	514.20	8.00
*	4235.000	162.87	164.17	167.86	.11	.22	156.50	181.16	-75.00	25.00	514.20	8.00
	4235.000	163.63	164.92	168.86	.10	.22	156.50	156.82	-75.00	25.00	514.20	8.00
	4235.000	164.77	165.96	170.26	.08	.20	156.50	128.76	-75.00	25.00	514.20	8.00
	4163.300	162.28	162.86	165.43	.25	.39	156.50	135.66	.00	25.00	514.20	13.60
*	4163.300	163.55	164.17	167.39	.16	.67	156.50	117.31	.00	25.00	514.20	13.60
*	4163.300	164.24	164.92	168.49	.15	.48	156.50	110.90	.00	25.00	514.20	13.60
*	4163.300	165.40	165.99	169.98	.13	.62	156.50	95.57	.00	25.00	514.20	13.60
*	4163.200	155.22	157.37	163.17	1.77	.48	150.50	625.81	-128.76	35.00	522.20	46.60
*	4163.200	156.11	158.74	165.40	1.44	.54	150.50	502.03	-128.76	35.00	522.20	46.60
*	4163.200	156.62	159.49	166.60	1.31	.57	150.50	451.75	-128.76	35.00	522.20	46.60
*	4163.200	157.38	160.52	168.22	1.14	.63	150.50	391.98	-128.76	35.00	522.20	46.60

	4163.100	155.31	157.37	162.80	.24	.14	150.50	566.45	.00	35.00	522.20	4.00
	4163.100	156.18	158.69	165.09	.19	.11	150.50	468.85	.00	35.00	522.20	4.00
	4163.100	156.69	159.46	166.32	.18	.10	150.50	426.04	.00	35.00	522.20	4.00
	4163.100	157.45	160.50	167.97	.15	.09	150.50	373.20	.00	35.00	522.20	4.00
	4163.000	156.20	157.88	161.90	.36	.54	151.50	360.00	125.00	35.00	522.20	8.00
	4163.000	157.08	159.21	164.26	.31	.52	151.50	327.83	125.00	35.00	522.20	8.00
	4163.000	157.61	159.97	165.52	.29	.52	151.50	307.86	125.00	35.00	522.20	8.00
	4163.000	158.39	161.01	167.20	.26	.51	151.50	279.20	125.00	35.00	522.20	8.00
	4091.300	156.66	157.89	161.04	.46	.40	151.50	232.55	.00	35.00	522.20	15.90
	4091.300	157.49	159.21	163.44	.45	.36	151.50	240.87	.00	35.00	522.20	15.90
	4091.300	158.01	159.97	164.73	.43	.36	151.50	235.12	.00	35.00	522.20	15.90
	4091.300	158.77	161.01	166.47	.40	.33	151.50	223.41	.00	35.00	522.20	15.90
*	4091.200	148.27	150.63	157.92	2.59	.53	143.90	938.94	-171.56	44.00	562.60	44.30
*	4091.200	148.98	151.91	160.59	2.29	.57	143.90	790.96	-171.56	44.00	562.60	44.30
*	4091.200	149.40	152.62	162.02	2.12	.59	143.90	724.18	-171.56	44.00	562.60	44.30
*	4091.200	150.00	153.63	163.92	1.92	.62	143.90	644.35	-171.56	44.00	562.60	44.30

1

SECNO	CWSEL	CRIWS	EG	HL	OLOSS	ELMIN	10*KS	K*CHSL	STCHL	STCHR	XLCH
4091.100	148.35	150.62	157.38	.35	.19	143.90	838.59	.00	44.00	562.60	4.00
4091.100	149.05	151.89	160.13	.30	.16	143.90	730.44	.00	44.00	562.60	4.00
4091.100	149.47	152.61	161.59	.28	.15	143.90	676.86	.00	44.00	562.60	4.00
4091.100	150.08	153.62	163.53	.25	.14	143.90	608.69	.00	44.00	562.60	4.00
4091.000	149.22	151.20	156.23	.54	.60	145.00	551.70	137.50	44.00	562.60	8.00
4091.000	149.91	152.44	159.05	.50	.58	145.00	531.25	137.50	44.00	562.60	8.00
4091.000	150.32	153.16	160.55	.47	.57	145.00	511.30	137.50	44.00	562.60	8.00
4091.000	150.92	154.16	162.55	.43	.55	145.00	479.01	137.50	44.00	562.60	8.00
3979.300	149.58	151.17	155.05	.71	.46	145.00	365.94	.00	44.00	562.60	15.90
3979.300	150.23	152.44	157.87	.73	.45	145.00	394.95	.00	44.00	562.60	15.90
3979.300	150.63	153.15	159.39	.72	.44	145.00	395.82	.00	44.00	562.60	15.90
3979.300	151.22	154.16	161.45	.68	.42	145.00	387.37	.00	44.00	562.60	15.90
3973.200	142.29	144.40	150.19	4.63	.24	137.40	663.29	-84.54	54.00	567.80	89.90
3973.200	142.98	145.68	153.07	4.55	.24	137.40	618.02	-84.54	54.00	567.80	89.90
3973.200	143.37	146.41	154.68	4.46	.25	137.40	595.82	-84.54	54.00	567.80	89.90
3973.200	143.94	147.42	156.90	4.28	.27	137.40	564.51	-84.54	54.00	567.80	89.90
3973.100	142.38	144.39	149.74	.29	.16	137.40	588.82	.00	54.00	567.80	4.60
3973.100	143.07	145.67	152.65	.27	.15	137.40	566.52	.00	54.00	567.80	4.60
3973.100	143.46	146.40	154.27	.26	.15	137.40	552.25	.00	54.00	567.80	4.60
3973.100	144.02	147.41	156.51	.25	.14	137.40	530.73	.00	54.00	567.80	4.60
3973.000	143.79	145.20	148.66	.33	.75	139.00	296.53	200.00	54.00	567.80	8.00
3973.000	144.38	146.49	151.57	.36	.71	139.00	353.12	200.00	54.00	567.80	8.00
3973.000	144.73	147.21	153.21	.36	.70	139.00	370.26	200.00	54.00	567.80	8.00

	3973.000	145.27	148.24	155.46	.36	.69	139.00	379.98	200.00	54.00	567.80	8.00
*	3972.300	146.68	146.68	149.05	.24	.86	142.00	90.93	115.38	54.00	567.80	26.00
*	3972.300	147.98	147.98	150.95	.21	.93	142.00	82.44	115.38	54.00	567.80	26.00
*	3972.300	148.50	148.71	152.03	.23	1.18	142.00	87.31	115.38	54.00	567.80	26.00
*	3972.300	148.84	149.69	153.69	.29	1.40	142.00	112.59	115.38	54.00	567.80	26.00
*	3972.200	146.71	146.71	149.05	.23	.22	142.00	89.25	.00	54.00	567.80	26.00
*	3972.200	147.97	147.97	150.95	.21	.04	142.00	82.59	.00	54.00	567.80	26.00
*	3972.200	148.68	148.68	152.02	.21	.16	142.00	79.67	.00	54.00	567.80	26.00
*	3972.200	149.70	149.70	153.52	.20	1.10	142.00	75.51	.00	54.00	567.80	26.00
*	3972.100	146.70	146.70	149.05	.45	.35	142.00	89.56	.00	54.00	567.80	50.00
*	3972.100	147.97	147.97	150.95	.41	.04	142.00	82.57	.00	54.00	567.80	50.00
*	3972.100	148.69	148.69	152.02	.40	.35	142.00	79.42	.00	54.00	567.80	50.00
*	3972.100	149.69	149.69	153.52	.38	.37	142.00	75.82	.00	54.00	567.80	50.00

SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=   5905.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
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CAUTION SECNO=   5905.000  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
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WARNING SECNO=   4235.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=   3972.100  PROFILE=  4  20 TRIALS ATTEMPTED TO BALANCE WSEL
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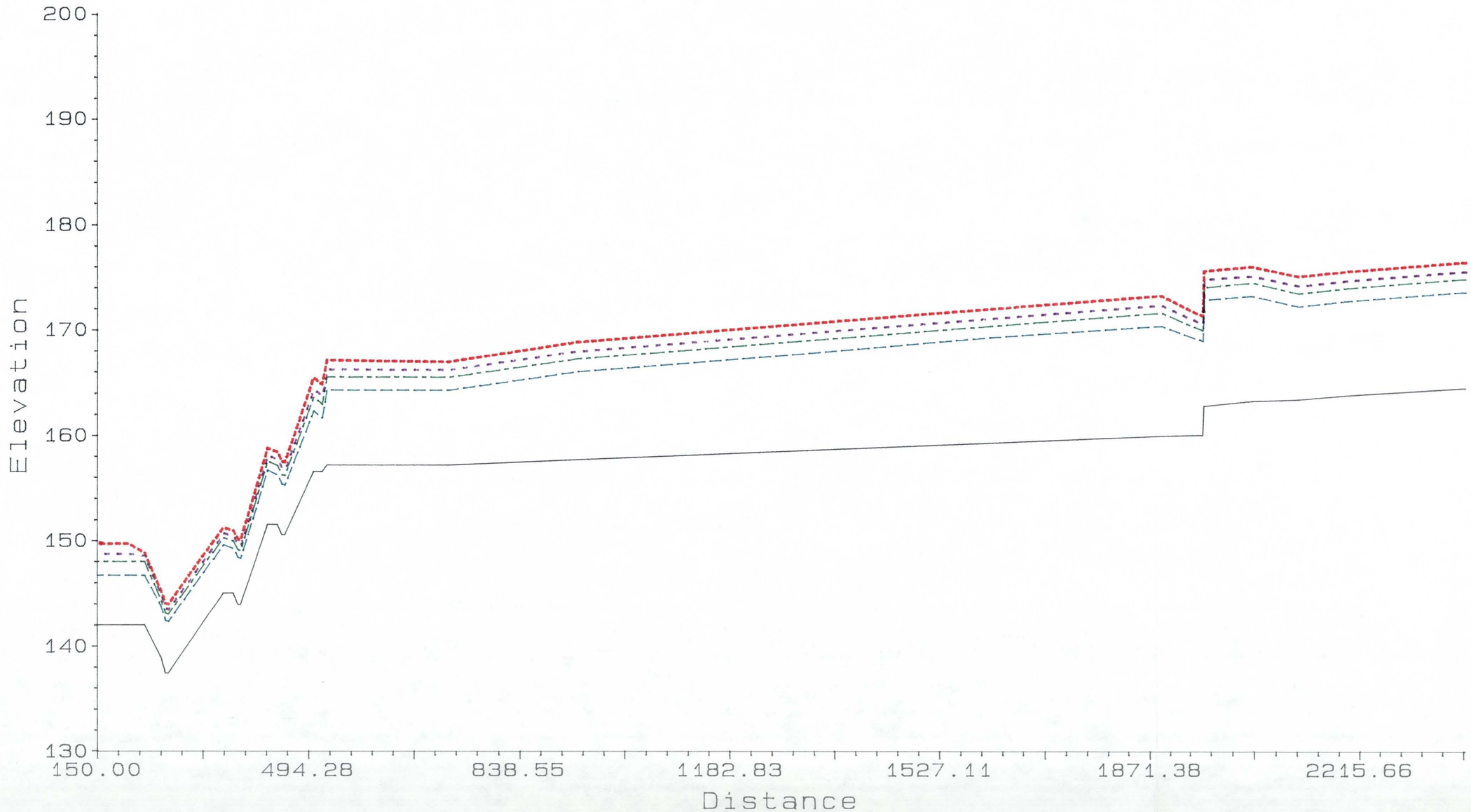
REVSIBW.DAT
NO FILL IN PLACE