City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 18, 2002

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St NE
Albuquerque, New Mexico 87108

RE: COTTONWOOD TRAILS SUBD (D-13/D10)
Engineers Certification For Release of Financial Guaranty
Engineers Stamp dated 12/22/2000
Engineers Certification dated 9/16/2002

Dear Mr. Arfman:

Based upon the information provided in your Engineers Certification submittal dated 9/16/2002, the above referenced plan is adequate to satisfy the Grading and Drainage Certification for Release of Financial Guaranty.

If you have any questions, please call me at 924-3981.

Sincerely,

Teresa A. Martin
Hydrology Plan Checker
Development & Bldg. Ser. Division
BLB

c: Arlene Portillo, COA--Project # 674781
File

DRAINAGE REPORT

FOR

COTTONWOOD TRAILS SUBDIVISION

A 62 LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION

BERNALILLO COUNTY, NEW MEXICO
DECEMBER 2000

Prepared by:

ISAACSON & ARFMAN, P.A.
128 Monroe Street NE
Albuquerque, NM 87108
(505) 268-8828

FRED C. ARFMAN
STATE OF NEW MEXICO
7322
REGISTERED PROFESSIONAL ENGINEER

Fred C. Arfman 12.21.00

Fred C. Arfman, PE **Date**

INTRODUCTION

The Cottonwood Trails Subdivision is a proposed development by Centex Homes on Tract E-1 located just east of Coors Boulevard. Specifically, the site is located east of the Corrales Main Canal, south and west of Eagle Ranch Road (west of the existing Bosque del Rio Subdivision), and north of COA open space. A COA Zone Atlas map D-13-Z showing the project location is included in this report. The subdivision will consist of 62 single family homes with lots ranging from 0.15 to 0.75 acres in size. Of the 25.94 Ac parcel, 17.57 acres will be developed for housing. The remaining 8.37 acres will be dedicated to the city for open space, a portion of which will be utilized as a detention pond in conjunction with the proposed pond for the subdivision.

Centex Homes has had several meetings with Mr. Fred Aguirre, PE, City Engineer for the City of Albuquerque to discuss possible drainage solutions for the site. Due to site characteristics, a drainage scenario was developed that includes a detention basin and lift station for the site. This scenario includes pumping the runoff from the detention basin to the Corrales Main Canal. Centex Homes has met with Mr. Subhas Shah of the Middle Rio Grande Conservancy District (MRGCD) to discuss this possibility and the MRGCD has agreed to issue a discharge permit to Centex Homes for this subdivision provided AMAFCA approves the addition of flows to the Corrales Main Canal.

This report was developed to determine the effects of adding additional flows to the Corrales Main Canal from the proposed Cottonwood Trails subdivision. AMAFCA requested that this report address other tracts of land in the study area to determine whether they can be developed and, if so, what would the effect of adding these developments' runoff to the drain as is being proposed for the Cottonwood Trails subdivision. The study area for this report is described in the Off-site Conditions. The "Design Memorandum for the North Coors

Drainage Management Plan, Middle Area" by Smith Engineering Company dated February, 1997 (hereinafter referred to as the NCDMP(MA)) was used to determine the effects of the additional runoff to the canal.

II. SITE CHARACTERISTICS

On-Site Conditions:

EXISTING CONDITIONS: The proposed subdivision (Cottonwood Trails) site slopes from west to east at an average grade of 1.5% over the site. The soils are sand and sandy loam and have sparse scrub vegetation. The southern portion of the site has some cottonwood trees, a majority of which will remain as part of the COA open space area. The west edge of the site is at the approximate same elevation of the east access road of the Corrales Main Canal. From there it slopes down to the east towards Coors Trail. Existing flows from Coors Trail are retained in small ponds within the right-of-way.

PROPOSED CONDITIONS: The Cottonwood Trails subdivision will consist of 62 single family homes on lots between about 0.15 and 0.75 acres in area (59 lots between 0.15 and 0.30 and 3 lots approximately 0.75 acres). The subdivision will drain to a proposed detention basin on the south side of the site. No storm drain will be constructed as there is adequate slope in the streets to safely convey the flows from the subdivision to the detention basin. Street flow calculations are provided in Appendix B. The analysis points are shown on Sheet 1 of the Grading & Drainage Plan in the pockets at the end of this report, and are designated by numbers within an ellipse.

Runoff calculations were performed using the rational method in accordance with the COA DPM, Chapter 22. These calculations are contained in Appendix A. The design storm for determining the peak runoff rate in the subdivision is the 100-Year, 6-Hour storm. The design storm for determining the volume of runoff for the subdivision is the 100-Year, 10-Day storm. The peak runoff rate from the subdivision is 45.66 cfs and the volume of runoff is 2.32 acre-feet.

The conveyance of the runoff from the subdivision to the detention basin will be overland in the streets and there is no storm drain planned for this project. The runoff would be collected in a detention basin and pumped to the Corrales Main Canal using a privately owned and maintained duplex lift station.

The detention basin is shown on Sheet 1 of the Grading & Drainage Plan. The detention basin will utilize a berm with a 12-inch equalization pipe between the main basin and the lift station to control sediment and pollutants. The pipe will have a flow capacity of approximately 4 cfs versus the peak inflow of 45.66 cfs from the subdivision. The reduction in flow rate from the subdivision to the lift station will produce slow flow velocities resulting in sediment and contaminant deposition in the primary area of the detention basin. This area can then be cleaned out during scheduled maintenance. The proposed detention basin is less than 10 acre-feet in volume with a ponding depth less than 10 feet, therefore it will not require review or approval by the New Mexico State Engineer.

As ponded runoff moves through the pipe and into the secondary basin, the runoff will enter the lift station and be pumped to the Corrales Main Canal through a 4- to 6-inch discharge line (final size will be determined during the next phase of the design). Each pump would have a 0.4 cfs capacity and the station would be set up to have the pumps on an alternate start schedule. Based on 0.4 cfs output of the pumps, the maximum ponding time will be 70.27 hours, less than the 96 hour evacuation time required by the DPM, and the maximum ponding depth will be 2.95 feet. Pond volume calculations are contained in Appendix C. The location of the lift station

and alignment of the discharge line to the canal is shown on Sheet 1 of the Grading & Drainage Plan.

The proposed discharge point into the Corrales Main Canal for the lift station will be the existing grouted rip-rap lined portion of the channel to which the principal spillway of the Piedras Marcadas Dam discharges. The inlet to the lift station will be grated to prevent any floatables from getting into the discharge line to the canal. Final plans for the detention basin and lift station will be submitted to the City and AMAFCA for review before final DRB.

The detention basin and lift station will be a private lift station and will be maintained by the homeowner association. Covenants will be prepared as part of the DRB process which will specify the homeowner association's obligations for maintenance of the detention basin, lift station, and appurtenances. Public easements for the lift station and discharge line will be granted with the final plat.

SUMMARY:

- The peak runoff rate from the subdivision is 45.66.
- The volume of runoff is 2.32 acre-feet.
- A detention pond will be constructed in the open space, that will have a design depth of 2.95 feet at a water surface elevation of 79.95.
- The detention pond will be drained by a lift station, which will pump 0.47 cfs to the Corrales Main Canal.

Off-Site Conditions

EXISTING CONDITIONS: The Corrales Main Canal is an existing facility that conveys both irrigation flows and storm water flows. This facility was modified in 1986 by AMAFCA to increase the conveyance capacity to allow for additional storm water flows to be added to the channel. The improvements included widening and lining (RPCC and shotcrete) portions of the channel. The channel reach that will be analyzed in this report is the reach from just south of Eagle Ranch Road to the La Orilla outlet at the Rio Grande River. The area that is studied in this report is bounded by the Corrales Main Canal to the west and south, the SIPI facility to the north, and the Riverside Drain on the east. There are several tracts of land in the study area which are described further in this section.

This report uses 1976 ortho-photo mapping obtained from the City of Albuquerque to delineate the tracts contained in the study area. Although this mapping is old, there has been very little development with the exception of the Bosque del Rio Subdivision. All other development has consisted of construction of single family homes on fairly large tracts of land. As a supplement to this mapping, several site visits were performed, and field observation notes little or no change in topography and only minor development in the area.

There are several tracts of land on the east side of the canal between Eagle Ranch Road and the outlet to the river. Most of these tracts are already developed or cannot be developed due to zoning. Plate 1 in the pockets at the end of this report shows the tracts (labeled with letters in circles) with tract numbers where available. For the purposes of this report, each tract will be identified using the Tract Identification number as shown on Plate 1. Plats were obtained from the county records to verify ownership and, in some cases, land use. The following table contains the information from the

plats. The highlighted portions are the tracts that could be developed in the future.

Tract Identifier as shown on Plate 1	Tract Designation From Plats	Land Use From Plat	Area, acres	Land Use as Observed in Field
A	H	Agricultural	7.00 +\-	Undeveloped dirt field (former horse training area)
B	G	Single family residential (SFR)	5.16	One DU, residential constructed on tract with riding facilities.
C	C-2	SFR	2.04	One DU, residential.
D	R1	SFR	3.61	One building (office).
E	C-1	COA Open Space	25.53	Alfalfa field, no development, COA open space.
F	Lands of Charles A. Porter	SFR	9.60 +\-	Tract developed into several single family residences on lots exceeding ¼ acre in area sold to individuals. Not a "developer" tract.
G	MRGCD 1A 3E	SFR	2.6 +\-	Tract undeveloped. Zoned SU-1 for 8 DU/acre
H	MRGCD 1A 4A2	SFR	1.4 +\-	Developed, one single family residence.
I	Lands of Dahlquist-Gunnar	SFR	13.4 +\-	Tract developed into several single family residences on lots exceeding ¼ acre in area. Not a "developer" tract.
J	C	SFR	1.25	Undeveloped.
K	D	SFR	1.25	Undeveloped.
L	A	SFR	2.50	Undeveloped.
M	E-2	COA Open Space	9.80	COA open space and archeological area.
N	B	SFR	2.00	Developed, one single family residence (open space ranger quarters).
O	Bosque del Rio Subdivision, Unit 1, 2 and 3	SFR	50.0	Tract developed into several single family residences on lots ¼ acre in area and 1 acre in area.
P	E-1, Cottonwood Trails Subdivision	Proposed SFR	25.94*	Proposed development into single family homes.
Q	Stout Subdivision	RA-2	3.4 +\-	Undeveloped

* Of the 25.94 acres of area, only 17.57 will be developed as the subdivision. The remaining area will be dedicated to COA Open Space to act as a buffer between the archaeological site to the south of the subdivision.

A tract that is not listed above but which has the possibility for further development is the land that comprises SIPI. This area is east of the

Corrales Main Canal, is only partially developed, and could support further development related to the school. However, this site is flat and currently makes use of a flat grading scheme. The site also has direct discharge to the Riverside Drain through a culvert at the southeast corner of the site. Therefore, this site was not considered as a candidate for discharge directly to the Corrales Main Canal. If SIPI chooses to modify its Drainage Plan at a future date, then it will need to perform a separate analysis of those changes, and receive approval from the appropriate agencies.

PROPOSED CONDITIONS: A majority of the tracts in the study area are currently developed either as a single residence on a tract or with several residences on a single tract. Generally, the developments have lots at least as large as ¼ acre in area (the minimum area required by the DPM for a flat grading scheme) as in the Bosque del Rio subdivision (Tract Identifier N). Most of the lots on the remaining developed tracts are much larger than ¼ acre, generally one acre or larger. Of the 17 tracts in the study area, only nine remained undeveloped, including Tract P (Tract E-1 from plat) the proposed site for the Cottonwood Trails Subdivision. Of these nine tracts, three will not be developed as they are designated as COA Open Space. Of the remaining six tracts (Tract Identifiers A, G, J, K, L, and Q), five can easily accommodate a flat grading scheme per the COA DPM as there is little or no slope across these tracts. However, Tract G is zoned for 8 DUs per acre. These lot sizes would exceed the COA minimum lot size of ¼ acre for on-site ponding. Also, there is a possibility that Tracts J, K, and L could be combined into one five acre tract and developed, possibly in lots smaller than ¼ acre. If the available developable land in the study area were to be developed using a pond and pump drainage scheme, the total area of land that could contribute to the Corrales Main Canal would be 35.57 acres (including the 17.57 acres of developed portions of the Cottonwood Trails subdivision). The proposed discharge rate from the Cottonwood Trails

subdivision is 0.4 cfs or 0.022 cfs/acre. Should the remaining tracts use a pond and pump scenario, the pumping rate should be limited to 0.022 cfs/acre. With a limiting discharge rate of 0.022 cfs/acre, the total possible discharge to the canal from potentially developable sites would be 0.8 cfs (35.57 acres x 0.022 cfs/acre = 0.8 cfs).

The existing hydraulic analysis of the canal from the NCDMP(MA) was used to determine the effects of adding 0.4 cfs to the canal from the Cottonwood Trails subdivision at the proposed outlet from the lift station (the same location as the discharge point from the Piedras Marcadas Dam outfall). For this report, the hydraulic analysis begins where Eagle Ranch Road crosses over the Corrales Main Canal and continues to the outfall. The 1997 report provided a hydraulic analysis of the canal with flows from existing and future developments on the west side of the canal and included irrigation base flows. The 1997 analysis did not include any flows from developments on the east side of the canal. This exclusion of flows from tracts on the east side of the canal was presumed because runoff could not reach the canal by gravitational means as most of the land on the east side of the canal is lower than the invert of the channel. Also, a majority of the land on the east side of the canal is flat and can accommodate a flat grading scheme as allowed by the COA DPM.

The NCDMP(MA) input data was modified to account for a 0.4 cfs increase in the flow rate in the canal for the discharge from the proposed Cottonwood Trails subdivision. The HEC-2 analysis was performed and the flow characteristics were compared to the 1997 data. Then another analysis was performed that includes flows from the tracts that could be developed in addition to the Cottonwood Trails subdivision. The discharge rate from these tracts was 0.022 cfs/acre, the same discharge rate as is being proposed for the Cottonwood Trails subdivision. The points of

increased flow rates to the Corrales Main Canal from the developable tracts is shown as a circle and number on Plate 1. Table 1 below provides a comparison of the hydraulic results at analysis points listed in the 1997 report as well as several other points along the reach between Eagle Ranch Road and the outlet to the Rio Grande River.

TABLE 1

Location	Station	Q100 Developed Conditions Flows From HEC-2 Data, February, 1997 Report		Q100 Developed Conditions Flows plus 0.4 cfs (0.022 cfs/acre) From the Proposed Cottonwood Trails Subdivision		Q100 developed Conditions Flows plus 0.4 cfs (0.022 cfs/acre) From the Proposed Cottonwood Trails Subdivision plus 0.022 cfs/acre From Potentially Developable Land		Q100 Design Capacity, cfs, for 2 Foot Freeboard From the NCDMP(MA), February 1997
		Flow rate, cfs	WSE	Flow rate, cfs	WSE	Flow rate, cfs	WSE	Allowable Flow Rate, cfs
---	666+11	281	91.29	281	91.30	281.08	91.30	Not specified
Outlet from Piedras Marcadas Dam	672+46[1]	301	90.92	301.4	90.93	301.48	90.93	305
---	685+96	301	90.03	301.4	90.04	301.65	90.04	Not specified
---	693+00	321	89.54	321.4	89.54	321.65	89.55	Not specified
Check structure	700+05[2]	321	89.14	321.4	89.14	321.65	89.14	330
---	707+00	382[4]	88.59	382.4	88.59	382.8	88.60	Not specified
Riverside Drain overchute	713+68[3]	382[4]	86.81	382.4	86.82	382.8	86.82	389

1 The report states the stationing at 672+56 but the nearest station in the HEC-2 data is 672+46.
2 The report states the stationing at 700+02 but the nearest station in the HEC-2 data is 700+05.
3 The report states the stationing at 713+75 but the nearest station in the HEC-2 data is 713+68.
4 The report states the flow at 382 cfs but the HEC-2 data shows 381 cfs. 382 cfs was used for this analysis.

A comparison between the developed flow rates and water surface elevations from the 1997 report and the HEC-2 runs in this report shows

that the addition of 0.4 cfs from the proposed subdivision and 0.022 cfs/acre from potentially developable land creates negligible changes in the hydraulics of the canal. Also, the proposed increase in flow rate is lower than the maximum allowable flow rate specified in the NCDMP(MA) in order to maintain the 2 feet of freeboard that was required at that time. However, FEMA requirements have changed in the interim to 3 feet of freeboard. An extra foot of freeboard will be added along the east side of the Corrales Main Canal where it is adjacent to the property. See Sheet 1 of the Grading & Drainage Plan. Printouts from the HEC-2 calculations are contained in Appendix E (February, 1997 developed conditions flows), Appendix F (February 1997 developed conditions flows plus the additional 0.4 cfs from the Cottonwood Trails subdivision), and Appendix G (February 1997 developed conditions flows plus the additional 0.4 cfs from the Cottonwood Trails subdivision & 0.022 cfs/acre increase for potentially developable land).

SUMMARY: The additional flows from the Cottonwood Trails Subdivision will result in a negligible increase in the Corrales Main Canal's water surface elevation from what was reported in the 1997 report.

- Tracts A, G, J, K, L, P, and Q as shown on Plate 1 in the pockets at the end of this report may be designed with an allowable discharge rate to the Corrales Main Canal limited to 0.022 cfs/acre.
- A change in the FEMA requirements will make a total of 3 feet of freeboard necessary in areas where housing improvements are built at an elevation below the 100-year water surface elevation of the canal. Additional flows shown in this report only allow for 2 feet of freeboard. A minimum of 1' of additional freeboard should be added to the canal as future improvements require.

HYDROLOGY CALCULATIONS

Land Treatments:

Basins 1 – 5:

Total Area = 13.869 Ac 59 lots

N = 59 lots/13.869 Ac = 4.25 D.U./Ac
%D = $7\sqrt{(N^2 + 5N)}$ = 43.89% D 44% D

100% - 43.89% = 56.11%

Split the remaining area evenly between Type B and Type C
28.06% B 28% B
28.05% C 28% C

Basin 8:

Area = 2.010 Ac 3 lots

N = 3 lots/2.010 Ac = 1.49 D.U./Ac
%D = $7\sqrt{(N^2 + 5N)}$ = 21.77% D

Split the remaining area evenly between Type B and Type C
39.12% B
39.11% C

Basins 6 & 7:

Both of these basins will be landscaped areas, therefore they will be 100% Type B

BASIN #	Type B Area (Ac)	Type C Area (Ac)	Type D Area (Ac)	Total Area (Ac)
1	0.6496	0.6494	1.0161	2.315
2	0.9094	0.9091	1.4225	3.241
3	0.9628	0.9625	1.5060	3.431
4	0.9233	0.9230	1.4442	3.290
5	0.4466	0.4464	0.6985	1.592
6	0.9408	0	0	0.941
7	0.7108	0	0	0.711
8	0.7861	0.7859	0.4375	2.010

Peak Discharge Calculations:

Precipitation Zone: 1
Land Type B: Q_{pb} = 2.03 cfs/Ac
Land Type C: Q_{pc} = 2.87 cfs/Ac
Land Type D: Q_{pd} = 4.37 cfs/Ac

$Q_p = A_b*Q_{pb} + A_c*Q_{pc} + A_d*Q_{pd}$

BASIN #	Type B Area (Ac)	Type C Area (Ac)	Type D Area (Ac)	Peak Discharge (cfs)
1	0.6496	0.6494	1.0161	7.62
2	0.9094	0.9091	1.4225	10.67
3	0.9628	0.9625	1.5060	11.30
4	0.9233	0.9230	1.4442	10.83
5	0.4466	0.4464	0.6985	5.24
6	0.9408	0	0	1.91
7	0.7108	0	0	1.44
8	0.7861	0.7859	0.4375	5.76

Basins 1-5:
Total Q_{1-5} = 45.66 cfs

Runoff Volume Calculations:

Precipitation Zone: 1
Land Type B: E_b = 0.67 Ac-ft/Ac
Land Type C: E_c = 0.99 Ac-ft/Ac
Land Type D: E_d = 1.97 Ac-ft/Ac

$V_{360} = (A_b*E_b + A_c*E_c + A_d*E_d)/12$

BASIN #	Type B Area (Ac)	Type C Area (Ac)	Type D Area (Ac)	100yr-6hr Volume (Ac-ft)
1	0.6496	0.6494	1.0161	0.2567
2	0.9094	0.9091	1.4225	0.3593
3	0.9628	0.9625	1.5060	0.3804
4	0.9233	0.9230	1.4442	0.3648
5	0.4466	0.4464	0.6985	0.1764
6	0.9408	0	0	0.0525
7	0.7108	0	0	0.0397
8	0.7861	0.7859	0.4375	0.1805

$V_{10\text{-day}} = V_{360} + (A_d*(P_{10\text{-day}} - P_{360}))/12$
P_{360} = 2.2 inches
$P_{10\text{-day}}$ = 3.67 inches
Basins 1-5 and 7:
A_d = 6.087 Ac

V_{360} = 1.5773 Ac-ft => 68,707 cu. ft.
$V_{10\text{-day}}$ = 1.577 + (6.087*(3.67 – 2.2))/12 = 2.323 Ac-ft => 101,175 cu. ft.

Basin 6:
A_d = 0 Ac

V_{360} = 0.0525 Ac-ft => 2,287 cu. ft.
$V_{10\text{-day}}$ = 0.0525 + (0.0*(3.67 – 2.2))/12 = 0.0525 Ac-ft => 2,287 cu. ft.

Basin 8:
A_d = 0.4375 Ac

V_{360} = 0.1805 Ac-ft => 7,863 cu. ft.
$V_{10\text{-day}}$ = 0.1805 + (0.4375*(3.67 – 2.2))/12 = 0.234 Ac-ft => 10,197 cu. ft.

COTTONWOOD TRAILS

STREET FLOW CAPACITY TABLE

Street	Analysis Point	Location	Street Width	Curb Type	Slope (ft/ft)	Q100(cfs)	Depth (ft)
Cottonwood Trail	AP1	South of lot 37 (Basin 2)	28	mtbl	0.0084	10.67	0.30
River Willow Road	AP2	entire length	28	std	0.0058	21.5	0.50
Santo Lina Pl	AP3	North of lot 53 (Basin 1)	28	mtbl	0.005	7.62	0.30
Santo Lina Pl	AP4	North of River Willow Road	28	std	0.005	18.92	0.49
Santo Lina Place	AP5	South of River Willow Road	28	std	0.005	45.66	0.68

****

max WSEL = ± 80.00
Pond BOT = 77.00'

POND VOLUMES

COTTONWOOD TRAILS

12/13/00

Job No. 1147

ELEV	AREA (SF)	VOLUME (CF)	VOLUME (Ac-ft)	SUM VOL (Ac-ft)
77	14100			
		15272	0.350596878	
78	16444			0.350596878
		18020.61	0.413696281	
79	19597.22			0.764293159
		71460.975	1.640518251	
80	123324.73			2.40481141
		140386.34	3.222826905	
81	157447.95			5.627638315

19500

119500

144,500

TABLE A
HYDRAULIC SUMMARY
NORTH COORS DRAINAGE MANAGEMENT PLAN (NCDMP) - MIDDLE AREA

FLOWS IN COORS BOULEVARD / PASEO DEL NORTE INTERCHANGE CBC AND FLOWS IN NORTH COORS-LA ORILLA OUTLET

Location	Station (ft)	Design Capacity (2 ft Freeboard) (cfs)	Q_{100} Developed Conditions (Proposed Improvements In Place) (cfs)
Upstream End CBC	632+75	285	85
Road to SIPI	645+00	263	134
Stout Subdivision	660+00	273	153
Outlet from Piedras Marcadas Dam	672+56	305	301
Check Structure	700+02	330	321
Riverside Drain Overchute	713+75	389	382

AMAFCA SAYS need 3' For FEMA CRITERIA?

STA 714.19 TO 666+11

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
*	714.190	382.00	86.18	29.81	3.15	12.01	10.12	37.76	87.76	83.03	.00	13.00	1.01
	713.680	382.00	86.81	17.98	3.75	12.01	8.47	45.09	87.93	83.06	51.00	13.00	.77
	713.180	382.00	86.99	16.23	3.89	12.01	8.17	46.76	88.02	83.09	50.00	13.00	.73
	712.680	382.00	88.05	10.14	4.97	41.73	2.86	133.48	88.18	83.08	50.00	35.00	.28
	711.790	382.00	88.14	9.81	5.01	41.97	2.83	135.13	88.26	83.13	89.00	35.00	.28
	710.900	382.00	88.23	9.52	5.04	42.18	2.80	136.62	88.35	83.19	89.00	35.00	.27
	710.000	382.00	88.32	9.26	5.08	42.38	2.77	138.02	88.44	83.24	90.00	35.00	.27
	709.000	382.00	88.41	9.00	5.11	42.58	2.74	139.47	88.53	83.30	100.00	35.00	.27
	708.000	382.00	88.50	8.77	5.14	42.77	2.71	140.81	88.62	83.36	100.00	35.00	.26
	707.000	382.00	88.59	8.57	5.17	42.95	2.69	142.05	88.70	83.42	100.00	35.00	.26
	706.870	382.00	88.60	8.54	5.17	42.97	2.69	142.20	88.71	83.43	13.00	35.00	.26
*	706.720	321.00	88.40	39.76	5.08	12.01	5.26	61.04	88.83	83.32	15.00	35.00	.41
*	706.320	321.00	88.45	5.41	5.11	12.01	5.23	61.35	88.88	83.34	40.00	13.00	.41
	706.170	321.00	88.86	4.51	5.57	44.64	2.04	157.73	88.92	83.29	15.00	35.00	.19
	706.000	321.00	88.87	4.52	5.57	44.62	2.04	157.60	88.93	83.30	17.00	35.00	.19
	705.000	321.00	88.91	4.57	5.55	44.53	2.05	156.90	88.98	83.36	100.00	35.00	.19
	704.000	321.00	88.96	4.62	5.54	44.45	2.05	156.25	89.02	83.42	100.00	35.00	.19

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
	703.000	321.00	89.00	4.67	5.52	44.36	2.06	155.63	89.07	83.48	100.00	35.00	.19
	702.000	321.00	89.05	4.72	5.51	44.29	2.07	155.04	89.12	83.54	100.00	35.00	.20
	701.000	321.00	89.10	4.77	5.50	44.21	2.08	154.47	89.16	83.60	100.00	35.00	.20
	700.500	321.00	89.12	4.79	5.49	44.17	2.08	154.19	89.19	83.63	50.00	35.00	.20
	700.120	321.00	89.14	4.81	5.49	44.15	2.08	153.99	89.21	83.65	38.00	35.00	.20
	700.050	321.00	89.14	5.53	5.27	43.66	2.19	146.88	89.21	83.86	7.00	35.00	.21
	699.970	321.00	89.20	5.31	5.33	43.98	2.15	149.16	89.27	83.87	8.00	35.00	.21
	699.870	321.00	89.21	4.73	5.51	44.34	2.07	155.03	89.28	83.70	10.00	35.00	.20
	699.550	321.00	89.22	4.72	5.51	44.35	2.07	155.13	89.29	83.72	32.00	35.00	.19
	699.000	321.00	89.25	4.75	5.50	44.30	2.07	154.78	89.32	83.75	55.00	35.00	.20
	698.000	321.00	89.30	4.80	5.49	44.23	2.08	154.22	89.36	83.81	100.00	35.00	.20
	697.000	321.00	89.35	4.84	5.47	44.16	2.09	153.68	89.41	83.87	100.00	35.00	.20
	696.000	321.00	89.39	4.89	5.46	44.09	2.10	153.16	89.46	83.93	100.00	35.00	.20
	695.000	321.00	89.44	4.93	5.45	44.02	2.10	152.67	89.51	83.99	100.00	35.00	.20
	694.000	321.00	89.49	4.97	5.44	43.96	2.11	152.19	89.56	84.05	100.00	35.00	.20
	693.000	321.00	89.54	5.01	5.43	43.90	2.12	151.74	89.61	84.11	100.00	35.00	.20
	692.000	321.00	89.59	5.05	5.42	43.84	2.12	151.30	89.66	84.17	100.00	35.00	.20
	690.340	301.00	89.63	4.46	5.42	43.80	1.99	151.02	89.69	84.21	66.00	35.00	.19
*	689.860	301.00	89.31	16.68	4.76	15.02	6.05	49.74	89.88	84.55	48.00	19.00	.59
	688.920	301.00	89.68	8.55	5.10	18.55	4.65	64.78	90.02	84.58	94.00	19.00	.44

687.860	301.00	89.86	5.48	5.32	21.22	3.89	77.32	90.10	84.54	106.00	19.00	.36
686.860	301.00	89.91	6.23	5.34	22.24	4.02	74.95	90.16	84.57	100.00	19.00	.39
685.960	301.00	90.03	4.17	5.42	24.43	3.44	87.52	90.22	84.61	100.00	19.00	.32
684.860	301.00	90.04	5.74	5.28	20.93	3.96	75.96	90.28	84.76	100.00	19.00	.37
683.860	301.00	90.07	7.19	5.20	19.89	4.32	69.63	90.36	84.87	100.00	19.00	.41
682.860	301.00	90.17	6.31	5.27	21.13	4.08	73.75	90.43	84.90	100.00	19.00	.38

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
	681.860	301.00	90.21	7.32	5.34	18.80	4.40	68.48	90.51	84.87	100.00	19.00	.41
	680.860	301.00	90.26	8.45	5.39	16.95	4.68	64.26	90.60	84.87	100.00	19.00	.42
	679.860	301.00	90.34	8.83	5.43	16.33	4.78	62.93	90.69	84.91	100.00	19.00	.43
	678.860	301.00	90.42	9.36	4.94	17.29	4.84	62.13	90.79	85.48	100.00	19.00	.45
	677.860	301.00	90.59	6.79	5.33	18.52	4.29	70.24	90.87	85.26	100.00	19.00	.39
	676.860	301.00	90.66	6.65	5.36	18.50	4.26	70.72	90.94	85.30	100.00	19.00	.38
	675.860	301.00	90.77	6.17	5.06	23.22	3.96	76.01	91.01	85.71	100.00	19.00	.39
	674.860	301.00	90.83	6.03	5.03	23.79	3.91	77.05	91.07	85.80	100.00	19.00	.38
*	673.860	301.00	90.98	2.76	7.66	23.39	3.01	100.16	91.12	83.32	100.00	19.00	.26
	673.010	301.00	91.00	3.31	5.67	26.01	3.14	95.91	91.15	85.33	85.00	19.00	.29
*	672.860	301.00	90.89	8.12	5.55	12.01	4.52	66.64	91.21	85.34	15.00	19.00	.34
	672.460	301.00	90.92	8.13	5.56	12.01	4.52	66.63	91.24	85.36	40.00	19.00	.34
*	672.310	301.00	91.21	1.18	5.47	46.12	1.89	159.09	91.27	85.74	15.00	19.00	.18
	672.000	301.00	91.22	1.18	5.47	46.12	1.89	159.06	91.27	85.75	31.00	19.00	.18
	671.000	301.00	91.23	1.20	5.45	45.97	1.91	157.97	91.29	85.78	100.00	19.00	.18
	670.000	301.00	91.24	1.22	5.43	45.86	1.92	157.12	91.30	85.81	100.00	19.00	.18
	669.000	301.00	91.25	1.24	5.41	45.74	1.93	156.29	91.31	85.84	100.00	19.00	.18
	668.000	301.00	91.26	1.25	5.39	45.63	1.94	155.47	91.32	85.87	100.00	19.00	.18
	667.000	301.00	91.28	1.27	5.38	45.52	1.95	154.66	91.34	85.90	100.00	19.00	.19
	666.110	281.00	91.29	1.12	5.37	45.42	1.83	153.94	91.35	85.93	89.00	19.00	.17

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 714.190 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 706.720 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 706.320 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 689.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 673.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 672.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 672.310 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

STA 714.19 TO 666+11

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
*	714.190	382.40	86.18	29.81	3.15	12.01	10.12	37.78	87.77	83.03	.00	13.00	1.01
	713.680	382.40	86.82	17.98	3.76	12.01	8.47	45.12	87.93	83.06	51.00	13.00	.77
	713.180	382.40	86.99	16.23	3.90	12.01	8.17	46.79	88.03	83.09	50.00	13.00	.73
	712.680	382.40	88.05	10.13	4.97	41.76	2.86	133.62	88.18	83.08	50.00	35.00	.28
	711.790	382.40	88.14	9.80	5.01	41.99	2.83	135.27	88.27	83.13	89.00	35.00	.28
	710.900	382.40	88.23	9.52	5.05	42.20	2.80	136.75	88.35	83.19	89.00	35.00	.27
	710.000	382.40	88.32	9.26	5.08	42.40	2.77	138.16	88.44	83.24	90.00	35.00	.27
	709.000	382.40	88.41	9.00	5.11	42.60	2.74	139.60	88.53	83.30	100.00	35.00	.27
	708.000	382.40	88.51	8.77	5.14	42.79	2.71	140.95	88.62	83.36	100.00	35.00	.26
	707.000	382.40	88.59	8.56	5.17	42.96	2.69	142.18	88.71	83.42	100.00	35.00	.26
	706.870	382.40	88.61	8.54	5.18	42.98	2.69	142.33	88.72	83.43	13.00	35.00	.26
*	706.720	321.40	88.41	39.80	5.09	12.01	5.26	61.07	88.84	83.32	15.00	35.00	.41
*	706.320	321.40	88.46	5.41	5.11	12.01	5.24	61.39	88.88	83.34	40.00	13.00	.41
	706.170	321.40	88.86	4.51	5.57	44.66	2.04	157.88	88.93	83.29	15.00	35.00	.19
	706.000	321.40	88.87	4.52	5.57	44.64	2.04	157.75	88.93	83.30	17.00	35.00	.19
	705.000	321.40	88.91	4.57	5.55	44.55	2.05	157.04	88.98	83.36	100.00	35.00	.19
	704.000	321.40	88.96	4.62	5.54	44.47	2.06	156.39	89.03	83.42	100.00	35.00	.19

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
	703.000	321.40	89.01	4.67	5.53	44.38	2.06	155.78	89.07	83.48	100.00	35.00	.19
	702.000	321.40	89.05	4.72	5.51	44.31	2.07	155.18	89.12	83.54	100.00	35.00	.20
	701.000	321.40	89.10	4.77	5.50	44.23	2.08	154.61	89.17	83.60	100.00	35.00	.20
	700.500	321.40	89.12	4.79	5.49	44.19	2.08	154.34	89.19	83.63	50.00	35.00	.20
	700.120	321.40	89.14	4.81	5.49	44.17	2.09	154.14	89.21	83.65	38.00	35.00	.20
	700.050	321.40	89.14	5.53	5.28	43.68	2.19	147.02	89.21	83.86	7.00	35.00	.21
	699.970	321.40	89.20	5.31	5.33	44.00	2.15	149.30	89.27	83.87	8.00	35.00	.21
	699.870	321.40	89.21	4.73	5.51	44.35	2.07	155.17	89.28	83.70	10.00	35.00	.20
	699.550	321.40	89.23	4.72	5.51	44.37	2.07	155.27	89.29	83.72	32.00	35.00	.19
	699.000	321.40	89.25	4.75	5.50	44.32	2.07	154.92	89.32	83.75	55.00	35.00	.20
	698.000	321.40	89.30	4.80	5.49	44.25	2.08	154.35	89.37	83.81	100.00	35.00	.20
	697.000	321.40	89.35	4.84	5.48	44.17	2.09	153.81	89.42	83.87	100.00	35.00	.20
	696.000	321.40	89.40	4.89	5.46	44.11	2.10	153.30	89.47	83.93	100.00	35.00	.20
	695.000	321.40	89.45	4.93	5.45	44.04	2.10	152.80	89.51	83.99	100.00	35.00	.20
	694.000	321.40	89.49	4.97	5.44	43.98	2.11	152.33	89.56	84.05	100.00	35.00	.20
	693.000	321.40	89.54	5.01	5.43	43.92	2.12	151.87	89.61	84.11	100.00	35.00	.20
	692.000	321.40	89.59	5.05	5.42	43.86	2.12	151.44	89.66	84.17	100.00	35.00	.20
	690.340	301.40	89.63	4.46	5.42	43.82	1.99	151.16	89.70	84.21	66.00	35.00	.19
*	689.860	301.40	89.32	16.69	4.77	15.02	6.05	49.78	89.89	84.55	48.00	19.00	.59
	688.920	301.40	89.68	8.56	5.10	18.55	4.65	64.84	90.02	84.58	94.00	19.00	.44

	687.860	301.40	89.86	5.48	5.32	21.23	3.89	77.39	90.10	84.54	106.00	19.00	.36
	686.860	301.40	89.91	6.23	5.34	22.24	4.02	75.03	90.16	84.57	100.00	19.00	.39
	685.960	301.40	90.04	4.17	5.43	24.44	3.44	87.60	90.22	84.61	100.00	19.00	.32
	684.860	301.40	90.04	5.74	5.28	20.94	3.96	76.03	90.29	84.76	100.00	19.00	.37
	683.860	301.40	90.07	7.20	5.20	19.89	4.32	69.70	90.37	84.87	100.00	19.00	.41
	682.860	301.40	90.18	6.31	5.28	21.14	4.08	73.82	90.44	84.90	100.00	19.00	.39

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
	681.860	301.40	90.22	7.32	5.35	18.80	4.40	68.54	90.52	84.87	100.00	19.00	.41
	680.860	301.40	90.27	8.46	5.40	16.96	4.69	64.31	90.61	84.87	100.00	19.00	.42
	679.860	301.40	90.34	8.83	5.43	16.34	4.79	62.99	90.70	84.91	100.00	19.00	.43
	678.860	301.40	90.43	9.37	4.95	17.29	4.85	62.19	90.79	85.48	100.00	19.00	.45
	677.860	301.40	90.59	6.79	5.33	18.52	4.29	70.30	90.88	85.26	100.00	19.00	.39
	676.860	301.40	90.66	6.65	5.36	18.50	4.26	70.78	90.95	85.30	100.00	19.00	.38
	675.860	301.40	90.77	6.16	5.06	23.23	3.96	76.09	91.01	85.71	100.00	19.00	.39
	674.860	301.40	90.84	6.03	5.04	23.80	3.91	77.13	91.08	85.80	100.00	19.00	.38
*	673.860	301.40	90.98	2.76	7.66	23.40	3.01	100.24	91.12	83.32	100.00	19.00	.26
	673.010	301.40	91.00	3.31	5.67	26.02	3.14	96.01	91.15	85.33	85.00	19.00	.29
*	672.860	301.40	90.89	8.13	5.55	12.01	4.52	66.68	91.21	85.34	15.00	19.00	.34
	672.460	301.40	90.93	8.13	5.56	12.01	4.52	66.66	91.24	85.36	40.00	19.00	.34
*	672.310	301.40	91.22	1.18	5.48	46.15	1.89	159.27	91.27	85.74	15.00	19.00	.18
	672.000	301.40	91.22	1.18	5.47	46.14	1.89	159.23	91.28	85.75	31.00	19.00	.18
	671.000	301.40	91.23	1.20	5.45	46.00	1.91	158.14	91.29	85.78	100.00	19.00	.18
	670.000	301.40	91.24	1.22	5.43	45.88	1.92	157.29	91.30	85.81	100.00	19.00	.18
	669.000	301.40	91.26	1.24	5.42	45.77	1.93	156.46	91.31	85.84	100.00	19.00	.18
	668.000	301.40	91.27	1.25	5.40	45.66	1.94	155.64	91.33	85.87	100.00	19.00	.18
	667.000	301.40	91.28	1.27	5.38	45.54	1.95	154.83	91.34	85.90	100.00	19.00	.19
	666.110	281.00	91.30	1.12	5.37	45.45	1.82	154.11	91.35	85.93	89.00	19.00	.17

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 714.190 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 706.720 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 706.320 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 689.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 673.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 672.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 672.310 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

STA 714.19 TO 666+11

SUMMARY PRINTOUT

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
*	714.190	382.80	86.18	29.81	3.15	12.01	10.12	37.81	87.77	83.03	.00	13.00	1.01
	713.680	382.80	86.82	17.99	3.76	12.01	8.48	45.15	87.94	83.06	51.00	13.00	.77
	713.180	382.80	86.99	16.23	3.90	12.01	8.17	46.83	88.03	83.09	50.00	13.00	.73
	712.680	382.80	88.06	10.13	4.98	41.78	2.86	133.77	88.18	83.08	50.00	35.00	.28
	711.790	382.80	88.15	9.80	5.01	42.01	2.83	135.41	88.27	83.13	89.00	35.00	.28
	710.900	382.80	88.24	9.51	5.05	42.22	2.80	136.89	88.36	83.19	89.00	35.00	.27
	710.000	382.80	88.32	9.25	5.08	42.42	2.77	138.29	88.44	83.24	90.00	35.00	.27
	709.000	382.80	88.42	8.99	5.12	42.62	2.74	139.74	88.53	83.30	100.00	35.00	.27
	708.000	382.80	88.51	8.77	5.15	42.81	2.71	141.08	88.62	83.36	100.00	35.00	.26
	707.000	382.80	88.60	8.56	5.18	42.98	2.69	142.31	88.71	83.42	100.00	35.00	.26
	706.870	382.80	88.61	8.54	5.18	43.00	2.69	142.46	88.72	83.43	13.00	35.00	.26
*	706.720	321.65	88.41	39.80	5.09	12.01	5.26	61.10	88.84	83.32	15.00	35.00	.41
*	706.320	321.65	88.46	5.41	5.12	12.01	5.24	61.42	88.89	83.34	40.00	13.00	.41
	706.170	321.65	88.86	4.50	5.57	44.68	2.04	158.02	88.93	83.29	15.00	35.00	.19
	706.000	321.65	88.87	4.51	5.57	44.66	2.04	157.89	88.94	83.30	17.00	35.00	.19
	705.000	321.65	88.92	4.57	5.56	44.57	2.05	157.18	88.98	83.36	100.00	35.00	.19
	704.000	321.65	88.96	4.62	5.54	44.48	2.05	156.53	89.03	83.42	100.00	35.00	.19

	SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
	703.000	321.65	89.01	4.67	5.53	44.40	2.06	155.91	89.08	83.48	100.00	35.00	.19
	702.000	321.65	89.06	4.72	5.52	44.32	2.07	155.32	89.12	83.54	100.00	35.00	.19
	701.000	321.65	89.10	4.76	5.50	44.25	2.08	154.74	89.17	83.60	100.00	35.00	.20
	700.500	321.65	89.13	4.79	5.50	44.21	2.08	154.47	89.19	83.63	50.00	35.00	.20
	700.120	321.65	89.14	4.80	5.49	44.18	2.09	154.27	89.21	83.65	38.00	35.00	.20
	700.050	321.65	89.14	5.53	5.28	43.70	2.19	147.15	89.22	83.86	7.00	35.00	.21
	699.970	321.65	89.20	5.30	5.34	44.01	2.15	149.41	89.28	83.87	8.00	35.00	.21
	699.870	321.65	89.21	4.73	5.51	44.37	2.07	155.28	89.28	83.70	10.00	35.00	.20
	699.550	321.65	89.23	4.72	5.51	44.38	2.07	155.39	89.30	83.72	32.00	35.00	.19
	699.000	321.65	89.26	4.75	5.50	44.34	2.07	155.04	89.32	83.75	55.00	35.00	.20
	698.000	321.65	89.30	4.79	5.49	44.26	2.08	154.47	89.37	83.81	100.00	35.00	.20
	697.000	321.65	89.35	4.84	5.48	44.19	2.09	153.93	89.42	83.87	100.00	35.00	.20
	696.000	321.65	89.40	4.88	5.47	44.12	2.10	153.41	89.47	83.93	100.00	35.00	.20
	695.000	321.65	89.45	4.93	5.46	44.05	2.10	152.91	89.52	83.99	100.00	35.00	.20
	694.000	321.65	89.50	4.97	5.45	43.99	2.11	152.44	89.57	84.05	100.00	35.00	.20
	693.000	321.65	89.55	5.01	5.43	43.93	2.12	151.98	89.62	84.11	100.00	35.00	.20
	692.000	321.65	89.60	5.05	5.42	43.87	2.12	151.54	89.67	84.17	100.00	35.00	.20
	690.340	301.65	89.64	4.46	5.43	43.83	1.99	151.27	89.70	84.21	66.00	35.00	.19
*	689.860	301.65	89.32	16.68	4.77	15.03	6.06	49.82	89.89	84.55	48.00	19.00	.59
	688.920	301.65	89.69	8.55	5.11	18.56	4.65	64.88	90.02	84.58	94.00	19.00	.44

687.860	301.65	89.87	5.48	5.33	21.23	3.90	77.44	90.10	84.54	106.00	19.00	.36
686.860	301.65	89.92	6.23	5.35	22.25	4.02	75.08	90.17	84.57	100.00	19.00	.39
685.960	301.65	90.04	4.17	5.43	24.45	3.44	87.66	90.22	84.61	100.00	19.00	.32
684.860	301.65	90.05	5.74	5.29	20.95	3.96	76.08	90.29	84.76	100.00	19.00	.37
683.860	301.65	90.08	7.19	5.21	19.90	4.32	69.75	90.37	84.87	100.00	19.00	.41
682.860	301.65	90.18	6.31	5.28	21.14	4.08	73.87	90.44	84.90	100.00	19.00	.39

SECNO	Q	CWSEL	10*KS	DEPTH	TOPWID	VCH	AREA	EG	ELMIN	XLCH	K*XNCH	FRCH
681.860	301.65	90.22	7.32	5.35	18.81	4.40	68.59	90.52	84.87	100.00	19.00	.41
680.860	301.65	90.27	8.46	5.40	16.96	4.69	64.35	90.61	84.87	100.00	19.00	.42
679.860	301.65	90.34	8.84	5.43	16.34	4.79	63.03	90.70	84.91	100.00	19.00	.43
678.860	301.65	90.43	9.37	4.95	17.30	4.85	62.23	90.79	85.48	100.00	19.00	.45
677.860	301.65	90.60	6.79	5.34	18.53	4.29	70.34	90.88	85.26	100.00	19.00	.39
676.860	301.65	90.67	6.65	5.37	18.51	4.26	70.83	90.95	85.30	100.00	19.00	.38
675.860	301.65	90.77	6.16	5.06	23.24	3.96	76.15	91.02	85.71	100.00	19.00	.39
674.860	301.65	90.84	6.02	5.04	23.81	3.91	77.19	91.08	85.80	100.00	19.00	.38
* 673.860	301.65	90.99	2.76	7.67	23.40	3.01	100.29	91.13	83.32	100.00	19.00	.26
673.010	301.65	91.00	3.31	5.67	26.03	3.14	96.07	91.16	85.33	85.00	19.00	.29
* 672.860	301.65	90.90	8.13	5.56	12.01	4.52	66.71	91.21	85.34	15.00	19.00	.34
672.460	301.65	90.93	8.14	5.56	12.01	4.52	66.69	91.25	85.36	40.00	19.00	.34
* 672.310	301.65	91.22	1.18	5.48	46.16	1.89	159.39	91.28	85.74	15.00	19.00	.18
672.000	301.48	91.22	1.18	5.47	46.16	1.89	159.35	91.28	85.75	31.00	19.00	.18
671.000	301.48	91.24	1.20	5.46	46.01	1.90	158.26	91.29	85.78	100.00	19.00	.18
670.000	301.48	91.25	1.22	5.44	45.90	1.92	157.41	91.30	85.81	100.00	19.00	.18
669.000	301.48	91.26	1.23	5.42	45.78	1.93	156.58	91.32	85.84	100.00	19.00	.18
668.000	301.48	91.27	1.25	5.40	45.67	1.94	155.76	91.33	85.87	100.00	19.00	.18
667.000	301.48	91.28	1.27	5.38	45.56	1.95	154.94	91.34	85.90	100.00	19.00	.19
666.110	281.08	91.30	1.12	5.38	45.46	1.82	154.23	91.35	85.93	89.00	19.00	.17

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 714.190 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 706.720 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 706.320 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 689.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 673.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 672.860 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 672.310 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE