

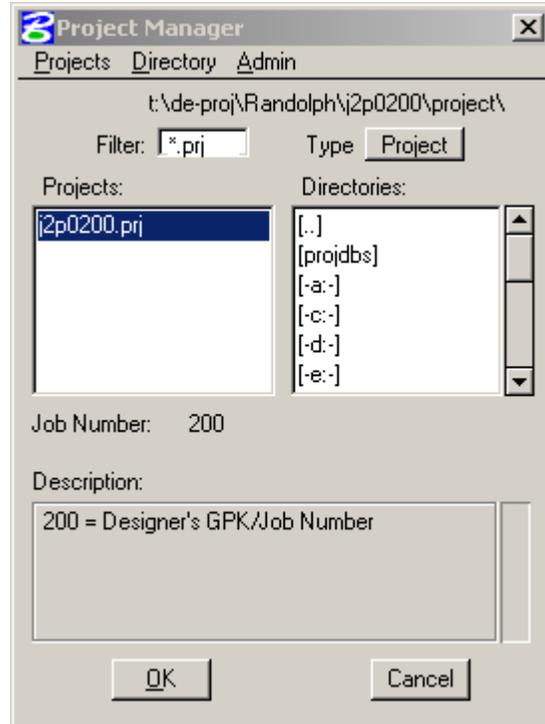
# GeoPak XS to SMI Templates

1) Open T:\de-proj\Randolph\J2P0200\Data\route63\_xs\_j2p0200.dgn

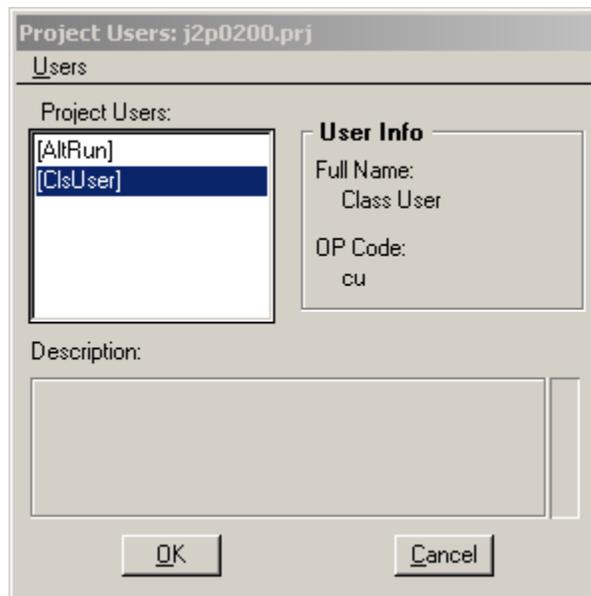
2) Select the Project Manager and navigate to the following folder:

T:\de-proj\Camden\J5P0590\project folder

Make sure the job number is set to the Designer's GPK/Job number of **200**



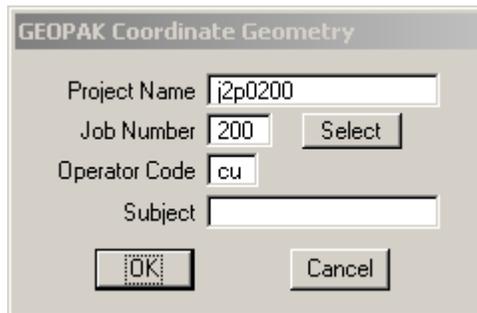
3) Select "ClsUser" as the Project User.



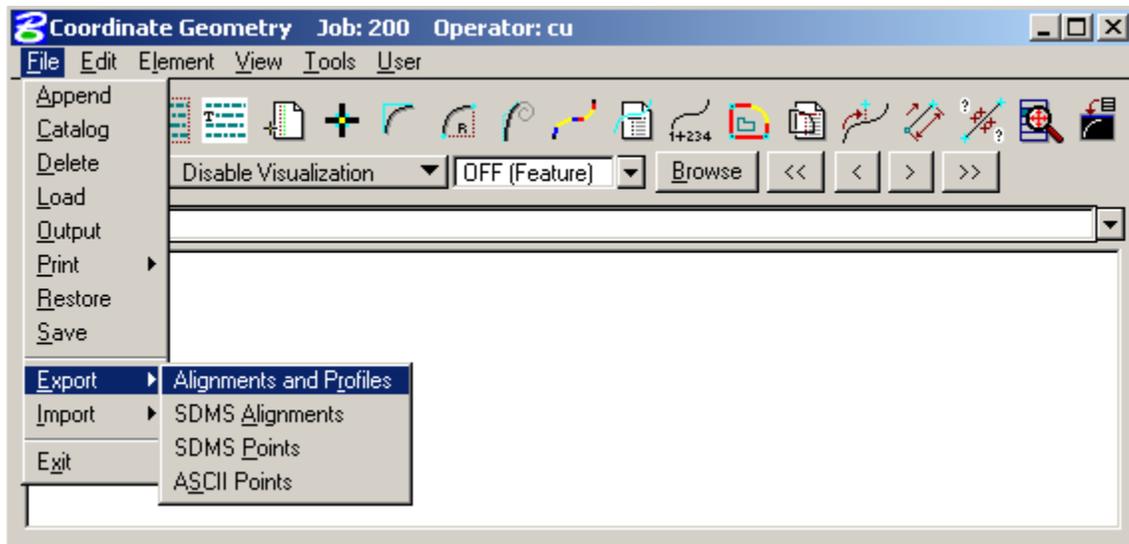
# GeoPak XS to SMI Templates

4) Next we need to create a chain file (CH file) that contains the alignment information for Route 63. To do this we need to open Coordinate Geometry. To open up Coordinate Geometry select the following:

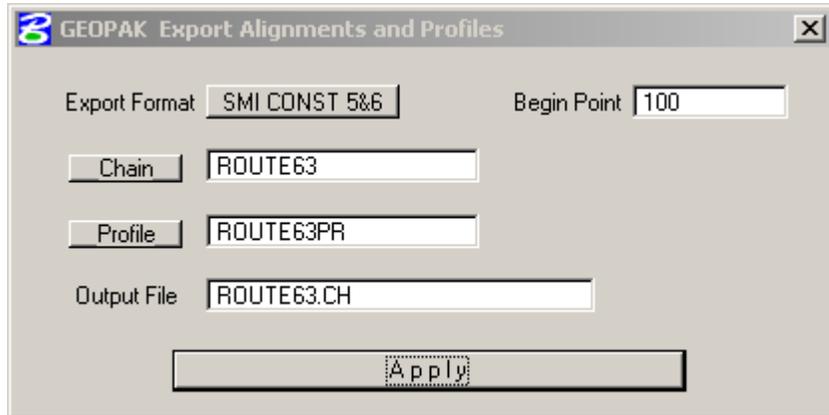
**Applications > GeoPak Survey > Geometry > Coordinate Geometry**



5) Once in Coordinate Geometry select **File > Export > Alignments and Profiles**



6) In the Export Dialog set the following fields: Begin Point, Export Format, Chain, Profile, and the name of the Output file.



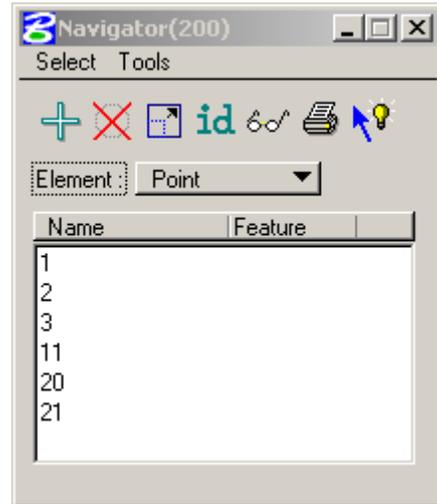
**Begin Point** = A point that has not been used and is available in COGO. Open Navigator to see what points have not been used.

**Export Format** = SMI CONST 5&6 will work with the current SMI version (Version 8).

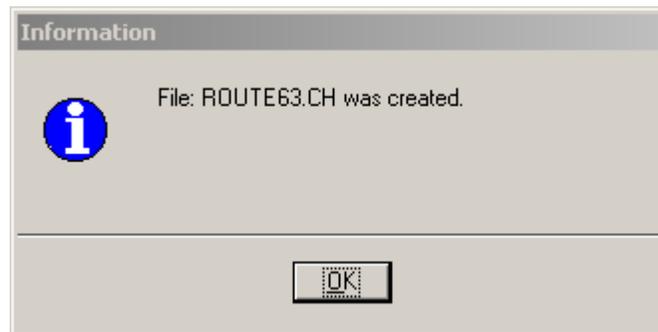
**Chain** = The Baseline of the Cross Sections that you're wanting to create a template for.

**Profile** = Proposed profile that is associated to the Chain/Profile. (**Optional**)

**Output Format** = Name of the chain file that you want to create. This will be the file that will be imported into your calculator.

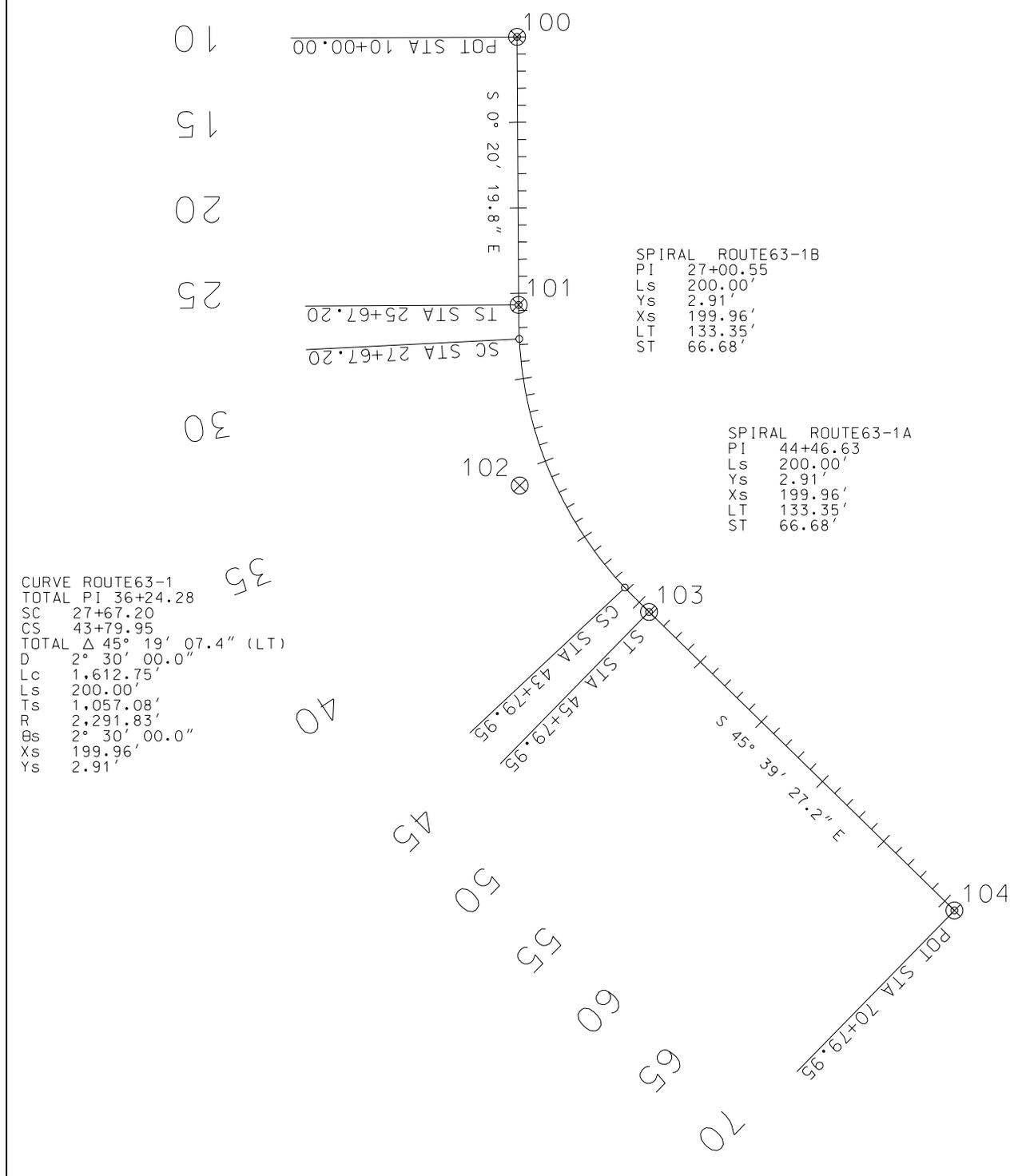


7) When the “Apply” button is selected GeoPak will show you the following Dialog:



# GeoPak XS to SMI Templates

8) Below is a view of the points that GeoPak created for the Route63.CH file.



# GeoPak XS to SMI Templates

9) Below is the view of the Route63.CH file in SMI Transfer.

**ROUTE63.CH**

**Horizontal Control** | Vertical Control | Left Templates | Right Templates

Beginning Point  For PI points use point numbers.  
Beginning Station  For simple curves: "PC CC PT"  
For spiral curves: {TS PI ST Radius SLB sla}

{101 102 103 2291.831181 200.000000 200.000000} 104

**ROUTE63.CH**

**Horizontal Control** | **Vertical Control** | Left Templates | Right Templates

Beginning Station  For slopes use % ex. 2.35% should be entered 2.35  
Beginning Elevation  For PVI points use station (no pluses) ex. 23+50 shou  
For vertical curves use: "PVC PVT". ex. "2500 2750"

-1.830370 "1850.000000 2850.000000" 0.500000 "3110.000000 3910.000000"  
2.000000 "5090.000000 6490.000000" -0.903909

**ROUTE63.CH**

**Horizontal Control** | **Vertical Control** | **Left Templates** | Right Templates

Enter each template on a separate line.

1000.000000 0.000 100.00 2.00 1.00 2.00  
7079.951520 0.000 100.00 2.00 1.00 2.00

**ROUTE63.CH**

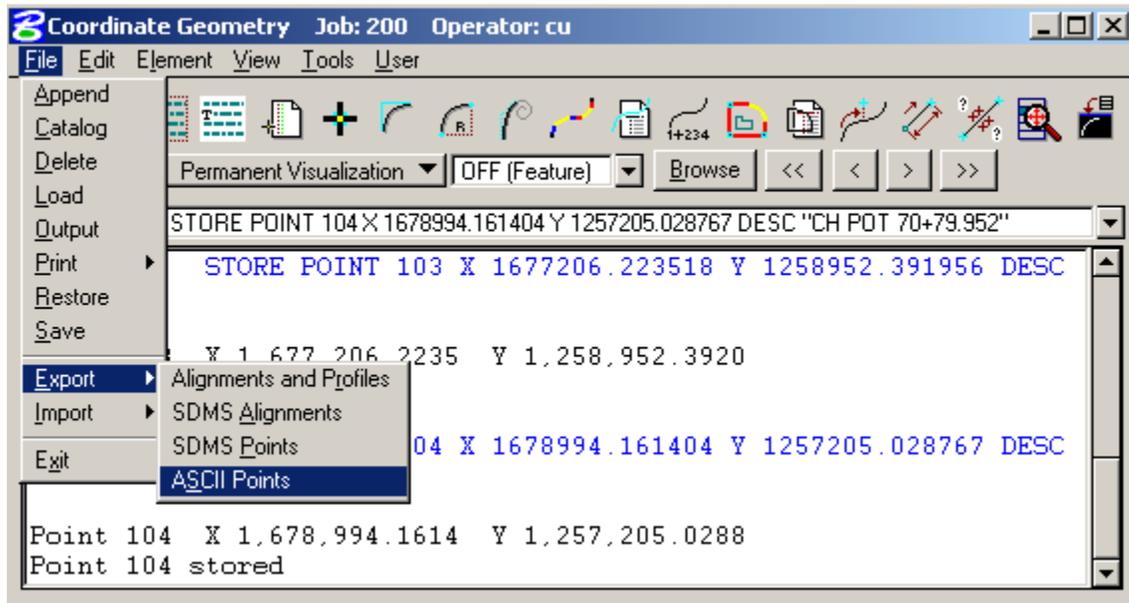
**Horizontal Control** | **Vertical Control** | **Left Templates** | **Right Templates**

Enter each template on a separate line.

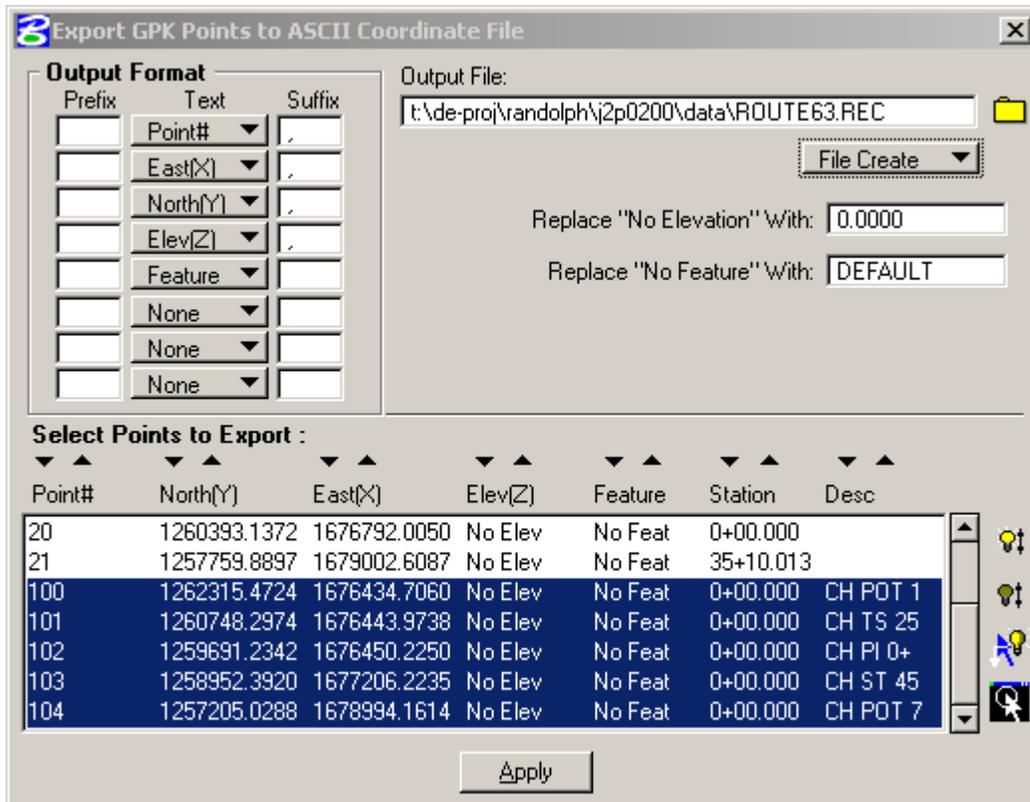
1000.000000 0.000 100.00 2.00 1.00 2.00  
7079.951520 0.000 100.00 2.00 1.00 2.00

# GeoPak XS to SMI Templates

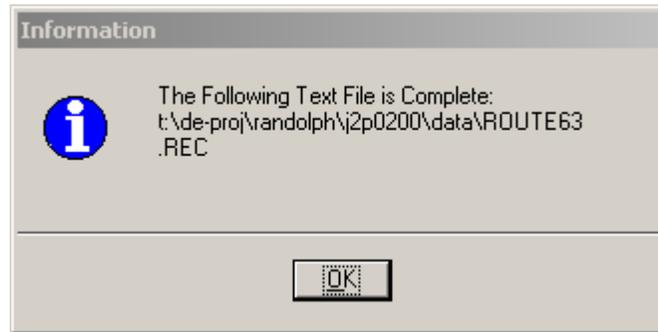
10) Next we need to export the control points.



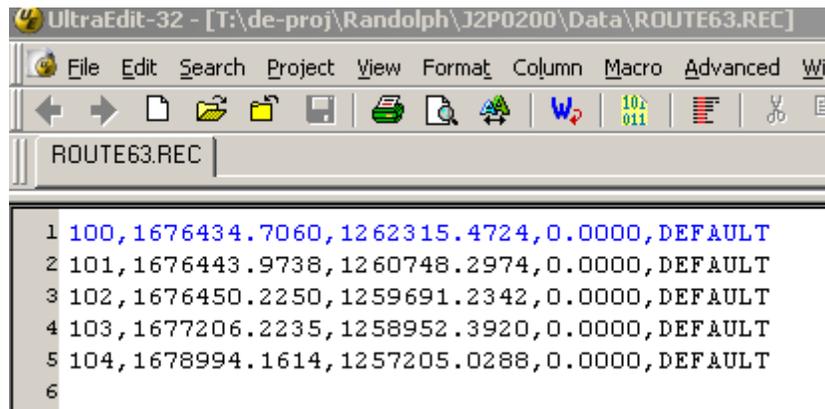
11) Fill out the “Export GPK Point to ASCII Coordinate File” Dialog as follows:



12) When you hit **Apply** you'll get the following dialog:



13) Below is what the Rout63.REC file looks like in text editor.



The image is a screenshot of the UltraEdit-32 text editor. The title bar shows the file path: "UltraEdit-32 - [T:\de-proj\Randolph\J2P0200\Data\ROUTE63.REC]". The menu bar includes "File", "Edit", "Search", "Project", "View", "Format", "Column", "Macro", "Advanced", and "Win". The toolbar contains various icons for file operations and editing. The active window title is "ROUTE63.REC". The main text area displays the following content:

```
1 100,1676434.7060,1262315.4724,0.0000,DEFAULT
2 101,1676443.9738,1260748.2974,0.0000,DEFAULT
3 102,1676450.2250,1259691.2342,0.0000,DEFAULT
4 103,1677206.2235,1258952.3920,0.0000,DEFAULT
5 104,1678994.1614,1257205.0288,0.0000,DEFAULT
6
```

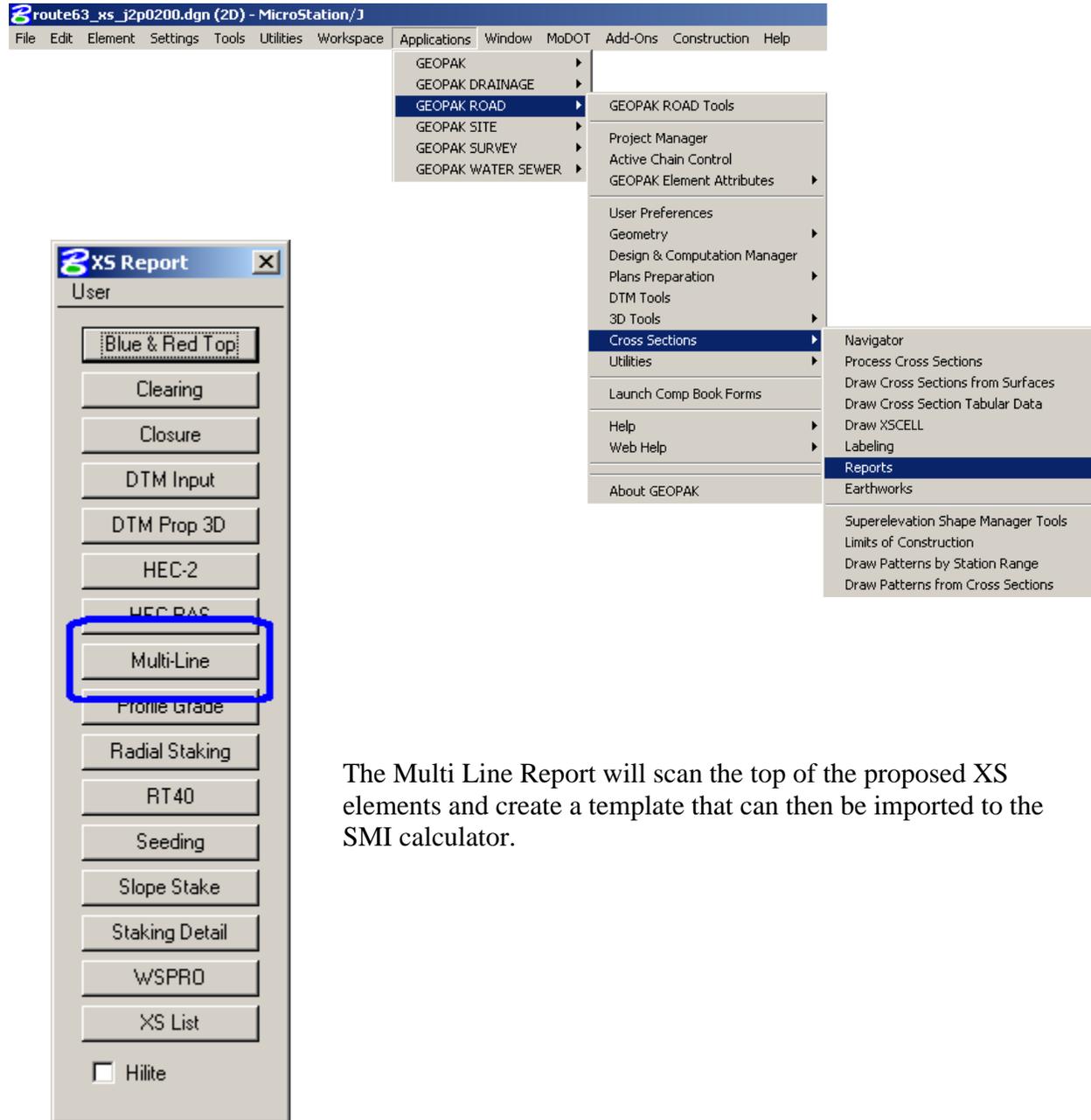
# GeoPak XS to SMI Templates

14) Next we'll Export Template information from a GeoPak Cross Section file using the Multi Line Report located in the Reports & XS Quantities.

\*\* You'll need to be in a XS file and in Project Manager in order to run XS Reports.

To access the Reports and Quantities dialog select the following:

## Applications > GeoPak Road > Cross Sections > Reports



The Multi Line Report will scan the top of the proposed XS elements and create a template that can then be imported to the SMI calculator.

15) Adjust the following setting:

Station Range	<b>11+00 to 70+00</b>	Level	<b>18,20,24</b>
Color	<b>0,4,63</b>	Weight	<b>5</b>
Style	<b>0</b>	T/B (Top/Bottom)	<b>T</b>
P/S (Primary/Secondary)	<b>P</b>	Output format	<b>SMI Const 5&amp;6</b>
ASCII File	<b>Route63.ch</b>	Create/New	<b>Append file</b>

**Multi-Line Report**

File

Job  Beg Sta

Chain  End Sta

**XS Elements**

Level	Color	Weight	Style	Lb	T/B	Lv	Co	Wt	LC	P/S
18,20,24	0,4,63	5	0	*	T	1	0	0	0	P

Lv  Co  Wt  St  Label

Lv  Wt

Co   Lc

Output Format  Horiz Offset

ASCII File    Cur Sta

\* \* \* Before you Apply (process) the report make sure the ASCII (CH) file has the same name that was used in the exported of the Alignment and Profile data (Step 1). Also make sure Append is selected.

16) Select "Yes" to the following Alert Dialog

**Alert**

A duplicate or decreasing offset value was found at Station 1100.000000 beginning at Offset 0.000. This may represent a vertical line or a line that goes back on itself. The

**Alert**

offset value was changed to 0.001. Please evaluate this cross section. Do you wish to automatically correct any other vertical lines encountered?

# GeoPak XS to SMI Templates

17) View Left and Right Template information in the SMI Transfer (See Below).

Left Template is Below

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Station	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope
2	1100	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
3	1200	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
4	1300	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
5	1400	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	6	580.36	4	6	0.01	6
6	1500	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	6	649.94	4	6	0.01	6
7	1600	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	6	643.36	4	6	0.01	6
8	1700	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
9	1800	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
10	1900	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
11	2000	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
12	2100	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
13	2200	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
14	2300	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
15	2400	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
16	2500	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
17	2600	0	3.3	18.18	22.7	-1.18	4	-1.18	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
18	2700	0	1.896	18.18	24.104	-4.78	4	-4.78	12	-4.78	12	-4.78	10	-16.67	24	0	8	2	0.01	2
19	2800	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
20	2900	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
21	3000	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
22	3100	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
23	3200	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
24	3300	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
25	3400	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
26	3500	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
27	3600	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
28	3700	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
29	3800	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
30	3900	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
31	4000	0	0.832	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	0	8	2	0.01	2
32	4100	0	0	0	0.831	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	2	0.01	2
33	4200	0	0	0	0.831	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	2	0.01	2
34	4300	0	0	0	0.831	18.18	25.168	-7.2	4	-7.2	12	-7.2	12	-7.2	10	-16.67	24	2	0.01	2
35	4400	0	0	0	1.15	18.18	24.849	-6.48	4	-6.48	12	-6.48	12	-6.48	10	-16.67	24	2	0.01	2
36	4500	0	0	0	2.733	18.18	23.266	-2.88	4	-2.88	12	-2.88	12	-2.88	10	-16.67	24	2	0.01	2
37	4600	0	0	0	3.832	18.18	22.167	1.24	4	1.24	12	-2	12	-2	10	-16.67	24	2	0.01	2
38	4700	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
39	4800	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
40	4900	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
41	5000	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
42	5100	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
43	5200	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
44	5300	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
45	5400	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
46	5500	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
47	5600	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
48	5700	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
49	5800	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
50	5900	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
51	6000	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
52	6100	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
53	6200	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
54	6300	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
55	6400	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
56	6500	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
57	6600	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
58	6700	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2
59	6800	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
60	6900	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
61	7000	0	4	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2

# GeoPak XS to SMI Templates

18) View Left and Right Template information in the SMI Transfer (See Below).

Right Template is Below

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Station	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope	Dist.	Slope												
2	1100	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
3	1200	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
4	1300	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
5	1400	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
6	1500	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
7	1600	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
8	1700	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
9	1800	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
10	1900	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
11	2000	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
12	2100	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
13	2200	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
14	2300	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
15	2400	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
16	2500	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
17	2600	0	0.001	0	3.999	18.18	22	2	4	2	12	1.18	12	1.18	10	-16.67	24	0	8	2	0.01	2
18	2700	0	0.001	0	3.999	18.18	22	4.78	4	4.78	12	4.78	12	4.78	10	-16.67	24	0	8	2	0.01	2
19	2800	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
20	2900	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
21	3000	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
22	3100	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
23	3200	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
24	3300	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
25	3400	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
26	3500	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
27	3600	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
28	3700	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
29	3800	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
30	3900	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
31	4000	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
32	4100	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
33	4200	0	0.001	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	0	8	2	0.01	2
34	4300	0	0	0	0	3.999	18.18	22	7.2	4	7.2	12	7.2	12	7.2	10	-16.67	24	2	0.01	2	2
35	4400	0	0	0	0	3.999	18.18	22	6.48	4	6.48	12	6.48	12	6.48	10	-16.67	24	2	0.01	2	2
36	4500	0	0	0	0	3.999	18.18	22	2.88	4	2.88	12	2.88	12	2.88	10	-16.67	24	2	0.01	2	2
37	4600	0	0	0	0	3.999	18.18	22	2	4	2	12	-1.24	12	-1.24	10	-16.67	24	2	0.01	2	2
38	4700	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
39	4800	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
40	4900	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
41	5000	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
42	5100	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
43	5200	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
44	5300	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
45	5400	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
46	5500	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
47	5600	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
48	5700	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
49	5800	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
50	5900	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
51	6000	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
52	6100	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
53	6200	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
54	6300	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
55	6400	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
56	6500	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
57	6600	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
58	6700	0	0	0	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	2	0.01	2	2
59	6800	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
60	6900	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2
61	7000	0	0.001	0	3.999	18.18	22	2	4	2	12	-2	12	-2	10	-16.67	24	0	8	2	0.01	2