

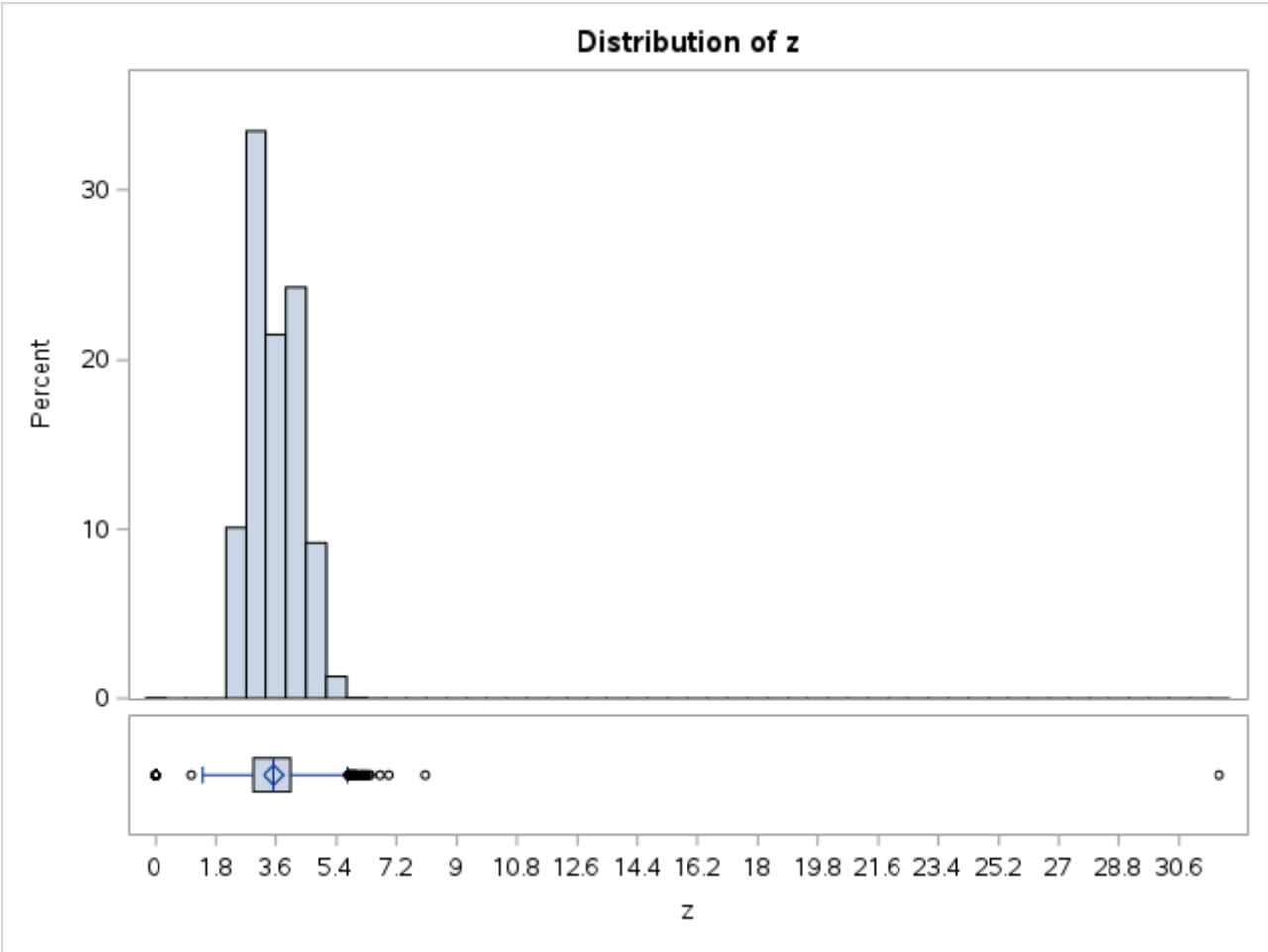
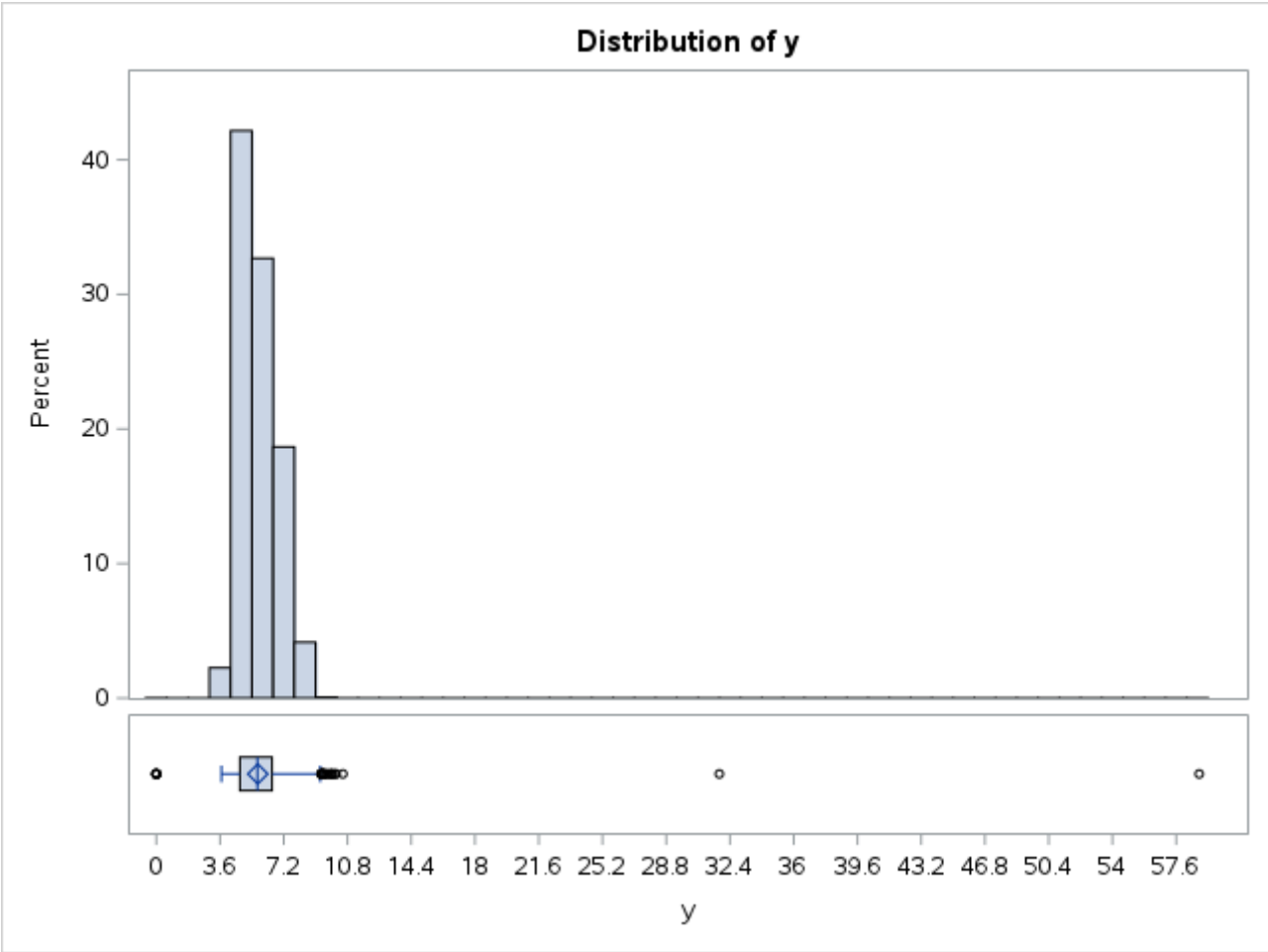
The CONTENTS Procedure

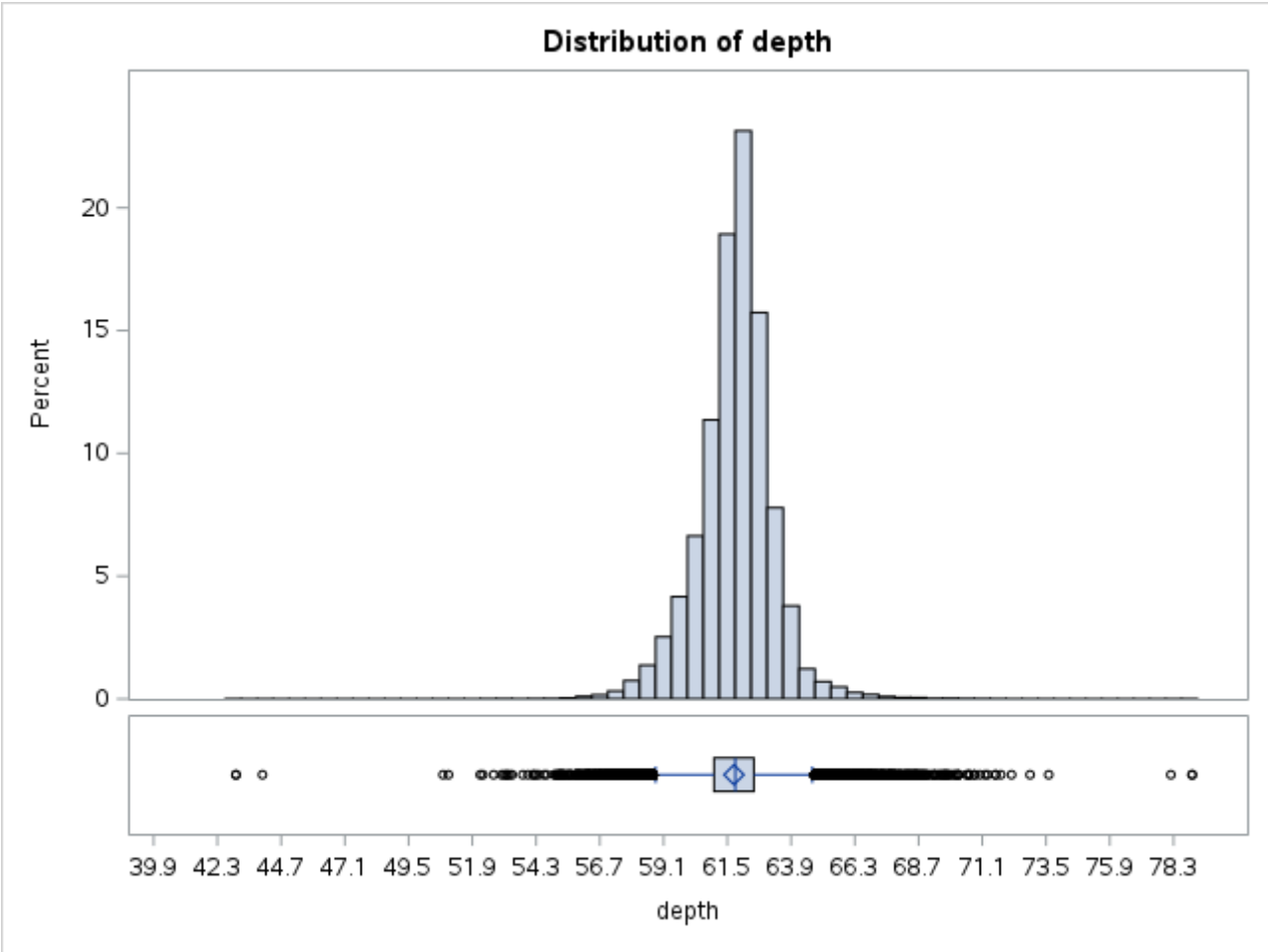
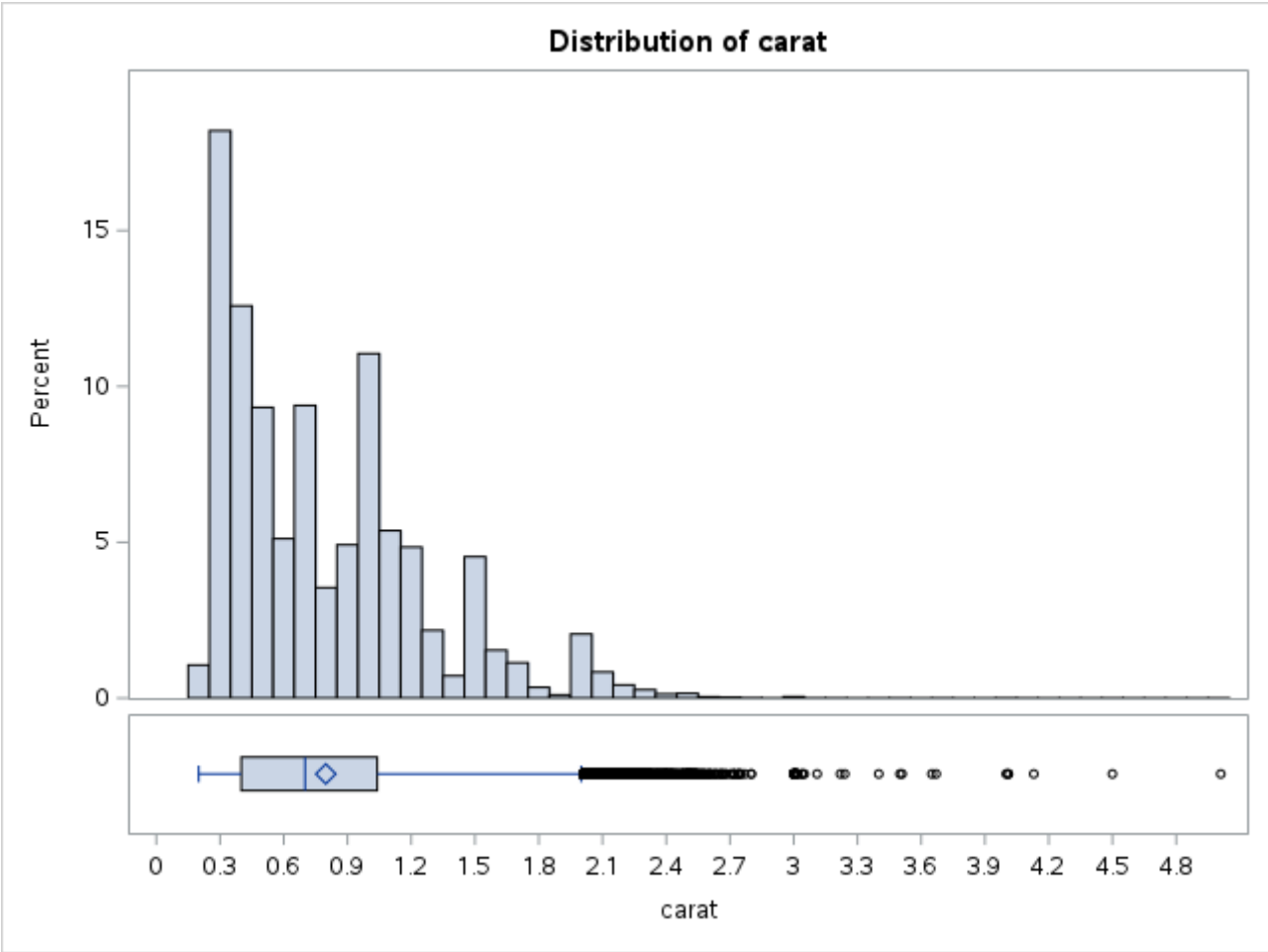
|                     |   |                      |       |
|---------------------|---|----------------------|-------|
| Data Set Name       | WORK.DIAMONDS   | Observations         | 53940 |
| Member Type         | DATA  | Variables            | 11    |
| Engine              | V9  | Indexes              | 0     |
| Created             | 17/01/2023 15:05:43                                   | Observation Length   | 80    |
| Last Modified       | 17/01/2023 15:05:43                                   | Deleted Observations | 0     |
| Protection          |   | Compressed           | NO    |
| Data Set Type       |   | Sorted               | NO    |
| Label               |   |                      |       |
| Data Representation | SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64 |                      |       |
| Encoding            | utf-8 Unicode (UTF-8)                                 |                      |       |

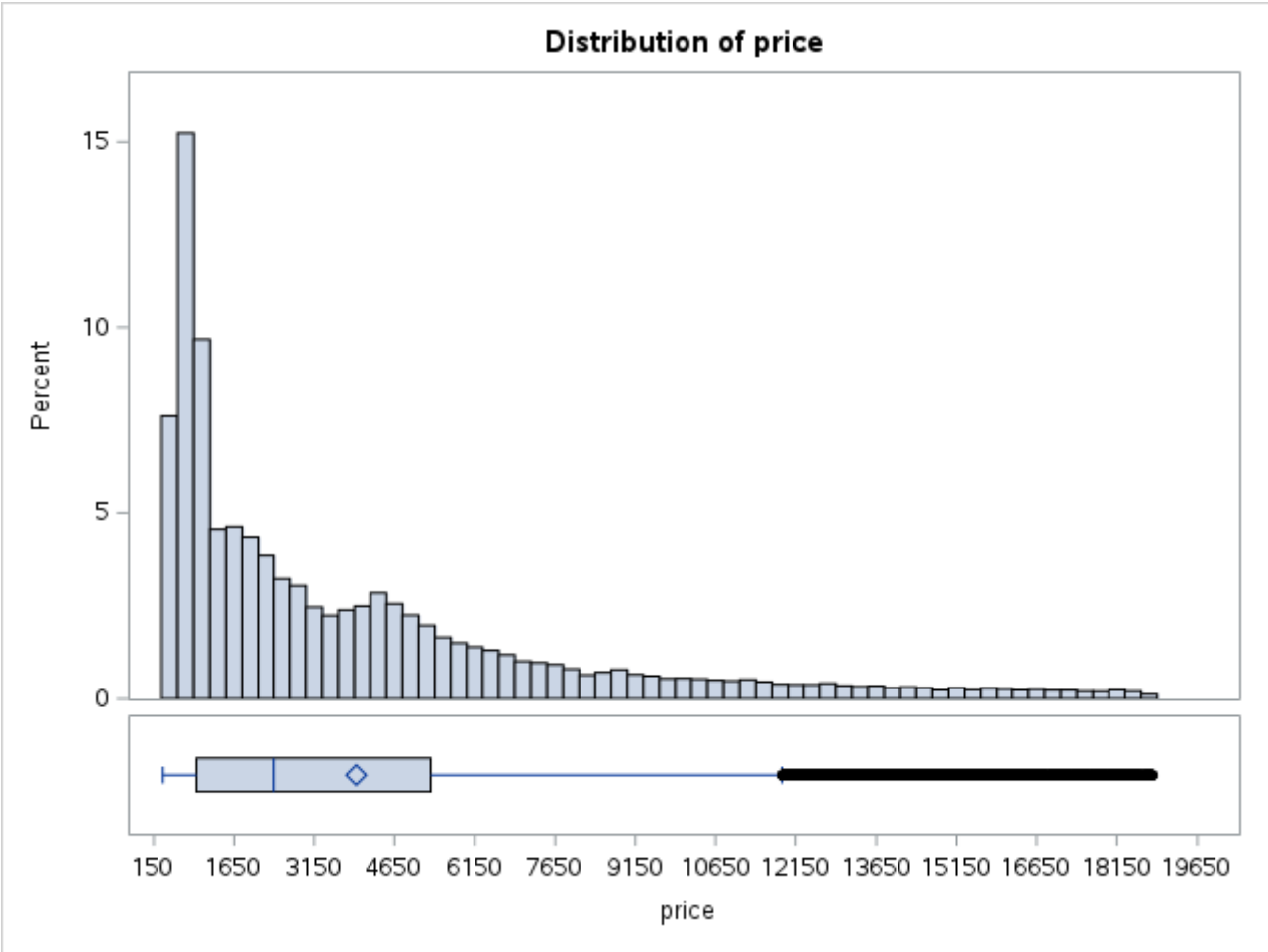
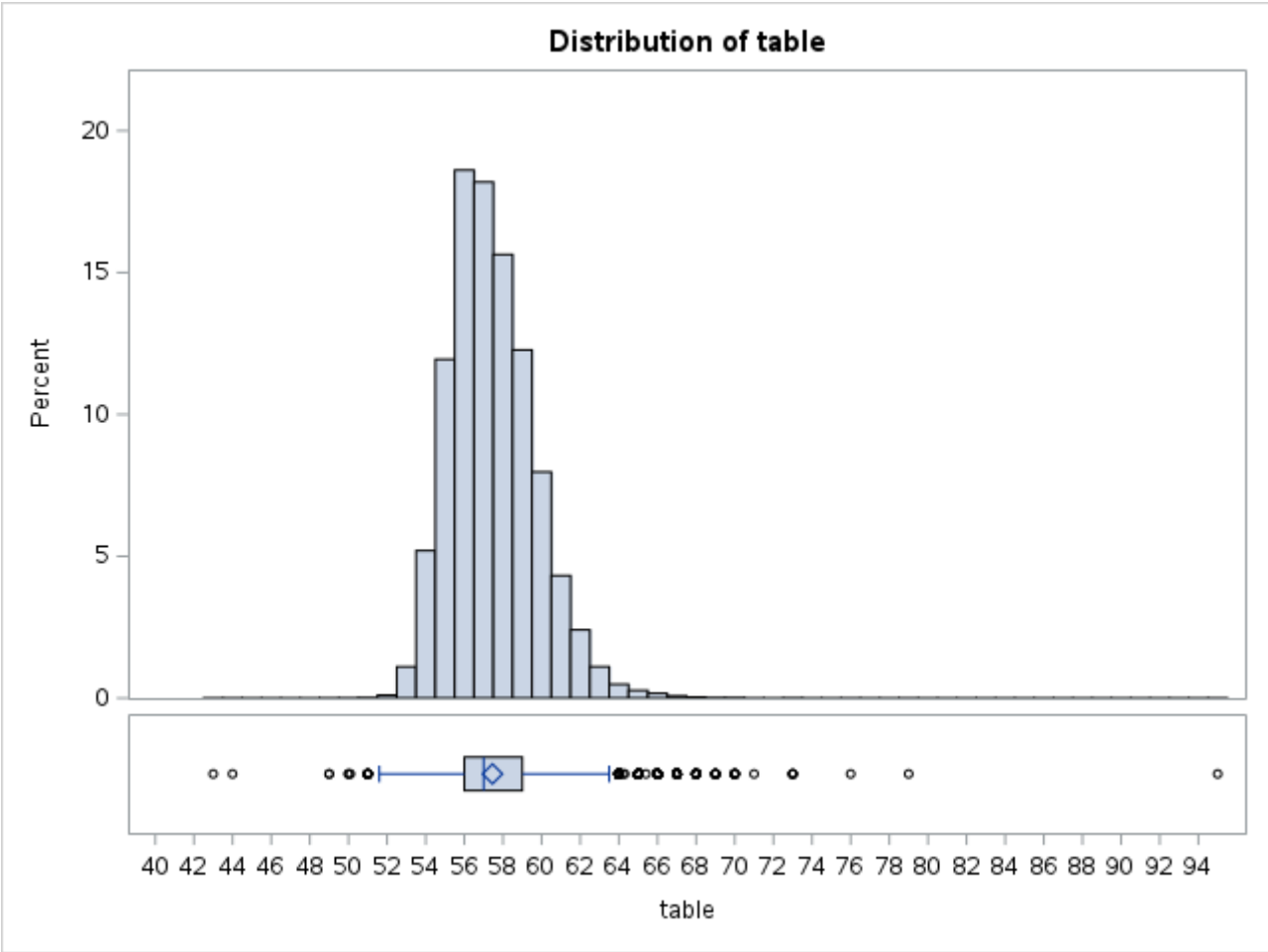
| Engine/Host Dependent Information |  |
|-----------------------------------|--|
| Data Set Page Size                | 131072   |
| Number of Data Set Pages          | 34   |
| First Data Page                   | 1  |
| Max Obs per Page                  | 1635   |
| Obs in First Data Page            | 1595   |
| Number of Data Set Repairs        | 0  |
| Filename                          | /saswork/SAS_work792000004778_odaws01-usw2-2.oda.sas.com/SAS_work59DF00004778_odaws01-usw2-2.oda.sas.com/diamonds.sas7bdat |
| Release Created                   | 9.0401M7   |
| Host Created                      | Linux  |
| Inode Number                      | 402653258  |
| Access Permission                 | rw-r--r--  |
| Owner Name                        | u62797381  |
| File Size                         | 4MB  |
| File Size (bytes)                 | 4587520  |

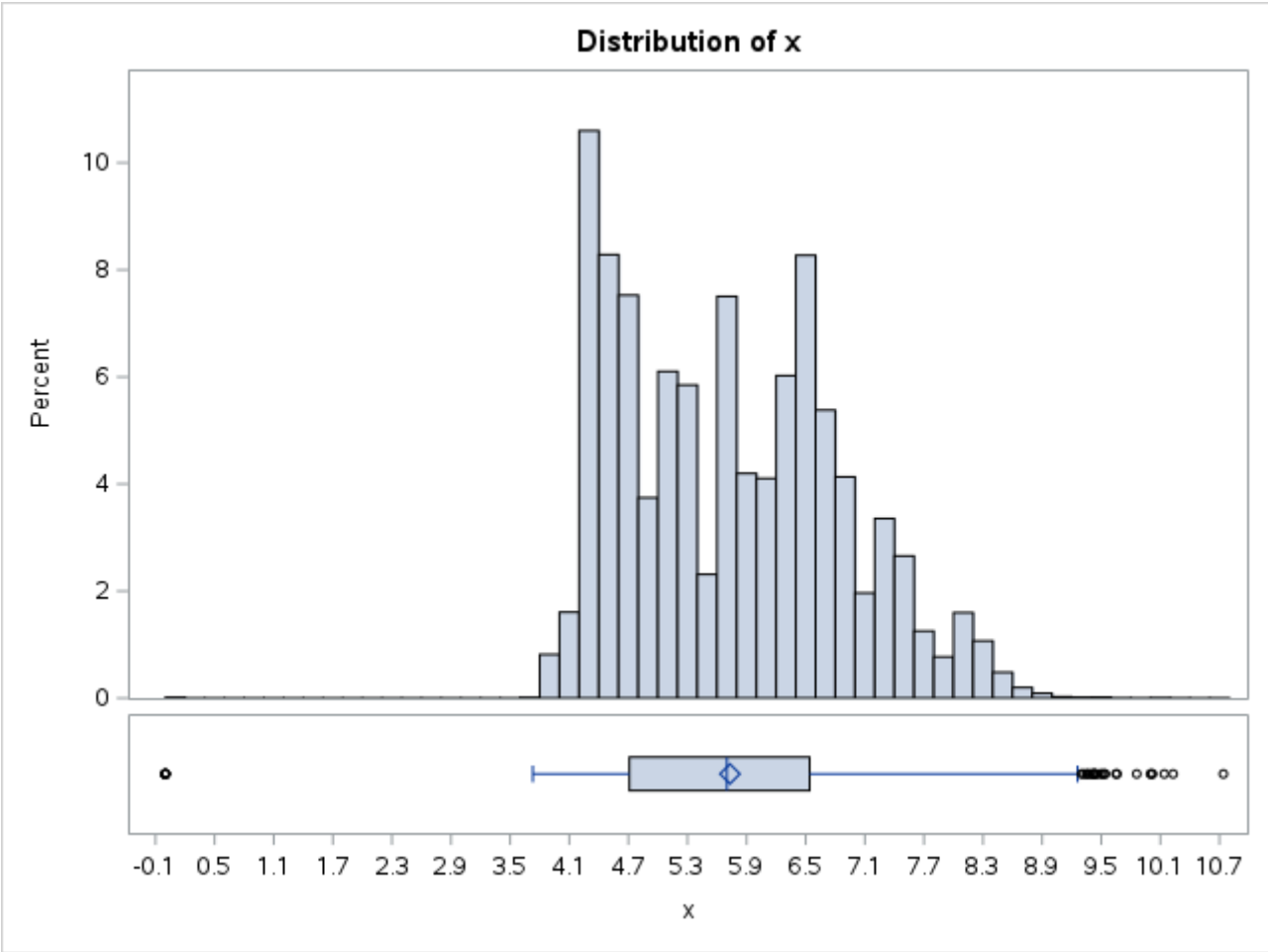
| Alphabetic List of Variables and Attributes |          |      |     |         |          |
|---|----------|------|-----|---------|----------|
| #   | Variable | Type | Len | Format  | Informat |
| 1   | VAR1     | Char | 4   | \$4.    | \$4.     |
| 2   | carat    | Num  | 8   | BEST12. | BEST32.  |
| 5   | clarity  | Char | 6   | \$6.    | \$6.     |
| 4   | color    | Char | 3   | \$3.    | \$3.     |
| 3   | cut      | Char | 11  | \$11.   | \$11.    |
| 6   | depth    | Num  | 8   | BEST12. | BEST32.  |
| 8   | price    | Num  | 8   | BEST12. | BEST32.  |
| 7   | table    | Num  | 8   | BEST12. | BEST32.  |
| 9   | x        | Num  | 8   | BEST12. | BEST32.  |
| 10  | y        | Num  | 8   | BEST12. | BEST32.  |
| 11  | z        | Num  | 8   | BEST12. | BEST32.  |

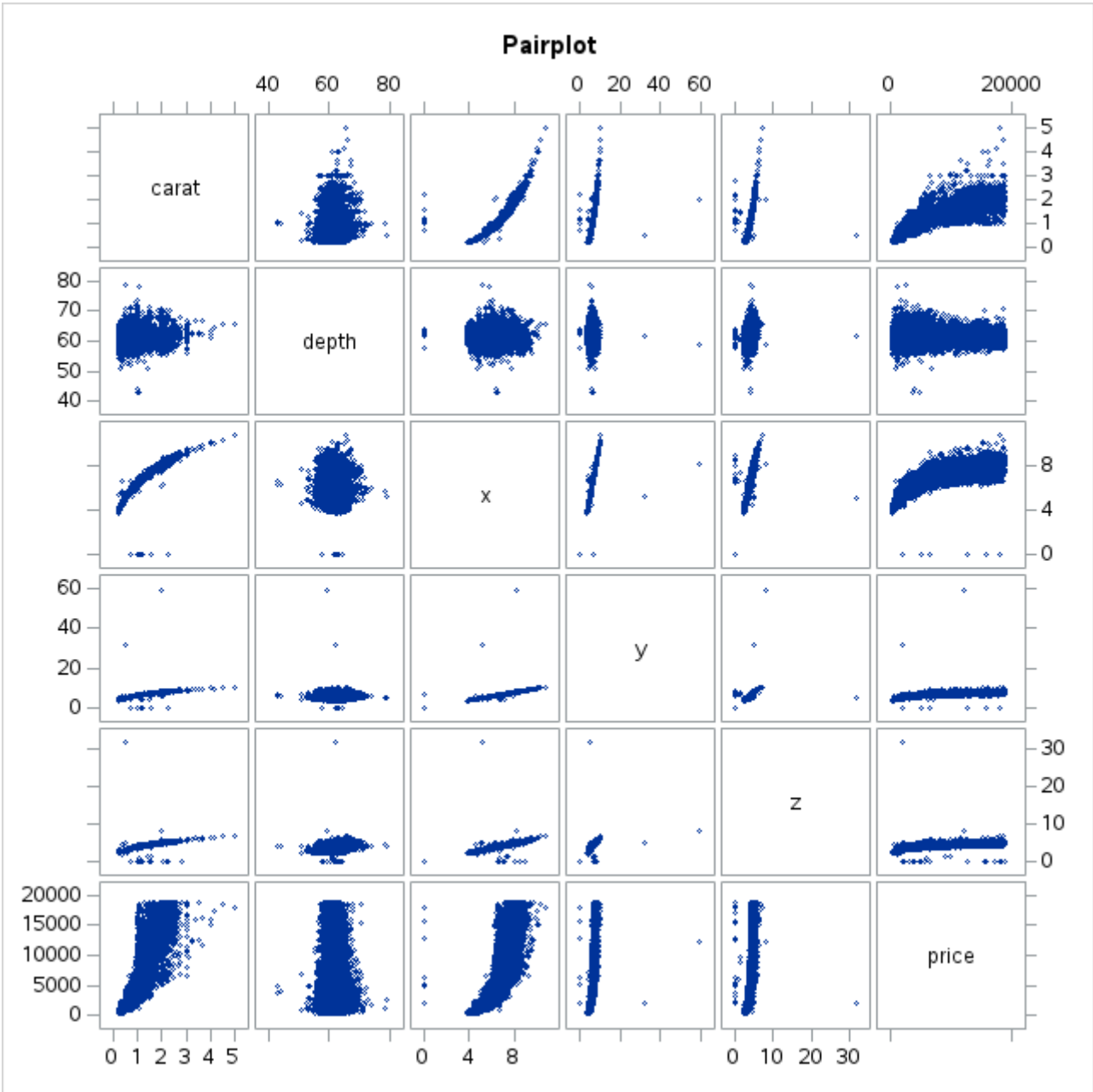
| Variable | Mean       | Std Dev   | Minimum     | Maximum    | N     |
|----------|------------|-----------|-------------|------------|-------|
| y        | 5.7345260  | 1.1421347 | 0           | 58.9000000 | 53940 |
| z        | 3.5387338  | 0.7056988 | 0           | 31.8000000 | 53940 |
| carat    | 0.7979397  | 0.4740112 | 0.2000000   | 5.0100000  | 53940 |
| depth    | 61.7494049 | 1.4326213 | 43.0000000  | 79.0000000 | 53940 |
| table    | 57.4571839 | 2.2344906 | 43.0000000  | 95.0000000 | 53940 |
| price    | 3932.80    | 3989.44   | 326.0000000 | 18823.00   | 53940 |
| x        | 5.7311572  | 1.1217607 | 0           | 10.7400000 | 53940 |











|                   |                         |
|-------------------|-------------------------|
| 6 With Variables: | carat depth table x y z |
| 1 Variables:      | price                   |

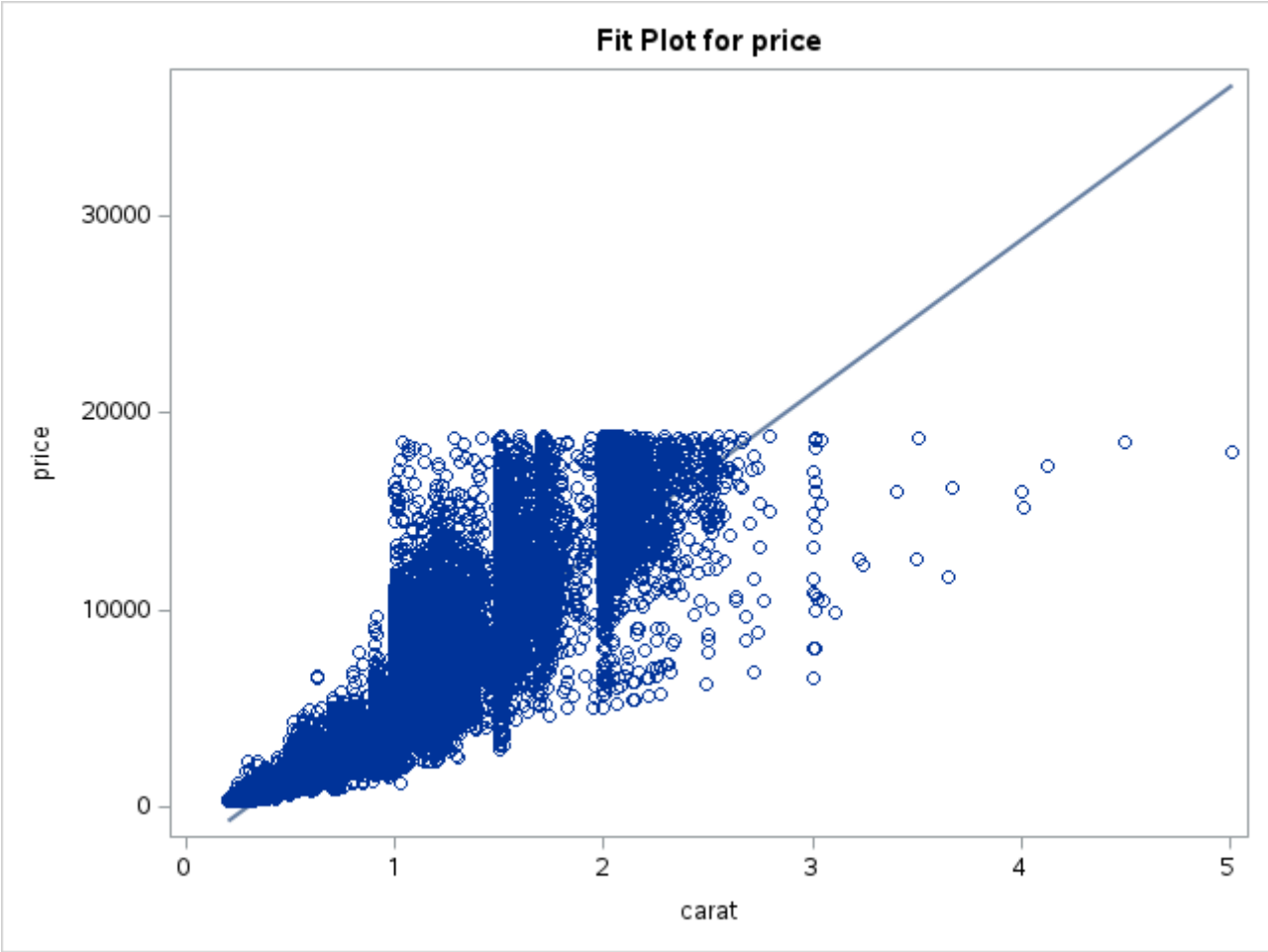
| Pearson Correlation Coefficients, N = 53940 |          |
|---|----------|
|   | price    |
| carat                                       | 0.92159  |
| depth                                       | -0.01065 |
| table                                       | 0.12713  |
| x   | 0.88444  |
| y   | 0.86542  |
| z   | 0.86125  |

|                                |                       |
|--------------------------------|-----------------------|
| Data Set                       | WORK.DIAMONDS         |
| Factor Extraction Method       | Partial Least Squares |
| PLS Algorithm                  | NIPALS                |
| Number of Response Variables   | 1                     |
| Number of Predictor Parameters | 1                     |

|                        |         |
|------------------------|---------|
| Missing Value Handling | Exclude |
| Number of Factors      | 1       |

|                             |       |
|-----------------------------|-------|
| Number of Observations Read | 53940 |
| Number of Observations Used | 53940 |

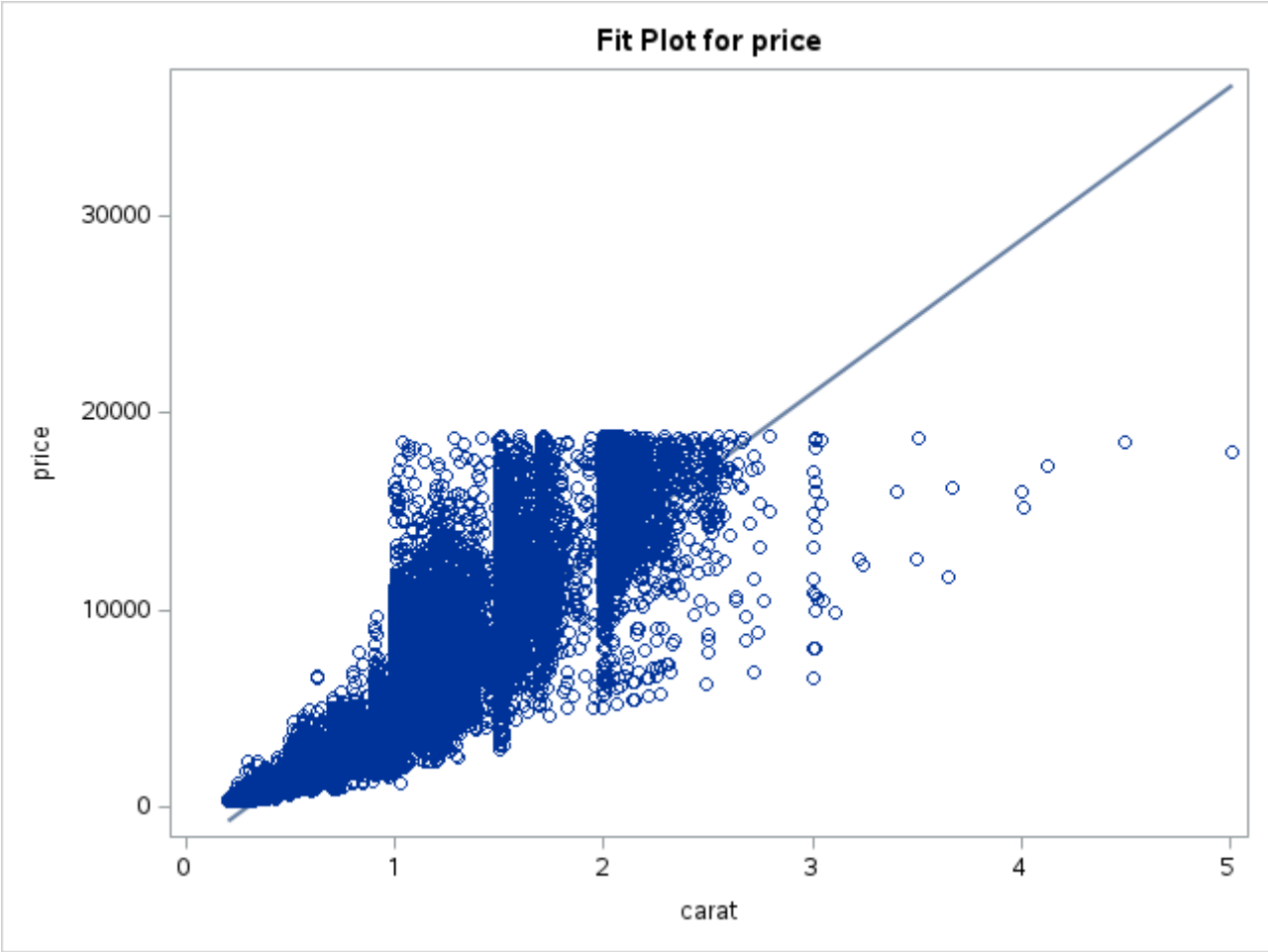
| Percent Variation Accounted for by Partial Least Squares Factors |               |          |                     |         |
|--|---------------|----------|---------------------|---------|
| Number of Extracted Factors                                      | Model Effects |          | Dependent Variables |         |
|  | Current       | Total    | Current             | Total   |
| 1  | 100.0000      | 100.0000 | 84.9331             | 84.9331 |



|                                |                       |
|--------------------------------|-----------------------|
| Data Set                       | WORK.DIAMONDS         |
| Factor Extraction Method       | Partial Least Squares |
| PLS Algorithm                  | NIPALS                |
| Number of Response Variables   | 1                     |
| Number of Predictor Parameters | 1                     |
| Missing Value Handling         | Exclude               |
| Number of Factors              | 1                     |

|                             |       |
|-----------------------------|-------|
| Number of Observations Read | 53940 |
| Number of Observations Used | 53940 |

| Percent Variation Accounted for by Partial Least Squares Factors |               |          |                     |         |
|--|---------------|----------|---------------------|---------|
| Number of Extracted Factors                                      | Model Effects |          | Dependent Variables |         |
|  | Current       | Total    | Current             | Total   |
| 1  | 100.0000      | 100.0000 | 84.9331             | 84.9331 |



|                           |               |
|---------------------------|---------------|
| Data Set                  | WORK.DIAMONDS |
| Dependent Variable        | price         |
| Selection Method          | Forward       |
| Select Criterion          | Adj R-Sq      |
| Stop Criterion            | Adj R-Sq      |
| Choose Criterion          | Adj R-Sq      |
| Effect Hierarchy Enforced | None          |

|                             |       |
|-----------------------------|-------|
| Number of Observations Read | 53940 |
| Number of Observations Used | 53940 |

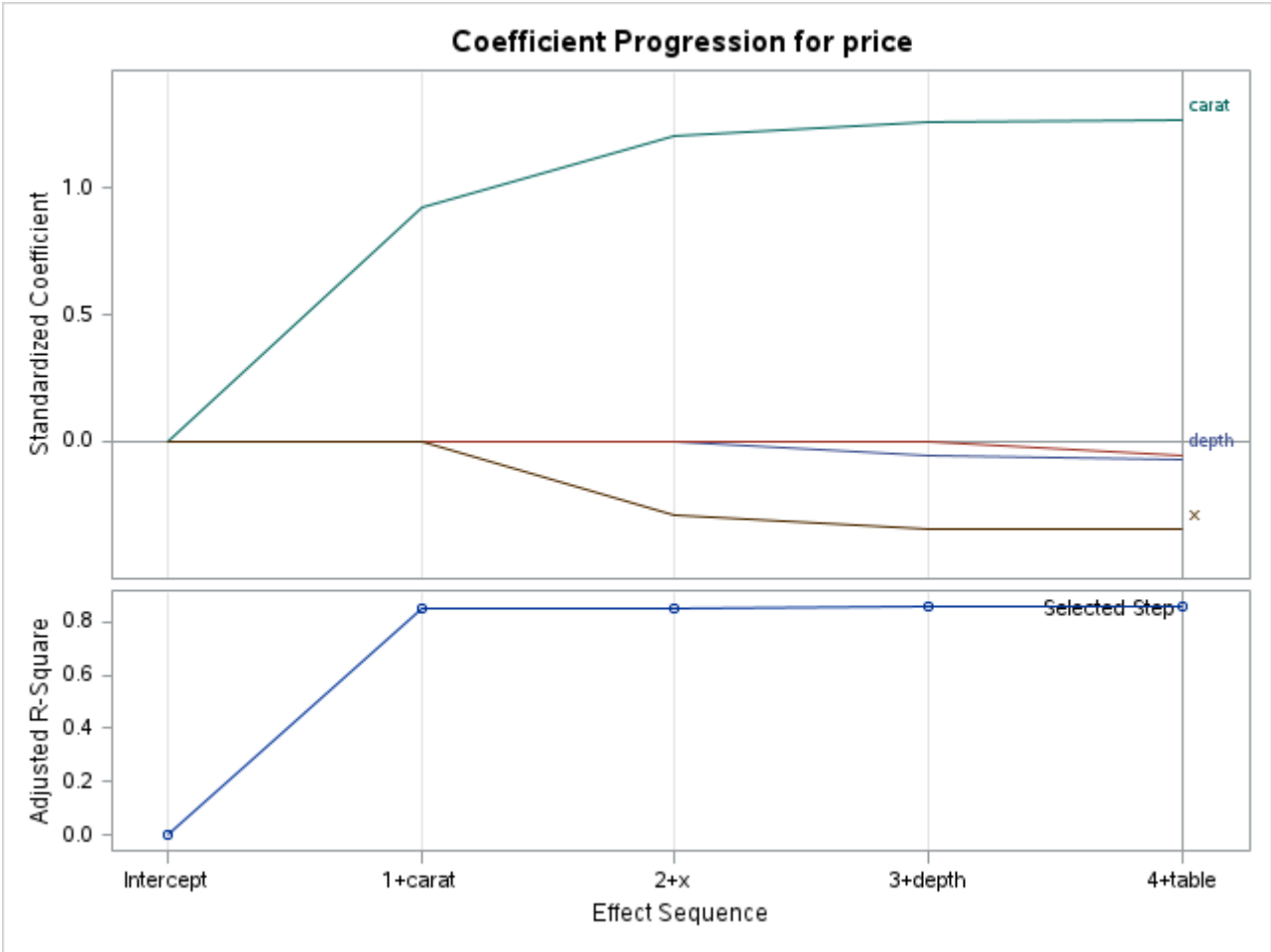
| Dimensions           |   |
|----------------------|---|
| Number of Effects    | 5 |
| Number of Parameters | 5 |

| Forward Selection Summary    |                |                   |                   |
|------------------------------|----------------|-------------------|-------------------|
| Step                         | Effect Entered | Number Effects In | Adjusted R-Square |
| * Optimal Value of Criterion |                |                   |                   |



| Forward Selection Summary    |                |                   |                   |
|------------------------------|----------------|-------------------|-------------------|
| Step                         | Effect Entered | Number Effects In | Adjusted R-Square |
| 0                            | Intercept      | 1                 | 0.0000            |
| 1                            | carat          | 2                 | 0.8493            |
| 2                            | x              | 3                 | 0.8534            |
| 3                            | depth          | 4                 | 0.8563            |
| 4                            | table          | 5                 | 0.8592*           |
| * Optimal Value of Criterion |                |                   |                   |

Selection stopped because all effects are in the final model.





**Selected Model**

The selected model, based on Adj R-Sq, is the model at Step 4.

|          |                               |
|----------|-------------------------------|
| Effects: | Intercept depth table carat x |
|----------|-------------------------------|

**Note:** The p-values for parameters and effects are not adjusted for the fact that the terms in the model have been selected and so are generally liberal.

| Analysis of Variance |       |                |             |         |        |
|----------------------|-------|----------------|-------------|---------|--------|
| Source               | DF    | Sum of Squares | Mean Square | F Value | Pr > F |
| Model                | 4     | 7.375972E11    | 1.843993E11 | 82279.2 | <.0001 |
| Error                | 53935 | 1.208759E11    | 2241141     |         |        |
| Corrected Total      | 53939 | 8.584731E11    |             |         |        |

|                |            |
|----------------|------------|
| Root MSE       | 1497.04397 |
| Dependent Mean | 3932.79972 |
| R-Square       | 0.8592     |
| Adj R-Sq       | 0.8592     |
| AIC            | 842684     |
| AICC           | 842684     |
| SBC            | 788787     |

| Parameter Estimates |    |             |                |         |         |
|---------------------|----|-------------|----------------|---------|---------|
| Parameter           | DF | Estimate    | Standard Error | t Value | Pr >  t |
| Intercept           | 1  | 20766       | 418.983589     | 49.56   | <.0001  |
| depth               | 1  | -201.231070 | 4.851529       | -41.48  | <.0001  |
| table               | 1  | -102.823886 | 3.081648       | -33.37  | <.0001  |
| carat               | 1  | 10693       | 63.167964      | 169.27  | <.0001  |

| Parameter Estimates |    |              |                |         |         |
|---------------------|----|--------------|----------------|---------|---------|
| Parameter           | DF | Estimate     | Standard Error | t Value | Pr >  t |
| x                   | 1  | -1226.773198 | 26.677982      | -45.98  | <.0001  |