1. Lower cluster visualization

coefficient of determination: 0.26615207911485594

intercept: [205.848103]

slope: [[12.75700551]]



Figure 1\_ lower cluster

Stat. Summary

Rig\_count Oil\_Price

count 66.000000 66.000000

mean 866.378788 51.777879

std 266.756747 10.787768

min 348.000000 16.550000

25% 748.000000 46.322500

50% 891.000000 51.480000

75% 1005.500000 58.082500

max 1882.000000 70.980000

2. Upper cluster visualization

----------Upper Cluster------------

coefficient of determination: 0.21835372726237104

intercept: [1109.7532332]

slope: [[7.43425359]]



Figure 2\_upper cluster

Stat. Summary

Rig\_count Oil\_Price

count 58.000000 58.000000

mean 1798.948276 92.705345

std 150.860505 9.482405

min 1350.000000 73.740000

25% 1746.750000 86.322500

50% 1787.000000 94.510000

75% 1921.250000 100.735000

max 2017.000000 109.530000

3. Lower prediction

Coefficients: [[9.20114033]]

Mean squared error: 106276.16

Coefficient of determination (y test vs y predict): 0.09

coefficient of determination (x test vs y predict): -87.61654016162628



Figure 3. Lower cluster prediction

4. Upper prediction

Coefficients: [[-2.70549712]]

Mean squared error: 49256.25

Coefficient of determination (y test vs y predict): -0.25

coefficient of determination (x test vs y predict): -16.91842941839042



Figure 4. Upper prediction