1. Lower cluster visualization

coefficient of determination: 0.4289305923648385

intercept: [53.52164619]

slope: [[14.5138709]]



Figure 1\_ lower cluster

Stat. Summary

Rig\_count Oil\_Price

count 63.000000 63.000000

mean 829.650794 53.063810

std 205.176805 9.132427

min 348.000000 30.320000

25% 727.500000 46.965000

50% 883.000000 51.970000

75% 981.000000 58.710000

max 1109.000000 70.980000

2. Upper cluster visualization

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

coefficient of determination: 0.46582319426108976

intercept: [711.87652883]

slope: [[11.68005448]]



Figure 2\_upper cluster

Stat. Summary

Rig\_count Oil\_Price

count 62.000000 62.000000

mean 1782.564516 91.668065

std 171.171434 10.002233

min 1267.000000 73.740000

25% 1718.500000 84.317500

50% 1782.500000 93.995000

75% 1910.750000 100.472500

max 2017.000000 109.530000

3. Lower prediction

Coefficients: [[9.33002152]]

Mean squared error: 33442.16

Coefficient of determination (y test vs y predict): 0.12

coefficient of determination (x test vs y predict): -43.91960031478429

Figure 3. Lower cluster prediction

4. Upper prediction

Coefficients: [[8.37372782]]

Mean squared error: 26432.48

Coefficient of determination (y test vs y predict): 0.44

coefficient of determination (x test vs y predict): 0.8440780702198116

Figure 4. Upper prediction