

# 1 Clastics

## 1.1 SHC

Table 1: Logs - SHC - Polynomial regression

| Format  | Coff.   | Logs       | R2                    | MAE      |
|---|---|------------|-----------------------|----------|
| $y = a_0 + a_1x_1 + a_2x_1^2$                                 | $a_0 = 6528.132432345905, a_1 = -2338.022766472902, a_2 = 69.12319352569881$  | RHOB       | 0.9915                | 48.2822  |
|   | $a_0 = 692.7191127087726, a_1 = 3097.216406343603, a_2 = 59.90843945999682$   | PHIN       | 0.9973                | 28.2771  |
|   | $a_0 = 1877.4587492622463, a_1 = 20.07548937278091, a_2 = -28.245995512753215$  | VSH        | $-2.3518e-607.669106$ |          |
|   | $a_0 = 5174.324903358844, a_1 = -915.0636302047793, a_2 = 46.45444232782892$  | U          | 0.8444                | 219.5572 |
|   | $a_0 = -557.9952047765271, a_1 = 7.211827182730625, a_2 = 0.00024144596206251368$   | DT         | 0.9976                | 26.1613  |
|   | $a_0 = 4281.761311076096, a_1 = -472.48235462720265, a_2 = 16.07687460521651$   | AI         | 0.9924                | 50.8218  |
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_1^2 + a_4x_1x_2 + a_5x_2^2$ | $a_0 = -30624.439392784083, a_1 = 23722.746285511177, a_2 = 39251.51192545707, a_3 = -4488.449519153133, a_4 = -13683.569480651813, a_5 = -10382.075697734952$  | RHOB, PHIN | 0.9984                | 21.5378  |
|   | $a_0 = 6498.042379604409, a_1 = -2306.241840774372, a_2 = 174.98795635908385, a_3 = 65.6852635918287, a_4 = -81.11221570179184, a_5 = -357.3068326107685$       | RHOB, VSH  | 0.9921                | 46.7976  |
|   | $a_0 = 6743.346106166878, a_1 = -2612.488518093608, a_2 = 80.62625994695213, a_3 = 61.106382125641005, a_4 = 6.654001484856024, a_5 = -2.531560278017802$       | RHOB, U    | 0.9942                | 39.7562  |
|   | $a_0 = -60022.015077469965, a_1 = 36042.801003304754, a_2 = 135.61095175755884, a_3 = -5459.953766861407, a_4 = -38.91600851043561, a_5 = -0.06907293785757174$ | RHOB, DT   | 0.9977                | 25.3782  |
|   | $a_0 = 7581.806185479824, a_1 = -3407.77220201039, a_2 = -408.4193646752273, a_3 = 767.6136539422374, a_4 = 24.35978889535716, a_5 = 8.606637132640229$         | RHOB, AI   | 0.9969                | 30.1736  |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format  | Coff.  | Logs               | R2     | MAE      |
|---|--|--------------------|--------|----------|
|   | $a_0 = 787.5532996452439, a_1 = 3041.0004014932942, a_2 = -456.33899424040766, a_3 = 22.852244596983198, a_4 = 397.22423107551805, a_5 = 48.87428276685722$  | PHIN, VSH          | 0.9991 | 15.9249  |
|   | $a_0 = 668.2435376645474, a_1 = 3307.2166047424553, a_2 = 31.182546767206716, a_3 = -100.89265057063768, a_4 = -48.2765740370919, a_5 = -3.8152073914159526$   | PHIN, U            | 0.9979 | 25.0435  |
|   | $a_0 = -3514.9772417205295, a_1 = -15976.575664432548, a_2 = 44.76392569144352, a_3 = -21386.999870302618, a_4 = 100.51703256920084, a_5 = -0.11789454818460571$   | PHIN, DT           | 0.9985 | 21.2562  |
|   | $a_0 = 1890.3741525556686, a_1 = 1788.6145508611248, a_2 = -121.14656748140406, a_3 = 483.88532725170637, a_4 = -43.45798229249828, a_5 = 2.917122097127873$   | PHIN, AI           | 0.9984 | 21.4874  |
|   | $a_0 = 5112.412075366838, a_1 = 623.4500894196624, a_2 = -922.353631793378, a_3 = -1409.4268077583574, a_4 = 49.59042355950121, a_5 = 45.96697293654693$   | VSH, U             | 0.8459 | 218.7511 |
|   | $a_0 = -477.7519929662119, a_1 = -375.3318105950118, a_2 = 7.135735574112457, a_3 = -150.87993188971046, a_4 = 0.706532886842906, a_5 = 0.0001263901658879035$   | VSH, DT            | 0.9985 | 20.2495  |
|   | $a_0 = 4301.042436096439, a_1 = -38.277771850346866, a_2 = -470.4416260428682, a_3 = -216.64584328971696, a_4 = -4.3892944534233544, a_5 = 16.004307530394485$   | VSH, AI            | 0.9931 | 48.9656  |
|   | $a_0 = -851.9565142120402, a_1 = 63.912621747240614, a_2 = 8.074994914182733, a_3 = -3.4089607714135193, a_4 = -0.09390459888275161, a_5 = -0.00039236008120131674$  | U, DT              | 0.9976 | 26.0854  |
|   | $a_0 = 4496.0584415846015, a_1 = -135.96027799573102, a_2 = -437.9931984839617, a_3 = 11.776199818966413, a_4 = 0.5337139032775204, a_5 = 14.107565443023864$  | U, AI              | 0.9934 | 45.4739  |
|   | $a_0 = 983.5237177806324, a_1 = 2.601421971690568, a_2 = -137.02395613458918, a_3 = 0.003944369702304538, a_4 = 0.1454100837423053, a_5 = 3.7363838278453727$  | DT, AI             | 0.9976 | 25.9484  |
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_1^2 + a_5x_1x_2 + a_6x_1x_3 + a_7x_2^2 + a_8x_2x_3 + a_9x_3^2$ | $a_0 = -6084.996849030492, a_1 = 5449.319501565212, a_2 = 11277.092088435162, a_3 = 378.07863986317454, a_4 = -1076.8374762863796, a_5 = -3252.086322860237, a_6 = -280.3378739630787, a_7 = -2442.3238946050046, a_8 = -72.86611363014366, a_9 = -16.172893517281445$ | RHOB,<br>PHIN, VSH | 0.9996 | 10.0780  |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format | Coff.  | Logs              | R2     | MAE     |
|--------|--|-------------------|--------|---------|
|        | $a_0 = -49694.40094325026, a_1 = 39801.891748800146, a_2 = 59316.72146553678, a_3 = -733.68264376635, a_4 = -7836.015052007359, a_5 = -22197.6408655502, a_6 = 278.4096073335178, a_7 = -15642.612709269397, a_8 = 406.36565681467914, a_9 = -1.3440809674091585$        | RHOB,<br>PHIN, U  | 0.9984 | 21.2074 |
|        | $a_0 = -87668.37177752845, a_1 = 49542.85591598895, a_2 = -28749.556687047578, a_3 = 251.28741503053902, a_4 = -7241.381968175909, a_5 = 4532.806176524229, a_6 = -62.26560710533697, a_7 = -18779.76443492585, a_8 = 104.4107450582701, a_9 = -0.23338877633962973$     | RHOB,<br>PHIN, DT | 0.9987 | 19.3267 |
|        | $a_0 = -25707.97802503114, a_1 = 20282.922779187007, a_2 = 33748.66899116268, a_3 = -101.60155225644114, a_4 = -3721.9984105869066, a_5 = -11824.824988995098, a_6 = -10.148520943281316, a_7 = -8705.105714347974, a_8 = -28.479791548164076, a_9 = 3.3269853051299556$ | RHOB,<br>PHIN, AI | 0.9986 | 20.2431 |
|        | $a_0 = 6426.086780967111, a_1 = -2153.0425866884625, a_2 = 923.7575705019462, a_3 = -14.219803248655726, a_4 = -72.78660990743435, a_5 = -917.8068205762095, a_6 = 65.66510371031158, a_7 = -321.8495583320322, a_8 = 192.5914464128706, a_9 = -9.383754822612916$       | RHOB, VSH,<br>U   | 0.9955 | 35.2083 |
|        | $a_0 = -8626.179415354552, a_1 = 4998.035990943329, a_2 = -985.707457477069, a_3 = 25.06792699692372, a_4 = -766.1809430667165, a_5 = 187.7373986471626, a_6 = -5.498706555881288, a_7 = -155.4537790110625, a_8 = 1.3580258406935815, a_9 = -0.009732921633580107$      | RHOB, VSH,<br>DT  | 0.9986 | 20.2179 |
|        | $a_0 = 7402.018090203355, a_1 = -3134.3332413676385, a_2 = 283.44813830393826, a_3 = -455.03716253821733, a_4 = 681.1075905688541, a_5 = -175.85929471191807, a_6 = 52.061367468483084, a_7 = -196.70463602375585, a_8 = -2.6837703863825144, a_9 = 7.315494613720561$   | RHOB, VSH,<br>AI  | 0.9978 | 25.6830 |
|        | $a_0 = -114030.25481309766, a_1 = 72488.1181443868, a_2 = -1254.1523206025079, a_3 = 247.50645958349403, a_4 = -11575.837357296994, a_5 = 400.89938057652046, a_6 = -76.76055464626504, a_7 = -3.3929066120143854, a_8 = 1.330492622263632, a_9 = -0.1269687249019825$   | RHOB, U,<br>DT    | 0.9977 | 25.1282 |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format | Coff.  | Logs          | R2     | MAE     |
|--------|--|---------------|--------|---------|
|        | $a_0 = 7757.0558403480545, a_1 = -3662.236596227967, a_2 = 132.08238253032033, a_3 = -453.4167019047725, a_4 = 772.9572142944758, a_5 = -38.21394049994063, a_6 = 64.3132493093247, a_7 = -1.4749935352325785, a_8 = -1.7786937714570588, a_9 = 6.787868416080158$     | RHOB, U, AI   | 0.9972 | 28.4016 |
|        | $a_0 = -58042.58731244243, a_1 = 0.03528335933343944, a_2 = 130.68273537640565, a_3 = -49.241096486427, a_4 = -5239.475985796418, a_5 = -38.290308328735954, a_6 = -30.50992168154046, a_7 = -0.06543909606318475, a_8 = 35.28335932564521, a_9 = 4.058249761662441$   | RHOB, DT, AI  | 0.9977 | 25.2128 |
|        | $a_0 = 788.4389187071613, a_1 = 3060.863723273694, a_2 = -25.486579742439638, a_3 = 3.331479228071646, a_4 = 3.020907962574195, a_5 = 43.62201683645275, a_6 = -5.676105170962257, a_7 = 47.38737395551057, a_8 = -56.40091737216497, a_9 = -0.5709686322114946$       | PHIN, VSH, U  | 0.9994 | 13.0630 |
|        | $a_0 = 1438.2631278333208, a_1 = 6973.359280064335, a_2 = -1400.2790124879718, a_3 = -9.217779112171305, a_4 = 5626.762541894752, a_5 = -2046.359470593931, a_6 = -26.502126322101745, a_7 = 9.870131580091435, a_8 = 5.721855121080216, a_9 = 0.03121167214311952$    | PHIN, VSH, DT | 0.9998 | 8.4491  |
|        | $a_0 = 1727.6480695362707, a_1 = 1912.486266137919, a_2 = -355.85680732264115, a_3 = -94.28641146027462, a_4 = 463.1111932973521, a_5 = 332.77283931526773, a_6 = -29.40277695451266, a_7 = -50.08581615618052, a_8 = 0.2657282506838744, a_9 = 2.1458893596391895$    | PHIN, VSH, AI | 0.9998 | 8.4496  |
|        | $a_0 = -4067.7848255749705, a_1 = -16655.34933225073, a_2 = 106.28524228963356, a_3 = 47.864328167783206, a_4 = -21372.55582834362, a_5 = 90.90315118236245, a_6 = 101.73185603723971, a_7 = -4.196755590568921, a_8 = -0.3335588241065891, a_9 = -0.121680506918414$  | PHIN, U, DT   | 0.9986 | 20.3684 |
|        | $a_0 = 1460.2817902041043, a_1 = 2582.748756721135, a_2 = 83.77731464030947, a_3 = -105.67541109519425, a_4 = 119.22769560942696, a_5 = -98.42626081267919, a_6 = -38.874854164099524, a_7 = -3.4394064532584667, a_8 = -2.6109925523659383, a_9 = 3.1646156780928654$ | PHIN, U, AI   | 0.9985 | 21.2019 |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format                         | Coff.   | Logs                     | R2     | MAE     |
|--------------------------------|---|--------------------------|--------|---------|
|                                | $a_0 = -1120.896258879109, a_1 = -12573.05898306143, a_2 = 32.57515168427455, a_3 = -111.15635289971733, a_4 = -18091.532152534597, a_5 = 83.9065831351309, a_6 = -36.05696852745895, a_7 = -0.09447740661275085, a_8 = 0.04372782312598581, a_9 = 2.6405114816200395$  | PHIN, DT, AI             | 0.9985 | 20.6792 |
|                                | $a_0 = -693.8617003175971, a_1 = -360.1136204529576, a_2 = 41.932596614294184, a_3 = 7.6914268770190475, a_4 = -135.3216176346012, a_5 = -2.889803762090418, a_6 = 0.6728514628462942, a_7 = -1.9702185533739875, a_8 = -0.05302572007768652, a_9 = -0.00022337026532571338$  | VSH, U, DT               | 0.9986 | 20.1402 |
|                                | $a_0 = 4494.989015295665, a_1 = 88.8776246246813, a_2 = -135.4382008448981, a_3 = -435.6579398494343, a_4 = -207.8916821401716, a_5 = -22.33395763219716, a_6 = -8.747456787828385, a_7 = 12.74589331199471, a_8 = 0.3260894324942942, a_9 = 14.053121320208563$  | VSH, U, AI               | 0.9942 | 42.7873 |
|                                | $a_0 = 460.2786885124949, a_1 = -558.3908290967787, a_2 = 4.203177026150301, a_3 = -88.37182571870797, a_4 = -152.5985522078658, a_5 = 1.036225568334634, a_6 = 10.454357762631611, a_7 = 0.0025138002216569238, a_8 = 0.11602704468461583, a_9 = 2.3282603317897776$   | VSH, DT, AI              | 0.9986 | 20.1818 |
|                                | $a_0 = 480.7017563910165, a_1 = 115.87238700815698, a_2 = 4.407506182363215, a_3 = -126.77735345243994, a_4 = -3.2443238772170764, a_5 = -0.18468117264610054, a_6 = -2.551311024626114, a_7 = 0.0024927152592660977, a_8 = 0.086487433658704, a_9 = 4.096980957383409$   | U, DT, AI                | 0.9976 | 25.8842 |
| -----                          | -----   | -----                    | -----  | -----   |
| $y =$                          | $a_0 = -9476.995642610196, a_1 = 8491.593827081626, a_2 = 14785.67495807561, a_3 = 386.3847478103804, a_4 = -184.84826988386067, a_5 = -1761.5056216235885, a_6 = -4819.756119360437, a_7 = -298.59459105028833, a_8 = 85.1508656122852, a_9 = -3352.3817068837584, a_{10} = -65.69333940308755, a_{11} = 93.25235763476508, a_{12} = -19.384298882697795, a_{13} = 5.844901933061908, a_{14} = -2.9694546935293$ | RHOB,<br>PHIN, VSH,<br>U | 0.9996 | 10.0011 |
| $a_0 + a_1x_1 + a_2x_2 +$      |   |                          |        |         |
| $a_3x_3 + a_4x_4 +$            |   |                          |        |         |
| $a_5x_1^2 + a_6x_1x_2 +$       |   |                          |        |         |
| $a_7x_1x_3 +$                  |   |                          |        |         |
| $a_8x_1x_4 + a_9x_2^2 +$       |   |                          |        |         |
| $a_{10}x_2x_3 +$               |   |                          |        |         |
| $a_{11}x_2x_4 + a_{12}x_3^2 +$ |   |                          |        |         |
| $a_{13}x_3x_4 + a_{14}x_4^2$   |   |                          |        |         |
| -----                          | -----   | -----                    | -----  | -----   |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format | Coff.  | Logs                      | R2     | MAE     |
|--------|--|---------------------------|--------|---------|
|        | $a_0 = -7271.091448367013, a_1 = 6785.193405940477, a_2 = 16632.962908561964, a_3 = -2460.522428208424, a_4 = -7.8962699778828584, a_5 = -1204.3443872164655, a_6 = -2147.2325875281917, a_7 = 320.0239174984799, a_8 = -3.504589866947371, a_9 = 8556.12319651559, a_{10} = -2095.865890970432, a_{11} = -48.03033282087409, a_{12} = -10.35540105150558, a_{13} = 6.96046899993023, a_{14} = 0.0504510662089854$       | RHOB,<br>PHIN, VSH,<br>DT | 0.9998 | 6.8958  |
|        | $a_0 = -2928.187430621352, a_1 = 3512.481988289442, a_2 = 7361.620826215982, a_3 = 366.8899353881441, a_4 = -133.2248638870774, a_5 = -683.306845565661, a_6 = -2005.1058168023974, a_7 = -268.26204000093975, a_8 = 22.786971268256835, a_9 = -1167.2752929583148, a_{10} = -73.21063221471731, a_{11} = -15.177727924182397, a_{12} = -33.14825508152855, a_{13} = -0.21496298633472413, a_{14} = 1.3249744317116179$  | RHOB,<br>PHIN, VSH,<br>AI | 0.9998 | 8.1415  |
|        | $a_0 = -103857.6004775052, a_1 = 61067.14163736135, a_2 = -26275.747844490907, a_3 = -501.49554522924177, a_4 = 278.93783197858363, a_5 = -9195.729482684943, a_6 = 3967.725259446983, a_7 = 125.51226729867739, a_8 = -72.86928841927991, a_9 = -18937.09323279505, a_{10} = -76.2895673303306, a_{11} = 102.21641469408235, a_{12} = 2.7283996517421794, a_{13} = 0.6882591500295161, a_{14} = -0.24474066164467548$   | RHOB,<br>PHIN, U, DT      | 0.9987 | 19.1153 |
|        | $a_0 = -32866.01455430407, a_1 = 26001.210571097923, a_2 = 41663.64200047618, a_3 = -225.33447644982778, a_4 = -83.44286347816481, a_5 = -4814.665376538263, a_6 = -15058.614997736006, a_7 = 60.973258119950444, a_8 = -19.953375907186, a_9 = -10861.146212944483, a_{10} = 147.95660620536756, a_{11} = -40.43503818945433, a_{12} = 2.7594978706476603, a_{13} = 0.900783114882002, a_{14} = 3.346250145328967$      | RHOB,<br>PHIN, U, AI      | 0.9986 | 20.0433 |
|        | $a_0 = -86082.84376881961, a_1 = 0.0489404729293008, a_2 = -28388.786843218004, a_3 = 246.81605759000445, a_4 = -34.893384552387765, a_5 = -7071.6101387255985, a_6 = 4538.150840622758, a_7 = -61.76216474878893, a_8 = -21.17484227037645, a_9 = -18517.652323348357, a_{10} = 102.95404634413532, a_{11} = -12.14334534250201, a_{12} = -0.22890589567508796, a_{13} = 48.94047260323579, a_{14} = 2.696461750240385$ | RHOB,<br>PHIN, DT, AI     | 0.9987 | 19.2412 |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format | Coff.   | Logs                 | R2     | MAE     |
|--------|---|----------------------|--------|---------|
|        | $a_0 = -33516.493395214544, a_1 = 21896.74969996989, a_2 = -1511.4199370151198, a_3 = -577.05909732325, a_4 = 77.52384491333814, a_5 = -3650.6657751418643, a_6 = 341.60399472193757, a_7 = 207.4447257954612, a_8 = -23.281253894510385, a_9 = -137.2318418333883, a_{10} = 0.45029258556920676, a_{11} = 1.9117662839487721, a_{12} = -5.248205584456441, a_{13} = 0.6015055329159716, a_{14} = -0.03735969135249852$   | RHOB, VSH,<br>U, DT  | 0.9986 | 19.8802 |
|        | $a_0 = 7329.8898384987515, a_1 = -3008.8174441207907, a_2 = 488.05756817993097, a_3 = 77.51887293544868, a_4 = -483.8157757273944, a_5 = 521.0914399195744, a_6 = -423.98515803979484, a_7 = 3.3460772241364083, a_8 = 95.75800012401875, a_9 = -178.12097934817817, a_{10} = 44.2181279140894, a_{11} = 8.230084658664634, a_{12} = -3.783042850610803, a_{13} = -3.6456334327066617, a_{14} = 5.190576405509397$        | RHOB, VSH,<br>U, AI  | 0.9982 | 22.9088 |
|        | $a_0 = -8350.7286452779, a_1 = 0.005077754017369843, a_2 = -1062.8559246596235, a_3 = 24.124475761038273, a_4 = -25.258659012130273, a_5 = -703.5361528022958, a_6 = 151.6105913548389, a_7 = -5.740159649464862, a_8 = -22.286481867274965, a_9 = -152.86139654663936, a_{10} = 1.5776847640518485, a_{11} = 11.146340397775244, a_{12} = -0.008661794311348212, a_{13} = 5.077754028089013, a_{14} = 2.602725434741105$ | RHOB, VSH,<br>DT, AI | 0.9986 | 20.1455 |
|        | $a_0 = -110509.20738180213, a_1 = 0.07106940649105443, a_2 = -1211.742410203195, a_3 = 238.3560448036593, a_4 = -103.63261898062198, a_5 = -11302.159570033396, a_6 = 394.136051931635, a_7 = -75.00219034202435, a_8 = -9.977835570059142, a_9 = -3.2482333443278906, a_{10} = 1.2645684367947816, a_{11} = -1.0842090627959173, a_{12} = -0.12066144575830598, a_{13} = 71.06940650101244, a_{14} = 3.9659563590021314$ | RHOB, U,<br>DT, AI   | 0.9978 | 24.9681 |
|        | $a_0 = 1698.4281354454208, a_1 = 8091.393007110963, a_2 = -1197.7852969804271, a_3 = 0.3376899086061346, a_4 = -11.81560906274418, a_5 = 6283.0873002710205, a_6 = -1914.1946314206032, a_7 = -53.50646461594779, a_8 = -30.30210358756157, a_9 = 4.622243486375454, a_{10} = -14.218780715999443, a_{11} = 5.1980820803513925, a_{12} = -1.3750786433509197, a_{13} = 0.08598936198119383, a_{14} = 0.03623217102371802$ | PHIN, VSH,<br>U, DT  | 0.9998 | 7.4168  |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format | Coff.  | Logs                 | R2     | MAE     |
|--------|--|----------------------|--------|---------|
|        | $a_0 = 1524.8079761726265, a_1 = 2280.941924390271, a_2 = -264.8158915908744, a_3 = 36.20212481234949, a_4 = -87.12304692930327, a_5 = 289.7003703368852, a_6 = 264.09688725347934, a_7 = -37.19487019529714, a_8 = -30.77085576089802, a_9 = -34.08103219522361, a_{10} = -16.249204994414413, a_{11} = 1.5261821483488858, a_{12} = -1.9724364493686364, a_{13} = -0.22340455028055536, a_{14} = 1.9788882591521049$       | PHIN, VSH,<br>U, AI  | 0.9997 | 8.2338  |
|        | $a_0 = 2992.9198139366945, a_1 = 10176.935780256754, a_2 = -1460.057197341929, a_3 = -18.075774726071018, a_4 = -16.129694859917105, a_5 = 8889.779909157085, a_6 = -2120.6411907668694, a_7 = -42.680506254027435, a_8 = -21.64266254605729, a_9 = -9.276886837363348, a_{10} = 5.96921074330824, a_{11} = 1.930668579827853, a_{12} = 0.05136420182365823, a_{13} = -0.15674709499937237, a_{14} = 0.19739103010371364$    | PHIN, VSH,<br>DT, AI | 0.9998 | 7.0981  |
|        | $a_0 = -3347.464149461497, a_1 = -16353.952595241111, a_2 = 139.74816083587862, a_3 = 44.97538133630917, a_4 = -88.27194881928568, a_5 = -20975.237237147405, a_6 = 96.48966068993306, a_7 = 99.97479339085508, a_8 = -6.372182207103515, a_9 = -3.97973507827522, a_{10} = -0.40744699987498767, a_{11} = -1.7311702565699678, a_{12} = -0.11780647140149371, a_{13} = 0.15328243300831168, a_{14} = 2.772017619867927$     | PHIN, U, DT,<br>AI   | 0.9986 | 20.2577 |
|        | $a_0 = 594.3380156126805, a_1 = -747.9234000138581, a_2 = 85.72096123334651, a_3 = 4.889380291267347, a_4 = -83.09952605488337, a_5 = -149.09601048879787, a_6 = 13.876578595584354, a_7 = 1.3234066696681812, a_8 = 12.967545147367506, a_9 = -2.5732648422696767, a_{10} = -0.12328249497078608, a_{11} = -1.4768344060655354, a_{12} = 0.0015792875780873735, a_{13} = -0.07662843793137582, a_{14} = 2.5416448468202275$ | VSH, U, DT,<br>AI    | 0.9986 | 19.8817 |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format   | Coff.  | Logs                          | R2     | MAE    |
|--|--|-------------------------------|--------|--------|
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + a_5x_5 + a_6x_1^2 + a_7x_1x_2 + a_8x_1x_3 + a_9x_1x_4 + a_{10}x_1x_5 + a_{11}x_2^2 + a_{12}x_2x_3 + a_{13}x_2x_4 + a_{14}x_2x_5 + a_{15}x_3^2 + a_{16}x_3x_4 + a_{17}x_3x_5 + a_{18}x_4^2 + a_{19}x_4x_5 + a_{20}x_5^2$ | $a_0 = -1043.9006192503568, a_1 = 2272.4495137936697, a_2 = 13383.781134447167, a_3 = -3512.1160948155216, a_4 = 147.54044077557157, a_5 = -14.499609365341803, a_6 = -403.07855187680184, a_7 = -1135.6230908022976, a_8 = 738.4066119118095, a_9 = -50.72236292509214, a_{10} = -0.7845877416685483, a_{11} = 8322.809760430826, a_{12} = -1870.6011648861204, a_{13} = -38.980670733343494, a_{14} = -43.78846996257534, a_{15} = -1.5435849476915369, a_{16} = -26.347777914939083, a_{17} = 7.569176281858644, a_{18} = 0.5978658292263462, a_{19} = -0.07918515617130317, a_{20} = 0.049782974222818195$ | RHOB,<br>PHIN, VSH,<br>U, DT  | 0.9998 | 6.8293 |
|  | $a_0 = 3599.5436421248614, a_1 = -1853.9663390196893, a_2 = 507.4897583001531, a_3 = 60.691532027175654, a_4 = 226.60129147124192, a_5 = -155.14685482657387, a_6 = 409.09998266922554, a_7 = 847.4960312132387, a_8 = -127.3698710323093, a_9 = -84.85010587108701, a_{10} = 32.88463643836434, a_{11} = 618.9972171483818, a_{12} = 80.69764018917095, a_{13} = -124.87551437278275, a_{14} = -13.83868469286527, a_{15} = -31.589884908802446, a_{16} = -10.939236452644343, a_{17} = -0.15638752497135697, a_{18} = 0.8412543025378039, a_{19} = -0.8055731469733031, a_{20} = 1.2393713272794418$         | RHOB,<br>PHIN, VSH,<br>U, AI  | 0.9998 | 8.0259 |
|  | $a_0 = -7176.800399391492, a_1 = 0.006848456267189161, a_2 = 16684.237189705353, a_3 = -2471.531939371673, a_4 = -8.40797669483166, a_5 = -13.063251980418313, a_6 = -1207.426156549788, a_7 = -2118.113472417294, a_8 = 318.42513235626814, a_9 = -3.57748479102228, a_{10} = -0.01911476794067739, a_{11} = 8553.241850729431, a_{12} = -2096.6531851409077, a_{13} = -48.19739184129049, a_{14} = -7.855962897215737, a_{15} = -10.332335576093923, a_{16} = 6.984650458491789, a_{17} = 0.9446907899264487, a_{18} = 0.05115480778827287, a_{19} = 6.848456656511661, a_{20} = 0.2631519557933496$         | RHOB,<br>PHIN, VSH,<br>DT, AI | 0.9998 | 6.8936 |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format | Coff.   | Logs                        | R2     | MAE     |
|--------|---|-----------------------------|--------|---------|
|        | $a_0 = -101880.57267566079, a_1 = 0.06008573739885048, a_2 =$<br>$-25818.332201762172, a_3 = -488.95478190472494, a_4 = 273.7561574008333, a_5 =$<br>$-16.81706493928747, a_6 = -8942.938037464284, a_7 = 3938.997820011786, a_8 =$<br>$118.94717120785343, a_9 = -72.04060066688793, a_{10} = -28.19220480772873, a_{11} =$<br>$-18701.306413503862, a_{12} = -71.96474344042656, a_{13} = 100.7335476662186, a_{14} =$<br>$-14.407898283566405, a_{15} = 2.729807495614373, a_{16} = 0.6755922914570056, a_{17} =$<br>$0.5573189035646604, a_{18} = -0.23997061449931184, a_{19} = 60.08573759256502, a_{20} =$<br>$2.6672122988127445$     | RHOB,<br>PHIN, U, DT,<br>AI | 0.9988 | 19.0314 |
|        | $a_0 = -32447.66843623586, a_1 = 0.02194829946170288, a_2 =$<br>$-1616.9487516519907, a_3 = -554.674863432357, a_4 = 73.65620675956318, a_5 =$<br>$-97.06524032312689, a_6 = -3656.610933910653, a_7 = 308.16790503221137, a_8 =$<br>$209.0035997355012, a_9 = -22.936472421947084, a_{10} = 4.122297199298904, a_{11} =$<br>$-134.5117031829232, a_{12} = 0.05337893190614542, a_{13} = 2.179422363116872, a_{14} =$<br>$12.317317874350493, a_{15} = -5.118435190344657, a_{16} = 0.551730829376171, a_{17} =$<br>$-1.4600593723055153, a_{18} = -0.034163918317667345, a_{19} = 21.94829947486826, a_{20} =$<br>$2.5444884087572763$       | RHOB, VSH,<br>U, DT, AI     | 0.9986 | 19.8050 |
|        | $a_0 = 2955.2463792886756, a_1 = 10932.385585140732, a_2 = -1423.8320725567276, a_3 =$<br>$5.635826476033424, a_4 = -19.40327335286102, a_5 = -10.108440066921947, a_6 =$<br>$9186.387055455023, a_7 = -2000.176435811802, a_8 = -82.34342160924203, a_9 =$<br>$-44.71273979086519, a_{10} = -9.482058737140424, a_{11} = -11.085751617752962, a_{12} =$<br>$1.973813032555338, a_{13} = 5.704077133602759, a_{14} = 1.8527509581603834, a_{15} =$<br>$-1.8544036951763703, a_{16} = 0.13038891492207616, a_{17} =$<br>$-0.24033664580335926, a_{18} = 0.054043823886638906, a_{19} =$<br>$-0.15389901482811708, a_{20} = 0.2246674746504409$ | PHIN, VSH,<br>U, DT, AI     | 0.9998 | 6.9664  |

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Table 1: Logs - SHC - Polynomial regression (Continued)

| Format  | Coff.   | Logs                             | R2     | MAE    |
|---|---|----------------------------------|--------|--------|
| $y =$<br>$a_0 + a_1x_1 + a_2x_2 +$<br>$a_3x_3 + a_4x_4 +$<br>$a_5x_5 + a_6x_6 +$<br>$a_7x_1^2 + a_8x_1x_2 +$<br>$a_9x_1x_3 +$<br>$a_{10}x_1x_4 +$<br>$a_{11}x_1x_5 +$<br>$a_{12}x_1x_6 +$<br>$a_{13}x_2^2 + a_{14}x_2x_3 +$<br>$a_{15}x_2x_4 +$<br>$a_{16}x_2x_5 +$<br>$a_{17}x_2x_6 +$<br>$a_{18}x_3^2 + a_{19}x_3x_4 +$<br>$a_{20}x_3x_5 +$<br>$a_{21}x_3x_6 +$<br>$a_{22}x_4^2 + a_{23}x_4x_5 +$<br>$a_{24}x_4x_6 + a_{25}x_5^2 +$<br>$a_{26}x_5x_6 + a_{27}x_6^2$ | $a_0 = -922.4292430570115, a_1 = 0.0023307572030380913, a_2 =$<br>$13456.99788685836, a_3 = -3521.853011156594, a_4 = 148.6848035951888, a_5 =$<br>$-15.149169387246445, a_6 = -15.116797522961399, a_7 = -411.2907890816676, a_8 =$<br>$-1125.6384988522875, a_9 = 737.7269943932564, a_{10} = -50.27824721336241, a_{11} =$<br>$-0.7922723152185336, a_{12} = 1.2159219175070746, a_{13} = 8315.094443227079, a_{14} =$<br>$-1870.5442584774091, a_{15} = -38.06517598777006, a_{16} = -43.932369475749326, a_{17} =$<br>$-6.440299092872194, a_{18} = -1.612677120078852, a_{19} = -26.38557487985591, a_{20} =$<br>$7.58770750509939, a_{21} = 0.7480384019737164, a_{22} = 0.5974125969252448, a_{23} =$<br>$-0.08420992836457013, a_{24} = -0.10612668194427062, a_{25} =$<br>$0.050523478433099074, a_{26} = 2.3307571133930733, a_{27} = 0.25208746636275564$ | RHOB,<br>PHIN, VSH,<br>U, DT, AI | 0.9998 | 6.8274 |

## 1.2 TC

Table 2: Logs - TC - Polynomial regression

| Format                             | Coff.  | Logs | R2     | MAE    |
|------------------------------------|--|------|--------|--------|
| $y =$<br>$a_0 + a_1x_1 + a_2x_1^2$ | $a_0 = 4.275173568063147, a_1 = -4.9875118519088835, a_2 = 1.9066363666837591$ | RHOB | 0.9554 | 0.1507 |
|                                    | $a_0 = 4.780268432270949, a_1 = -8.412982330365205, a_2 = 4.7595516892810155$  | PHIN | 0.9644 | 0.1365 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format  | Coff.  | Logs       | R2     | MAE    |
|---|--|------------|--------|--------|
|   | $a_0 = 2.7588208769307188, a_1 = -1.090685090218025, a_2 = -0.01403421947544018$   | VSH        | 0.0095 | 0.9373 |
|   | $a_0 = -1.1337808165890042, a_1 = 0.8201835552104842, a_2 = -0.015795639261830238$   | U          | 0.7509 | 0.4067 |
|   | $a_0 = 8.919491215028346, a_1 = -0.02854088124804317, a_2 = 2.5893988160031656e - 05$  | DT         | 0.9598 | 0.1434 |
|   | $a_0 = -0.27609335862518725, a_1 = 0.4535670823760844, a_2 = -0.008105149906995755$  | AI         | 0.9612 | 0.1388 |
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_1^2 + a_4x_1x_2 + a_5x_2^2$ | $a_0 = -62.0663709341782, a_1 = 47.966532410007574, a_2 = 69.49164122882654, a_3 = -8.592181282000299, a_4 = -27.99522532469252, a_5 = -17.890475339540647$          | RHOB, PHIN | 0.9662 | 0.1322 |
|   | $a_0 = 3.458590999047595, a_1 = -4.426365464796012, a_2 = 2.8179994553030037, a_3 = 1.8687527148699041, a_4 = -1.7882092572150925, a_5 = 0.35716446480327796$        | RHOB, VSH  | 0.9637 | 0.1381 |
|   | $a_0 = 5.655146456266424, a_1 = -7.409243877545748, a_2 = 0.382233728956985, a_3 = 2.999718828029086, a_4 = -0.34079572270061254, a_5 = 0.02081069800698437$         | RHOB, U    | 0.9629 | 0.1398 |
|   | $a_0 = -177.57022107037648, a_1 = 110.23472548974007, a_2 = 0.38084327747295205, a_3 = -16.28022048859659, a_4 = -0.12104144677074412, a_5 = -0.0001987181174086252$ | RHOB, DT   | 0.9611 | 0.1408 |
|   | $a_0 = -0.263921740731877, a_1 = 0.1410141692451447, a_2 = 0.39911330443583176, a_3 = -0.09340405781678103, a_4 = 0.040583017782040536, a_5 = -0.010514522682328128$ | RHOB, AI   | 0.9612 | 0.1386 |
|   | $a_0 = 5.042984660172692, a_1 = -8.737251185952958, a_2 = -1.1201861287266708, a_3 = 4.633117155246527, a_4 = 1.9121272411440418, a_5 = -0.43339090517646106$        | PHIN, VSH  | 0.9687 | 0.1274 |
|   | $a_0 = 4.646685359125808, a_1 = -8.167790528264309, a_2 = 0.0103396509531474, a_3 = 4.6529853903488805, a_4 = -0.01306759879335987, a_5 = 0.0011480068133502012$     | PHIN, U    | 0.9645 | 0.1359 |
|   | $a_0 = -1.6325764230717663, a_1 = -40.99638912846838, a_2 = 0.07616127092433325, a_3 = -36.36391064778476, a_4 = 0.19261590397826636, a_5 = -0.00022540515522594053$ | PHIN, DT   | 0.9646 | 0.1358 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format  | Coff.  | Logs               | R2     | MAE    |
|---|--|--------------------|--------|--------|
|   | $a_0 = 2.7090250576121484, a_1 = -2.9647055851365054, a_2 = 0.2067427377836122, a_3 = 1.0309622895438997, a_4 = -0.24581940285553316, a_5 = -0.004364585476124046$   | PHIN, AI           | 0.9657 | 0.1313 |
|   | $a_0 = -1.3194775188614334, a_1 = 0.5150315014480445, a_2 = 0.9232592504157491, a_3 = 2.4380419580225574, a_4 = -0.6291665891707037, a_5 = -0.01127767731377897$   | VSH, U             | 0.7744 | 0.3907 |
|   | $a_0 = 9.408358389967553, a_1 = -2.4742749568004903, a_2 = -0.02929048091278822, a_3 = -0.02373304119510619, a_4 = 0.005268115173946001, a_5 = 2.526785500207098e - 05$  | VSH, DT            | 0.9660 | 0.1312 |
|   | $a_0 = -0.39559232280864, a_1 = 0.3524563077671862, a_2 = 0.49993289188389406, a_3 = 0.05149572013927728, a_4 = -0.15251295973129847, a_5 = -0.008879066577401507$   | VSH, AI            | 0.9677 | 0.1258 |
|   | $a_0 = 9.199167474588572, a_1 = -0.01887491062551122, a_2 = -0.02946341236104025, a_3 = -0.0010447223853669368, a_4 = 3.8961650383273444e - 05, a_5 = 2.664311215383405e - 05$   | U, DT              | 0.9599 | 0.1435 |
|   | $a_0 = -0.276936882420872, a_1 = -0.04942389188018605, a_2 = 0.5066218118535483, a_3 = 0.001896369878089515, a_4 = -0.0037020952996900105, a_5 = -0.008746801664497445$  | U, AI              | 0.9623 | 0.1371 |
|   | $a_0 = 1.924714209694596, a_1 = -0.00861046823524608, a_2 = 0.25141213468055656, a_3 = 8.395217978851232e - 06, a_4 = 0.00039342197646496826, a_5 = -0.0034519040661420072$  | DT, AI             | 0.9612 | 0.1386 |
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_1^2 + a_5x_1x_2 + a_6x_1x_3 + a_7x_2^2 + a_8x_2x_3 + a_9x_3^2$ | $a_0 = 18.111862569435708, a_1 = -12.507039423340776, a_2 = -22.100013488859897, a_3 = 8.272547199439728, a_4 = 2.8468224643451268, a_5 = 6.540771261752229, a_6 = -3.624005636848502, a_7 = 8.027975447323753, a_8 = -3.3675407979686307, a_9 = 0.012593451903314526$     | RHOB,<br>PHIN, VSH | 0.9712 | 0.1210 |
|   | $a_0 = -66.14610765293143, a_1 = 48.43156206413852, a_2 = 77.2157517974412, a_3 = 0.5998830843205176, a_4 = -7.8222100801785865, a_5 = -30.065820952143326, a_6 = -0.47614431402770413, a_7 = -20.680615981316354, a_8 = -0.11582947970074435, a_9 = 0.040948756612526206$ | RHOB,<br>PHIN, U   | 0.9670 | 0.1312 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format | Coff.  | Logs              | R2     | MAE    |
|--------|--|-------------------|--------|--------|
|        | $a_0 = -166.7211448485081, a_1 = 86.55741881631712, a_2 = -114.55954527481192, a_3 = 0.5847688292837548, a_4 = -11.590934555811387, a_5 = 14.469305915623838, a_6 = -0.12444187413576396, a_7 = -65.68397082542751, a_8 = 0.38541033307383665, a_9 = -0.0006916434728967773$       | RHOB,<br>PHIN, DT | 0.9670 | 0.1309 |
|        | $a_0 = -67.05228948074408, a_1 = 56.84281480997184, a_2 = 63.90097135776773, a_3 = -1.2928112278985682, a_4 = -10.894466566518915, a_5 = -28.86207914886634, a_6 = 0.33282518744859135, a_7 = -13.52474242066208, a_8 = 0.7102499033420412, a_9 = 0.0137238627043917$              | RHOB,<br>PHIN, AI | 0.9676 | 0.1276 |
|        | $a_0 = 5.1061956500546, a_1 = -7.112799030799967, a_2 = 1.2817441594991008, a_3 = 0.4690698030894371, a_4 = 2.9649489181678894, a_5 = -0.24188521436807117, a_6 = -0.3777053283934708, a_7 = 0.28315756277879106, a_8 = -0.3245610753121419, a_9 = 0.029471488597251606$           | RHOB, VSH,<br>U   | 0.9689 | 0.1277 |
|        | $a_0 = 3.7707865900501, a_1 = -2.6277340787022934, a_2 = 35.912558627370295, a_3 = -0.020761993601751787, a_4 = 1.3066508398833347, a_5 = -11.66041475380442, a_6 = 0.00394852947354302, a_7 = 0.366607157436022, a_8 = -0.03619596009481102, a_9 = 2.2599868403133e - 05$         | RHOB, VSH,<br>DT  | 0.9682 | 0.1272 |
|        | $a_0 = -1.8590437188188051, a_1 = 2.4510171206550364, a_2 = 1.0835413180587465, a_3 = 0.0837066693736903, a_4 = -0.9019815724564375, a_5 = -0.4932192260331328, a_6 = 0.2558851799106276, a_7 = 0.10639171651342097, a_8 = -0.11492829596994025, a_9 = -0.02085520774404676$       | RHOB, VSH,<br>AI  | 0.9681 | 0.1254 |
|        | $a_0 = 283.5743984920205, a_1 = -209.57502527800773, a_2 = 12.962529696491385, a_3 = -0.5558855447488896, a_4 = 39.39987981013753, a_5 = -4.651323252636662, a_6 = 0.20313542008291605, a_7 = 0.11486244117324607, a_8 = -0.01293663494678604, a_9 = 0.0002774027785898276$        | RHOB, U,<br>DT    | 0.9641 | 0.1371 |
|        | $a_0 = 2.046993233929996, a_1 = -3.2615836363114785, a_2 = 0.49447808967693363, a_3 = -0.036119922886075115, a_4 = 1.6604615876806503, a_5 = -0.42235264315311444, a_6 = 0.09552692630642406, a_7 = 0.022978410069716574, a_8 = 0.009466935660873442, a_9 = -0.006614303569206122$ | RHOB, U, AI       | 0.9640 | 0.1354 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format | Coff.  | Logs          | R2     | MAE    |
|--------|--|---------------|--------|--------|
|        | $a_0 = -169.97245960195733, a_1 = 0.00010785966787512363, a_2 = 0.35836500410320354, a_3 = -0.3824029901229694, a_4 = -16.6589030714186, a_5 = -0.11374932946822354, a_6 = 0.21850096530837898, a_7 = -0.00018784023595614648, a_8 = 0.10785966785033314, a_9 = -0.005925464268313732$ | RHOB, DT, AI  | 0.9617 | 0.1378 |
|        | $a_0 = 5.0463531455015005, a_1 = -8.584067907788027, a_2 = -1.6005761856730878, a_3 = -0.03542624170602341, a_4 = 4.506719563412869, a_5 = 2.320463926301223, a_6 = 0.007033355273232002, a_7 = -0.3746121170088931, a_8 = 0.052801767438204895, a_9 = 0.005150727378296716$           | PHIN, VSH, U  | 0.9693 | 0.1255 |
|        | $a_0 = 10.213672890977941, a_1 = 18.156231120243707, a_2 = 5.721712991512015, a_3 = -0.0653298225215398, a_4 = 39.47546254018052, a_5 = 18.740055706615617, a_6 = -0.16886919034622142, a_7 = -0.762590278595843, a_8 = -0.039256181079545004, a_9 = 0.00020449260333496247$           | PHIN, VSH, DT | 0.9696 | 0.1255 |
|        | $a_0 = 1.8501553686470382, a_1 = -2.213339624600824, a_2 = -0.2209730860180648, a_3 = 0.3318838665804101, a_4 = 0.7919673154759921, a_5 = 0.7784244115906164, a_6 = -0.22029579854057257, a_7 = -0.24285671536948228, a_8 = -0.08236632213834898, a_9 = -0.007620188607794019$         | PHIN, VSH, AI | 0.9704 | 0.1198 |
|        | $a_0 = -9.145211452275232, a_1 = -61.99776131895495, a_2 = 0.6297807486379318, a_3 = 0.13510726599264242, a_4 = -48.10217522639502, a_5 = 1.1531286489378627, a_6 = 0.26453273955199696, a_7 = -0.006729979767912746, a_8 = -0.002958025833272053, a_9 = -0.0003316949097066466$       | PHIN, U, DT   | 0.9648 | 0.1354 |
|        | $a_0 = 2.7828472605680776, a_1 = -3.1715094855512143, a_2 = -0.012579806100986165, a_3 = 0.20437948068597966, a_4 = 1.164565229209674, a_5 = 0.009982589086110027, a_6 = -0.23747409446680098, a_7 = 0.0032590513678900737, a_8 = -0.002914624175652851, a_9 = -0.003491380255191989$  | PHIN, U, AI   | 0.9658 | 0.1313 |
|        | $a_0 = -7.410525597318248, a_1 = -48.13397887253473, a_2 = 0.09635511409217658, a_3 = -0.30615591311913776, a_4 = -57.42229118913866, a_5 = 0.2711699448266666, a_6 = -0.5607276909748328, a_7 = -0.00030164382209131157, a_8 = 0.0030220980336250385, a_9 = 0.005393164883265933$     | PHIN, DT, AI  | 0.9676 | 0.1281 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format   | Coff.  | Logs                     | R2     | MAE    |
|--|--|--------------------------|--------|--------|
|  | $a_0 = 9.795661835468291, a_1 = -2.034723659738994, a_2 = -0.09355130842023171, a_3 = -0.030557742062989838, a_4 = 0.018286666301597403, a_5 = -0.04893859323475276, a_6 = 0.004606422030940696, a_7 = 0.005501106745278504, a_8 = 0.00015193239451263547, a_9 = 2.629318155740887e - 05$  | VSH, U, DT               | 0.9660 | 0.1311 |
|  | $a_0 = -0.362696107814636, a_1 = 0.5715156591064636, a_2 = -0.0653547048318582, a_3 = 0.540996543076393, a_4 = 0.0024484092644874622, a_5 = -0.07721365545671365, a_6 = -0.12263279835139132, a_7 = 0.005303388525285439, a_8 = -0.0019782821023561904, a_9 = -0.01008569195485207$  | VSH, U, AI               | 0.9682 | 0.1245 |
|  | $a_0 = -3.1089712571868935, a_1 = 0.9621175603105276, a_2 = 0.006245806887268062, a_3 = 0.7079537939177879, a_4 = 0.07633952991998087, a_5 = -0.0011425592976861453, a_6 = -0.18699986938649443, a_7 = -3.632998815802089e - 06, a_8 = -3.253787097325857e - 05, a_9 = -0.014721711831965094$  | VSH, DT, AI              | 0.9679 | 0.1257 |
|  | $a_0 = -2.901169142797169, a_1 = -0.26365485018879287, a_2 = -0.006776387914114571, a_3 = 0.21387236247969676, a_4 = 0.005162098690732256, a_5 = 0.00025464471304709776, a_6 = 0.0002617934826251548, a_7 = 1.2041247838874693e - 05, a_8 = 0.0026325227487596745, a_9 = -0.002556182648506772$  | U, DT, AI                | 0.9636 | 0.1368 |
| -----  |  |                          |        |        |
| $y =$<br>$a_0 + a_1x_1 + a_2x_2 +$<br>$a_3x_3 + a_4x_4 +$<br>$a_5x_1^2 + a_6x_1x_2 +$<br>$a_7x_1x_3 +$<br>$a_8x_1x_4 + a_9x_2^2 +$<br>$a_{10}x_2x_3 +$<br>$a_{11}x_2x_4 + a_{12}x_3^2 +$<br>$a_{13}x_3x_4 + a_{14}x_4^2$ | $a_0 = 57.6582548525435, a_1 = -48.85996562131358, a_2 = -62.054079598433525, a_3 = 14.121402116304289, a_4 = 2.13335607281016, a_5 = 11.23550843760532, a_6 = 24.797750693333317, a_7 = -6.0742569628089305, a_8 = -1.0158106568362728, a_9 = 18.181452154401306, a_{10} = -6.479799159574811, a_{11} = -1.0326555394938557, a_{12} = 0.0001552961059686686, a_{13} = 0.11086933382756897, a_{14} = 0.034986452985728854$ | RHOB,<br>PHIN, VSH,<br>U | 0.9718 | 0.1203 |
| -----  |  |                          |        |        |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format | Coff.   | Logs                      | R2     | MAE    |
|--------|---|---------------------------|--------|--------|
|        | $a_0 = 17.31278455830583, a_1 = -14.388646942936056, a_2 =$<br>$0.056669964498426026, a_3 = 52.51229948743423, a_4 = -0.048814988705049876, a_5 =$<br>$3.3096335251344056, a_6 = 0.07098144785964405, a_7 = -13.56018836847831, a_8 =$<br>$0.01619511342067209, a_9 = 21.15614989966704, a_{10} = 23.693595673992895, a_{11} =$<br>$-0.07953078423164324, a_{12} = -0.4381139920543614, a_{13} =$<br>$-0.09926622789048611, a_{14} = 0.00011191158371059533$    | RHOB,<br>PHIN, VSH,<br>DT | 0.9729 | 0.1191 |
|        | $a_0 = 27.046512406497563, a_1 = -17.514525595501716, a_2 =$<br>$-33.752638486488074, a_3 = 7.9831264786460645, a_4 = -0.45915845929493126, a_5 =$<br>$3.322952072549825, a_6 = 11.82094752585341, a_7 = -3.1524857276863876, a_8 =$<br>$0.25861063139410106, a_9 = 10.348222739606406, a_{10} = -3.7541609404122664, a_{11} =$<br>$-0.32680763889958164, a_{12} = -0.04714524754707605, a_{13} =$<br>$-0.07063332767945933, a_{14} = -0.01044005884551602$     | RHOB,<br>PHIN, VSH,<br>AI | 0.9722 | 0.1172 |
|        | $a_0 = 246.60095992633947, a_1 = -201.62659201890497, a_2 =$<br>$-115.28928191291871, a_3 = 12.357404095124444, a_4 = -0.252591985495572, a_5 =$<br>$37.95590767188801, a_6 = 4.5714209420035345, a_7 = -4.234624068057073, a_8 =$<br>$0.18687029014217563, a_9 = -97.47091002763459, a_{10} = 0.9884378065400382, a_{11} =$<br>$0.5097586851723039, a_{12} = 0.09795738400473677, a_{13} = -0.014332525740666043, a_{14} =$<br>$-0.00038747739603184713$       | RHOB,<br>PHIN, U, DT      | 0.9689 | 0.1283 |
|        | $a_0 = 2.514613024260102, a_1 = -9.06002738642769, a_2 = 7.729807548911206, a_3 =$<br>$2.639175668756234, a_4 = -0.06761912530562723, a_5 = 4.56776219091978, a_6 =$<br>$0.39452415769508614, a_7 = -1.3755856334856134, a_8 = -0.036159975528432226, a_9 =$<br>$-4.179680485976733, a_{10} = -1.0963626689593577, a_{11} = -0.6381556882666614, a_{12} =$<br>$0.056989411704088076, a_{13} = 0.00957661480311238, a_{14} = -0.000817728111303821$              | RHOB,<br>PHIN, U, AI      | 0.9688 | 0.1262 |
|        | $a_0 = -147.25235017496556, a_1 = 8.451996011229588e-05, a_2 =$<br>$-102.20833229136186, a_3 = 0.5024611408333585, a_4 = -1.0297910312861511, a_5 =$<br>$-11.703124318734424, a_6 = 15.74719717623148, a_7 = -0.11695147867418441, a_8 =$<br>$0.2412790476881342, a_9 = -61.02384915922522, a_{10} = 0.34331844324291094, a_{11} =$<br>$-0.6480716680097166, a_{12} = -0.0005907519160038838, a_{13} =$<br>$0.08451995898673717, a_{14} = 0.002381410589813345$ | RHOB,<br>PHIN, DT, AI     | 0.9679 | 0.1270 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format | Coff.   | Logs                 | R2     | MAE    |
|--------|---|----------------------|--------|--------|
|        | $a_0 = 481.87392926247486, a_1 = -333.7964612582064, a_2 = 48.79578913519271, a_3 = 13.11756142435039, a_4 = -0.998809412776318, a_5 = 58.74221234079996, a_6 = -16.189390733074713, a_7 = -4.6012642550301175, a_8 = 0.3424335706319654, a_9 = -0.010788727941703253, a_{10} = 0.24816258962640989, a_{11} = -0.049069347631291525, a_{12} = 0.09654622654039775, a_{13} = -0.013340378330969035, a_{14} = 0.0005229548728742595$                | RHOB, VSH,<br>U, DT  | 0.9710 | 0.1232 |
|        | $a_0 = -0.2953804906170605, a_1 = 0.3416869835162907, a_2 = 0.004070602967749476, a_3 = 0.3703950455882526, a_4 = -0.33801744487322494, a_5 = 0.20736775451528777, a_6 = 0.6286838131730489, a_7 = -0.31190322279148397, a_8 = 0.3503350251369357, a_9 = 0.17914475420020587, a_{10} = -0.25885877454667333, a_{11} = -0.115577096928895, a_{12} = 0.026817870412218846, a_{13} = -0.0006563439449144833, a_{14} = -0.018007760336601467$         | RHOB, VSH,<br>U, AI  | 0.9698 | 0.1231 |
|        | $a_0 = 7.013943760143356, a_1 = -4.464618282102969e - 06, a_2 = 36.68851917123493, a_3 = -0.029733750259513515, a_4 = -0.14711136898990812, a_5 = 0.49781320776642574, a_6 = -10.90257607272383, a_7 = 0.010698658142417532, a_8 = 0.31268807664987064, a_9 = 0.3164927728489973, a_{10} = -0.03946934798093934, a_{11} = -0.17358871997104766, a_{12} = 2.233990606227437e - 05, a_{13} = -0.004464618693518107, a_{14} = -0.019531900210201528$ | RHOB, VSH,<br>DT, AI | 0.9688 | 0.1239 |
|        | $a_0 = 296.8532706528972, a_1 = -0.00021387763084192222, a_2 = 13.091466080226901, a_3 = -0.5948708115743535, a_4 = -0.6408752155883286, a_5 = 39.123869951190024, a_6 = -4.667663297535967, a_7 = 0.2142941083962262, a_8 = 0.3002649495367848, a_9 = 0.11524241280434265, a_{10} = -0.013147308737545695, a_{11} = -0.0039804072356819965, a_{12} = 0.00029931580776563187, a_{13} = -0.21387763088417314, a_{14} = -0.005245638858722786$      | RHOB, U,<br>DT, AI   | 0.9647 | 0.1340 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format | Coff.  | Logs                 | R2     | MAE    |
|--------|--|----------------------|--------|--------|
|        | $a_0 = 8.274758707764958, a_1 = 14.755961786586887, a_2 = 7.944165760693852, a_3 =$<br>$0.11025656113912646, a_4 = -0.054279674084837054, a_5 = 39.13055929329188, a_6 =$<br>$21.168759736502434, a_7 = 0.17757141874290686, a_8 = -0.16342351516530013, a_9 =$<br>$-0.6331932588724776, a_{10} = -0.14266461914859427, a_{11} =$<br>$-0.04680139823212797, a_{12} = 0.002918655053916793, a_{13} =$<br>$-0.0004406955130440151, a_{14} = 0.00019270945244640716$      | PHIN, VSH,<br>U, DT  | 0.9700 | 0.1244 |
|        | $a_0 = 2.5883279368219125, a_1 = -3.4035372616910817, a_2 =$<br>$-0.14103758964270677, a_3 = -0.17623925412939553, a_4 = 0.31841041520721663, a_5 =$<br>$1.2697026954316535, a_6 = 0.6835296454967204, a_7 = 0.18082681053596603, a_8 =$<br>$-0.24260898223579805, a_9 = -0.24750314444641794, a_{10} =$<br>$0.0037851773979128587, a_{11} = -0.09171948433734116, a_{12} =$<br>$0.006653239103011244, a_{13} = 0.006565222997877111, a_{14} = -0.009030506787720211$  | PHIN, VSH,<br>U, AI  | 0.9705 | 0.1197 |
|        | $a_0 = -3.872408189028919, a_1 = -0.29601980315058773, a_2 = 9.115133769343641, a_3 =$<br>$0.001492903958868422, a_4 = 0.30115760223540394, a_5 = 14.695476422388664, a_6 =$<br>$19.98778248005903, a_7 = -0.05799399056930358, a_8 = -0.14364990193439245, a_9 =$<br>$-0.6678170611643808, a_{10} = -0.04762648309986176, a_{11} =$<br>$-0.15027506014464984, a_{12} = 6.171134038078299e - 05, a_{13} =$<br>$0.0013393239360841764, a_{14} = -0.005598801846890647$  | PHIN, VSH,<br>DT, AI | 0.9723 | 0.1181 |
|        | $a_0 = -21.295474851603174, a_1 = -83.71873028131117, a_2 =$<br>$0.43229667323282556, a_3 = 0.19153941562822976, a_4 = -0.3142722545204346, a_5 =$<br>$-87.30349395497238, a_6 = 1.3148618990315035, a_7 = 0.428861605334748, a_8 =$<br>$-0.5931362528189732, a_9 = -0.00038253245528402396, a_{10} =$<br>$-0.0030975345364149713, a_{11} = 0.0007510615257287688, a_{12} =$<br>$-0.0005074803113304129, a_{13} = 0.004678528646417071, a_{14} = 0.005028225390239967$ | PHIN, U, DT,<br>AI   | 0.9689 | 0.1271 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format   | Coff.  | Logs                         | R2     | MAE    |
|--|--|------------------------------|--------|--------|
|  | $a_0 = -6.4630427140404265, a_1 = 3.9817790728242475, a_2 =$<br>$-0.5346078226284852, a_3 = 0.004108713195302345, a_4 = 0.6653918844157963, a_5 =$<br>$0.21267356259580394, a_6 = -0.3038495457797855, a_7 = -0.005651016026874208, a_8 =$<br>$-0.19081218639884445, a_9 = 0.017206467435706443, a_{10} =$<br>$0.0007969981369245885, a_{11} = 0.007752048092680602, a_{12} =$<br>$2.9688390739812826e - 06, a_{13} = 0.00198512278363321, a_{14} = -0.01548763322902346$  | VSH, U, DT,<br>AI            | 0.9695 | 0.1242 |
| $y = a_0 + a_1x_1 +$<br>$a_2x_2 + a_3x_3 +$<br>$a_4x_4 + a_5x_5 +$<br>$a_6x_1^2 + a_7x_1x_2 +$<br>$a_8x_1x_3 +$<br>$a_9x_1x_4 +$<br>$a_{10}x_1x_5 +$<br>$a_{11}x_2^2 + a_{12}x_2x_3 +$<br>$a_{13}x_2x_4 +$<br>$a_{14}x_2x_5 +$<br>$a_{15}x_3^2 + a_{16}x_3x_4 +$<br>$a_{17}x_3x_5 + a_{18}x_4^2 +$<br>$a_{19}x_4x_5 + a_{20}x_5^2$ | $a_0 = 394.0375725230351, a_1 = -282.93789953327945, a_2 = -41.30493706604534, a_3 =$<br>$58.59547326127607, a_4 = 11.45398949016226, a_5 = -0.7358492660215541, a_6 =$<br>$50.487489820530605, a_7 = 6.320747065500322, a_8 = -16.3392808477125, a_9 =$<br>$-3.9449555584147045, a_{10} = 0.27784555160905183, a_{11} = -3.7366300144755202, a_{12} =$<br>$19.769916656923932, a_{13} = 0.2713536718000414, a_{14} = 0.06136687562776411, a_{15} =$<br>$-0.5781405238094096, a_{16} = 0.1745892219698234, a_{17} = -0.09770025489682728, a_{18} =$<br>$0.07954727748366301, a_{19} = -0.012201567703441751, a_{20} = 0.0003229548243661464$           | RHOB,<br>PHIN, VSH,<br>U, DT | 0.9744 | 0.1165 |
|  | $a_0 = 111.90077823760647, a_1 = -92.92470993708339, a_2 = -118.72351048604557, a_3 =$<br>$12.747794135148185, a_4 = 3.816399848758301, a_5 = -0.38694758950324015, a_6 =$<br>$20.227972382192206, a_7 = 49.73711229974042, a_8 = -5.04988251016476, a_9 =$<br>$-1.7378129476787352, a_{10} = 0.20758153785553007, a_{11} = 31.600948153796736, a_{12} =$<br>$-6.3466379306258185, a_{13} = -1.8726622805856366, a_{14} =$<br>$-0.5357874355042601, a_{15} = -0.06122804237426822, a_{16} =$<br>$0.04747481534085709, a_{17} = -0.06684715511329853, a_{18} = 0.0502358538508516, a_{19} =$<br>$0.0023659577400977415, a_{20} = -0.010705232194332833$ | RHOB,<br>PHIN, VSH,<br>U, AI | 0.9732 | 0.1161 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format | Coff.   | Logs                          | R2     | MAE    |
|--------|---|-------------------------------|--------|--------|
|        | $a_0 = 24.90965940880168, a_1 = -1.5616791038345925e - 05, a_2 =$<br>$5.561039613636628, a_3 = 53.1418106122914, a_4 = -0.0822018120377947, a_5 =$<br>$-0.40619406019463405, a_6 = 2.7403277004622333, a_7 = 0.2882491606135332, a_8 =$<br>$-12.965121290823218, a_9 = 0.022322861909137976, a_{10} = 0.2482952971842822, a_{11} =$<br>$22.97538956943711, a_{12} = 24.002390977485103, a_{13} = -0.09702382949985482, a_{14} =$<br>$-0.23381246788600762, a_{15} = -0.4936780461465539, a_{16} =$<br>$-0.10238495997614201, a_{17} = -0.1278066510815337, a_{18} =$<br>$0.0001498245927681017, a_{19} = -0.01561679127909663, a_{20} = -0.009687956349749177$        | RHOB,<br>PHIN, VSH,<br>DT, AI | 0.9735 | 0.1152 |
|        | $a_0 = 269.29877959194056, a_1 = -0.00020415003186974846, a_2 =$<br>$-102.32262997284109, a_3 = 12.450945317423788, a_4 = -0.34736486870682814, a_5 =$<br>$-1.2660905140175207, a_6 = 37.57592646610861, a_7 = 5.211797136670674, a_8 =$<br>$-4.222316106256375, a_9 = 0.1981625424262583, a_{10} = 0.337293213327194, a_{11} =$<br>$-93.03602648443837, a_{12} = 1.0269167320253683, a_{13} = 0.4688898880096566, a_{14} =$<br>$-0.6031946266472339, a_{15} = 0.09752298467591232, a_{16} =$<br>$-0.014613195105930269, a_{17} = -0.005152499043798664, a_{18} =$<br>$-0.0002801148497613592, a_{19} = -0.2041500300334925, a_{20} = 0.0019755341354124535$          | RHOB,<br>PHIN, U, DT,<br>AI   | 0.9698 | 0.1244 |
|        | $a_0 = 487.1599150117226, a_1 = -0.0003362505024915484, a_2 =$<br>$49.500528459184565, a_3 = 13.156754233821804, a_4 = -1.0141712663120548, a_5 =$<br>$-0.23572279221326, a_6 = 57.97952892973189, a_7 = -15.423058743082988, a_8 =$<br>$-4.6042447459039355, a_9 = 0.3505537352754267, a_{10} = 0.3302391395821928, a_{11} =$<br>$-0.06157909785996859, a_{12} = 0.24733129137205728, a_{13} =$<br>$-0.05222964821111567, a_{14} = -0.17069806347361252, a_{15} =$<br>$0.09657801041285936, a_{16} = -0.013417541503765274, a_{17} =$<br>$-0.001225927266408748, a_{18} = 0.0005272499968707136, a_{19} =$<br>$-0.33625050294565373, a_{20} = -0.018417555790886542$ | RHOB, VSH,<br>U, DT, AI       | 0.9717 | 0.1197 |

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Table 2: Logs - TC - Polynomial regression (Continued)

| Format  | Coff.   | Logs                             | R2     | MAE    |
|---|---|----------------------------------|--------|--------|
|   | $a_0 = -14.397871566748597, a_1 = -27.366855336139746, a_2 =$<br>$14.116042977134803, a_3 = 0.03919381728628113, a_4 = 0.07094324974578751, a_5 =$<br>$0.27679060348574314, a_6 = -10.457016442354783, a_7 = 22.965646868708845, a_8 =$<br>$0.7459078258711341, a_9 = 0.06959081496203147, a_{10} = -0.20032118795315298, a_{11} =$<br>$-0.421250657524542, a_{12} = -0.4125868629677707, a_{13} =$<br>$-0.060243290926938586, a_{14} = -0.14387257062926895, a_{15} =$<br>$0.011574280865002588, a_{16} = -0.0013546368038051633, a_{17} =$<br>$0.0036395323518651217, a_{18} = -9.705336043366922e - 05, a_{19} =$<br>$0.002912969476781599, a_{20} = -0.006495875127857746$  | PHIN, VSH,<br>U, DT, AI          | 0.9733 | 0.1170 |
| $y =$<br>$a_0 + a_1x_1 + a_2x_2 +$<br>$a_3x_3 + a_4x_4 +$<br>$a_5x_5 + a_6x_6 +$<br>$a_7x_1^2 + a_8x_1x_2 +$<br>$a_9x_1x_3 +$<br>$a_{10}x_1x_4 +$<br>$a_{11}x_1x_5 +$<br>$a_{12}x_1x_6 +$<br>$a_{13}x_2^2 + a_{14}x_2x_3 +$<br>$a_{15}x_2x_4 +$<br>$a_{16}x_2x_5 +$<br>$a_{17}x_2x_6 +$<br>$a_{18}x_3^2 + a_{19}x_3x_4 +$<br>$a_{20}x_3x_5 +$<br>$a_{21}x_3x_6 +$<br>$a_{22}x_4^2 + a_{23}x_4x_5 +$<br>$a_{24}x_4x_6 + a_{25}x_5^2 +$<br>$a_{26}x_5x_6 + a_{27}x_6^2$ | $a_0 = 404.3693430197794, a_1 = -0.0002841569636781406, a_2 =$<br>$-35.001804740423886, a_3 = 59.02755939804845, a_4 = 11.520557687712886, a_5 =$<br>$-0.7811143128894071, a_6 = -0.6460303243818525, a_7 = 49.60617887154464, a_8 =$<br>$6.1090932616921325, a_9 = -15.690075501686671, a_{10} = -3.926898564616078, a_{11} =$<br>$0.28685450834665777, a_{12} = 0.3385405132450669, a_{13} = -1.9919928230570705, a_{14} =$<br>$20.084713077442466, a_{15} = 0.29629014942695653, a_{16} = 0.04373290454944533, a_{17} =$<br>$-0.2196552230319348, a_{18} = -0.6330121170478265, a_{19} = 0.17070426137465766, a_{20} =$<br>$-0.10058250000898347, a_{21} = -0.12503453937639183, a_{22} =$<br>$0.07951369325301795, a_{23} = -0.012429215301620035, a_{24} =$<br>$-0.00538231375218753, a_{25} = 0.00036897883011402597, a_{26} =$<br>$-0.28415696330505197, a_{27} = -0.009767889842863482$ | RHOB,<br>PHIN, VSH,<br>U, DT, AI | 0.9751 | 0.1126 |

### 1.3 TD

Table 3: Logs - TD - Polynomial regression

| Format  | Coff.  | Logs       | R2     | MAE    |
|---|--|------------|--------|--------|
| $y = a_0 + a_1x_1 + a_2x_1^2$                                 | $a_0 = 4.276877935228524, a_1 = -4.957378716069339, a_2 = 1.5596992722966283$  | RHOB       | 0.9567 | 0.0807 |
|   | $a_0 = 2.3177316815987354, a_1 = -5.554668899134674, a_2 = 3.913739168261015$  | PHIN       | 0.9751 | 0.0640 |
|   | $a_0 = 1.0661873537532234, a_1 = -0.444529904196949, a_2 = 0.04844474700128605$  | VSH        | 0.0046 | 0.5072 |
|   | $a_0 = -0.6076073711332727, a_1 = 0.28082214239310116, a_2 = 0.006872601752617151$   | U          | 0.7174 | 0.2308 |
|   | $a_0 = 5.165233955487366, a_1 = -0.020233692910431717, a_2 = 2.1234357550430846e-05$   | DT         | 0.9675 | 0.0711 |
|   | $a_0 = -0.26734285091961485, a_1 = 0.16423235122502605, a_2 = 0.0005259931852503761$   | AI         | 0.9696 | 0.0644 |
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_1^2 + a_4x_1x_2 + a_5x_2^2$ | $a_0 = -6.245915935339942, a_1 = 5.91374877387133, a_2 = 4.742221970010042, a_3 = -1.0151394975414445, a_4 = -3.5750201766368943, a_5 = 0.8378115067485691$            | RHOB, PHIN | 0.9755 | 0.0634 |
|   | $a_0 = 3.9456994767517197, a_1 = -4.73677513194174, a_2 = 1.1225076595758787, a_3 = 1.545439967790996, a_4 = -0.7129018391997015, a_5 = 0.27997113344781305$           | RHOB, VSH  | 0.9600 | 0.0783 |
|   | $a_0 = 5.429230422164389, a_1 = -6.93153299273784, a_2 = 0.326899041531437, a_3 = 2.3913175124254855, a_4 = -0.2561671627703868, a_5 = 0.014495718145606998$           | RHOB, U    | 0.9661 | 0.0734 |
|   | $a_0 = -25.264264006113628, a_1 = 17.95535721683531, a_2 = 0.04684649535780991, a_3 = -2.6469239383560415, a_4 = -0.019800783104858825, a_5 = -1.5718758974709555e-05$ | RHOB, DT   | 0.9676 | 0.0710 |
|   | $a_0 = -1.034293189077562, a_1 = 1.330659498551331, a_2 = 0.13084949335773685, a_3 = -0.7044056771876483, a_4 = 0.13053257762062387, a_5 = -0.010625358300019212$      | RHOB, AI   | 0.9710 | 0.0608 |
|   | $a_0 = 2.3789863016012527, a_1 = -5.638970721066066, a_2 = -0.24823344008149117, a_3 = 3.8827450783793354, a_4 = 0.4889842746472988, a_5 = -0.1515710582874114$        | PHIN, VSH  | 0.9759 | 0.0628 |
|   | $a_0 = 2.517449938492078, a_1 = -5.8965481646975, a_2 = -0.06393390098469767, a_3 = 4.061496572079053, a_4 = 0.054205229906318125, a_5 = 0.004947825723563519$         | PHIN, U    | 0.9752 | 0.0638 |
|   |  |            |        |        |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.  | Logs     | R2     | MAE    |
|--------|--|----------|--------|--------|
|        | $a_0 = 0.0873115941863184, a_1 = -15.991748049505286, a_2 = 0.02545113600090369, a_3 = -8.206474721801746, a_4 = 0.05930648868225215, a_5 = -7.241944755423366e - 05$        | PHIN, DT | 0.9751 | 0.0638 |
|        | $a_0 = 0.026856917690860405, a_1 = 1.7366386148682287, a_2 = 0.28218225748136366, a_3 = -1.2122025935694765, a_4 = -0.4942693027094875, a_5 = -0.008265141126361822$         | PHIN, AI | 0.9792 | 0.0524 |
|        | $a_0 = -0.7336433184879093, a_1 = 0.3616400458069125, a_2 = 0.3357155386242618, a_3 = 1.3791123149791757, a_4 = -0.3292856632590112, a_5 = 0.009115234564209877$             | VSH, U   | 0.7337 | 0.2251 |
|        | $a_0 = 5.3252769921073755, a_1 = -0.8279975176584644, a_2 = -0.020490892324889876, a_3 = 0.07254019820313497, a_4 = 0.0017556172135718652, a_5 = 2.1035082682077047e - 05$   | VSH, DT  | 0.9694 | 0.0691 |
|        | $a_0 = -0.3047291219244558, a_1 = 0.0829488249555046, a_2 = 0.17823676577407485, a_3 = 0.12642278205188343, a_4 = -0.046474861564514046, a_5 = 0.00029910963884271054$       | VSH, AI  | 0.9713 | 0.0628 |
|        | $a_0 = 5.986054717929707, a_1 = -0.12820161516434922, a_2 = -0.02292519026202811, a_3 = 0.004379521704267992, a_4 = 0.00021842015994798396, a_5 = 2.341142931542824e - 05$   | U, DT    | 0.9679 | 0.0710 |
|        | $a_0 = -0.2090716041313071, a_1 = -0.07799075608396543, a_2 = 0.21559187553403594, a_3 = 0.006611883866352139, a_4 = -0.004628034561439949, a_5 = -1.5218570677894564e - 05$ | U, AI    | 0.9716 | 0.0621 |
|        | $a_0 = -1.888699189011322, a_1 = 0.008859461647194556, a_2 = 0.5492021469342893, a_3 = -8.444903317316788e - 06, a_4 = -0.0011425020461848846, a_5 = -0.010257878402765923$  | DT, AI   | 0.9710 | 0.0608 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format  | Coff.  | Logs               | R2     | MAE    |
|---|--|--------------------|--------|--------|
| $y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_1^2 + a_5x_1x_2 + a_6x_1x_3 + a_7x_2^2 + a_8x_2x_3 + a_9x_3^2$ | $a_0 = 13.939481858868033, a_1 = -9.474429300376642, a_2 = -18.568496427973546, a_3 = 3.7469786524750766, a_4 = 1.9254476918521675, a_5 = 5.303059759170564, a_6 = -1.5294780293791483, a_7 = 7.500259629888959, a_8 = -1.7532605559508572, a_9 = -0.007477530292299125$           | RHOB,<br>PHIN, VSH | 0.9765 | 0.0618 |
|   | $a_0 = -0.6378435651849829, a_1 = -0.3420123158291929, a_2 = 0.38313901595328653, a_3 = 0.7000529784329288, a_4 = 0.7080163552799584, a_5 = -1.065124854940063, a_6 = -0.38289781958744745, a_7 = 1.6291751838741317, a_8 = -0.2912504111754061, a_9 = 0.02147384127577579$        | RHOB,<br>PHIN, U   | 0.9757 | 0.0633 |
|   | $a_0 = -0.15552954049281553, a_1 = -3.5087526747901268, a_2 = -32.72297148336475, a_3 = 0.06384797128202653, a_4 = 0.9109880630053823, a_5 = 2.497586257783606, a_6 = -0.0026834132683607194, a_7 = -17.739766981106808, a_8 = 0.11448375950696109, a_9 = -0.00014968684958544106$ | RHOB,<br>PHIN, DT  | 0.9760 | 0.0630 |
|   | $a_0 = 4.731133339629367, a_1 = -2.833270262021201, a_2 = -5.6864480196805856, a_3 = 0.03879745888365624, a_4 = 0.5670622874884735, a_5 = 2.510946049820903, a_6 = 0.054293796408182, a_7 = 1.5218954613184639, a_8 = -0.5294675168357903, a_9 = -0.006924893224716934$            | RHOB,<br>PHIN, AI  | 0.9800 | 0.0510 |
|   | $a_0 = 5.443463460234673, a_1 = -7.1386974601455995, a_2 = -0.14428418375018928, a_3 = 0.4306138517260709, a_4 = 2.4706493013623563, a_5 = 0.5278532592004378, a_6 = -0.31196280704820956, a_7 = 0.2807319925457302, a_8 = -0.2630291557914265, a_9 = 0.022614219293642206$        | RHOB, VSH,<br>U    | 0.9683 | 0.0712 |
|   | $a_0 = 23.521844320119403, a_1 = -13.046761994493034, a_2 = 17.48070637233336, a_3 = -0.06364545079996424, a_4 = 2.28003511636454, a_5 = -5.552716772323624, a_6 = 0.01525566383158987, a_7 = 0.21401279653055344, a_8 = -0.018009780636909115, a_9 = 4.640138574951398e - 05$     | RHOB, VSH,<br>DT   | 0.9702 | 0.0684 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.   | Logs          | R2     | MAE    |
|--------|---|---------------|--------|--------|
|        | $a_0 = -1.5477257431363225, a_1 = 2.095592357291627, a_2 = 0.1419656483121561, a_3 = 0.031195501841400623, a_4 = -0.986682844477755, a_5 = 0.0010398218660872317, a_6 = 0.20267488692451385, a_7 = 0.087076442003274, a_8 = -0.05251008341357235, a_9 = -0.014141328507553659$            | RHOB, VSH, AI | 0.9728 | 0.0589 |
|        | $a_0 = 203.25913211664303, a_1 = -140.8720494262081, a_2 = 6.535980997969193, a_3 = -0.41536334862147206, a_4 = 25.034109388063424, a_5 = -2.3279020373685757, a_6 = 0.1405546098334059, a_7 = 0.05499116311339996, a_8 = -0.006510857490555966, a_9 = 0.00021817815183656545$            | RHOB, U, DT   | 0.9696 | 0.0696 |
|        | $a_0 = -0.47291159088741896, a_1 = 0.5569861578178572, a_2 = 0.1940823061473899, a_3 = -0.10931082600434203, a_4 = -0.24547858939263545, a_5 = -0.16527080880940095, a_6 = 0.20738095129244496, a_7 = 0.013705688311010948, a_8 = -0.0020661608602865968, a_9 = -0.010554371668870707$    | RHOB, U, AI   | 0.9725 | 0.0599 |
|        | $a_0 = -19.432891708113438, a_1 = 1.2323735547186388e-05, a_2 = 0.038667867344887766, a_3 = 0.1704182576237765, a_4 = -2.376594146648381, a_5 = -0.011544661541499478, a_6 = 0.12369815932079585, a_7 = -2.0373091202210673e-05, a_8 = 0.012323735543810482, a_9 = -0.011067579770563432$ | RHOB, DT, AI  | 0.9710 | 0.0608 |
|        | $a_0 = 2.6070190548973167, a_1 = -6.027276481640231, a_2 = -0.18342686346428627, a_3 = -0.07932079209526817, a_4 = 4.048972930952715, a_5 = 0.4300860257966181, a_6 = 0.06766879233434876, a_7 = -0.10951605362371152, a_8 = -0.015376104137349009, a_9 = 0.006663243821332716$           | PHIN, VSH, U  | 0.9761 | 0.0624 |
|        | $a_0 = 1.8555523430448853, a_1 = -5.543869016203081, a_2 = 3.7864549978632556, a_3 = 0.00015862669670153062, a_4 = 7.193881929095459, a_5 = 10.151661596174819, a_6 = -0.014633520970688508, a_7 = -0.3608519557350668, a_8 = -0.022744458539464513, a_9 = 1.6121237190717544e-05$        | PHIN, VSH, DT | 0.9763 | 0.0623 |
|        | $a_0 = -0.11443737893597794, a_1 = 1.8574131299621504, a_2 = -0.12693884831015037, a_3 = 0.3047647396659603, a_4 = -1.2742976031622895, a_5 = 0.33278690532723565, a_6 = -0.4916992046044325, a_7 = -0.1250791310689984, a_8 = -0.00782047620934612, a_9 = -0.008911207692195267$         | PHIN, VSH, AI | 0.9798 | 0.0512 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.   | Logs         | R2     | MAE    |
|--------|---|--------------|--------|--------|
|        | $a_0 = -1.5034082773092363, a_1 = -21.70389051501089, a_2 = 0.06208182503920322, a_3 = 0.04028920124245253, a_4 = -11.57630982591072, a_5 = 0.2842067817767803, a_6 = 0.07959723635944117, a_7 = 0.0036246942846647314, a_8 = -0.000602153909081904, a_9 = -0.0001012837848055935$        | PHIN, U, DT  | 0.9753 | 0.0637 |
|        | $a_0 = 0.5867221501249509, a_1 = 0.6319638016864056, a_2 = -0.1073534277146446, a_3 = 0.26193339000629323, a_4 = -0.6732335139415213, a_5 = 0.12609396810798323, a_6 = -0.492707838331926, a_7 = 0.005912447590784878, a_8 = 0.00140052670269999, a_9 = -0.008010686622678601$            | PHIN, U, AI  | 0.9793 | 0.0520 |
|        | $a_0 = -1.094646460651644, a_1 = -5.5230364624456065, a_2 = 0.012335814468746856, a_3 = 0.005192489803869319, a_4 = -11.275153608614342, a_5 = 0.04841412811544526, a_6 = -0.6747746485034399, a_7 = -5.176524789219104e-05, a_8 = 0.0013342753166354397, a_9 = -0.003006096854182773$    | PHIN, DT, AI | 0.9800 | 0.0506 |
|        | $a_0 = 6.1709186889214935, a_1 = -0.07408777876377434, a_2 = -0.16451412606166635, a_3 = -0.023466125023140036, a_4 = 0.10953424216210829, a_5 = -0.0775650339039995, a_6 = 0.0006063228140015622, a_7 = 0.007809352192498186, a_8 = 0.0002935393548990626, a_9 = 2.358653984632177e-05$  | VSH, U, DT   | 0.9696 | 0.0689 |
|        | $a_0 = -0.26347117553609, a_1 = 0.3030998721199572, a_2 = -0.07531809946902161, a_3 = 0.223156845652032, a_4 = 0.08359132187915073, a_5 = -0.08240841367066395, a_6 = -0.013854712086448532, a_7 = 0.009006968270083383, a_8 = -0.005238426743229293, a_9 = -0.00018449905802597825$      | VSH, U, AI   | 0.9730 | 0.0607 |
|        | $a_0 = -3.690566286145507, a_1 = 0.8933192623668194, a_2 = 0.014084912721403612, a_3 = 0.7095139020635366, a_4 = 0.08058864924257181, a_5 = -0.0014304049880031382, a_6 = -0.08942281430677407, a_7 = -1.2511109029932178e-05, a_8 = -0.0012964793318477393, a_9 = -0.014066294559673$    | VSH, DT, AI  | 0.9728 | 0.0588 |
|        | $a_0 = -2.809389161702262, a_1 = -0.2420915045898682, a_2 = 0.006090993803256261, a_3 = 0.515917489281888, a_4 = 0.0067303500408137625, a_5 = 0.0003691149273065751, a_6 = 0.0010824576327705057, a_7 = -3.997445386351593e-06, a_8 = -0.0002373329201777773, a_9 = -0.00964095690310873$ | U, DT, AI    | 0.9723 | 0.0603 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format   | Coff.  | Logs                      | R2     | MAE    |
|--|--|---------------------------|--------|--------|
| $y =$<br>$a_0 + a_1x_1 + a_2x_2 +$<br>$a_3x_3 + a_4x_4 +$<br>$a_5x_1^2 + a_6x_1x_2 +$<br>$a_7x_1x_3 +$<br>$a_8x_1x_4 + a_9x_2^2 +$<br>$a_{10}x_2x_3 +$<br>$a_{11}x_2x_4 + a_{12}x_3^2 +$<br>$a_{13}x_3x_4 + a_{14}x_4^2$ | $a_0 = 28.78371947659455, a_1 = -23.569581402500674, a_2 = -33.12974212822389, a_3 =$<br>$5.354898550622534, a_4 = 1.026793131181098, a_5 = 5.27817359606499, a_6 =$<br>$12.188885905123815, a_7 = -2.1960828463948094, a_8 = -0.4975246327548788, a_9 =$<br>$11.088947067808759, a_{10} = -2.6185970048744633, a_{11} = -0.489565481610539, a_{12} =$<br>$-0.00563673072843689, a_{13} = 0.028068067605267217, a_{14} = 0.020033676536580006$                 | RHOB,<br>PHIN, VSH,<br>U  | 0.9767 | 0.0617 |
|  | $a_0 = 28.642577032337776, a_1 = -20.27070167009837, a_2 = -11.644787034983084, a_3 =$<br>$26.068587164511065, a_4 = -0.04731694554586351, a_5 = 3.573381411676637, a_6 =$<br>$0.5167234165733919, a_7 = -6.478020268649265, a_8 = 0.021281359475436232, a_9 =$<br>$3.3020821459180074, a_{10} = 12.376916082447831, a_{11} = 0.006765134484564919, a_{12} =$<br>$-0.23759880755895185, a_{13} = -0.05102283847183656, a_{14} = 2.2051777527656462e - 05$      | RHOB,<br>PHIN, VSH,<br>DT | 0.9781 | 0.0606 |
|  | $a_0 = 20.792714561732097, a_1 = -15.130123051830536, a_2 =$<br>$-24.448539263475105, a_3 = 3.8373383948015563, a_4 = 0.036769837394279956, a_5 =$<br>$2.8784126110614565, a_6 = 9.781822435090513, a_7 = -1.5545668486974018, a_8 =$<br>$0.07372536632504938, a_9 = 6.863518498387502, a_{10} = -1.8300427394318222, a_{11} =$<br>$-0.5404988802608061, a_{12} = -0.034260111080787144, a_{13} =$<br>$0.0044605053207999725, a_{14} = -0.008765407821069613$  | RHOB,<br>PHIN, VSH,<br>AI | 0.9807 | 0.0500 |
|  | $a_0 = 175.05098992352467, a_1 = -127.67887231209606, a_2 = -41.70909459088419, a_3 =$<br>$5.62941089137466, a_4 = -0.2730258210260124, a_5 = 22.64649596111236, a_6 =$<br>$2.2308207519251724, a_7 = -1.951516595548993, a_8 = 0.12333874900514966, a_9 =$<br>$-28.111231883355565, a_{10} = 0.21254266656391566, a_{11} = 0.16394510517102368, a_{12} =$<br>$0.044615408043385756, a_{13} = -0.0060773794554860195, a_{14} =$<br>$-2.7438974515856822e - 05$ | RHOB,<br>PHIN, U, DT      | 0.9768 | 0.0624 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.  | Logs                  | R2     | MAE    |
|--------|--|-----------------------|--------|--------|
|        | $a_0 = 34.121484582030746, a_1 = -29.85197592366928, a_2 = -33.78236254742648, a_3 = 1.6234753204539176, a_4 = 0.12583874133607756, a_5 = 6.857168911481934, a_6 = 15.44533085413594, a_7 = -0.7815486405277947, a_8 = 0.006689288031939703, a_9 = 8.223598277400981, a_{10} = -0.7522139920518336, a_{11} = -0.6238545172528883, a_{12} = 0.028142935736290006, a_{13} = 0.0034317551048247286, a_{14} = -0.006931505606231765$                   | RHOB,<br>PHIN, U, AI  | 0.9804 | 0.0509 |
|        | $a_0 = 16.78377308430552, a_1 = -7.648901330012586e - 06, a_2 = -19.84058204605718, a_3 = -0.00479045959886155, a_4 = -0.5370721073245628, a_5 = 1.2852863098380467, a_6 = 4.483759719945405, a_7 = 0.0037818039299617927, a_8 = 0.16953816649914513, a_9 = -12.433798224932913, a_{10} = 0.0671796270237827, a_{11} = -0.7608172876768123, a_{12} = -5.6522077945105636e - 05, a_{13} = -0.007648901548792728, a_{14} = -0.004418103191626988$    | RHOB,<br>PHIN, DT, AI | 0.9802 | 0.0504 |
|        | $a_0 = 242.94785343832515, a_1 = -165.69818575809418, a_2 = 22.42823798221917, a_3 = 6.2123885716382885, a_4 = -0.5097007535854557, a_5 = 28.882952792205767, a_6 = -7.272913221414298, a_7 = -2.197446899949974, a_8 = 0.17023108869895537, a_9 = 0.05815239499277321, a_{10} = 0.09057594027476959, a_{11} = -0.022989427592326472, a_{12} = 0.0486702294736058, a_{13} = -0.006250489973708507, a_{14} = 0.00027323040213968555$                | RHOB, VSH,<br>U, DT   | 0.9722 | 0.0670 |
|        | $a_0 = -1.0683338039028403, a_1 = 1.5084107346196565, a_2 = -0.4294328631477518, a_3 = 0.1899710008440577, a_4 = -0.2102792523254434, a_5 = -0.6471478371724592, a_6 = 0.5897868373470189, a_7 = -0.1521273547544134, a_8 = 0.2887030886263173, a_9 = 0.15527746649105864, a_{10} = -0.14579921991580627, a_{11} = -0.04869187463119353, a_{12} = 0.01715056851401255, a_{13} = -0.00505144385799195, a_{14} = -0.014052727291974577$              | RHOB, VSH,<br>U, AI   | 0.9741 | 0.0582 |
|        | $a_0 = 24.687462252678376, a_1 = -1.6700894985354266e - 05, a_2 = 17.93219669861857, a_3 = -0.06007312779709877, a_4 = 0.26664202076072785, a_5 = 2.1371084273671386, a_6 = -5.224389520350333, a_7 = 0.021293794381612247, a_8 = 0.15300761237860708, a_9 = 0.1949110692311426, a_{10} = -0.019664699128914085, a_{11} = -0.07894639843458542, a_{12} = 3.4012594163828644e - 05, a_{13} = -0.016700895184110186, a_{14} = -0.015762292988260696$ | RHOB, VSH,<br>DT, AI  | 0.9735 | 0.0584 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.   | Logs                 | R2     | MAE    |
|--------|---|----------------------|--------|--------|
|        | $a_0 = 215.69187690493908, a_1 = -0.00014935784950853272, a_2 = 6.7001077751628175, a_3 = -0.4413428240957079, a_4 = -0.05050706415885077, a_5 = 25.577397639514732, a_6 = -2.3554722764057616, a_7 = 0.1534672233838642, a_8 = 0.19812808902845055, a_9 = 0.05546239576787539, a_{10} = -0.006760130565912369, a_{11} = -0.003917955175026903, a_{12} = 0.0002248244129248328, a_{13} = -0.14935784953442377, a_{14} = -0.010759895846729164$  | RHOB, U,<br>DT, AI   | 0.9731 | 0.0594 |
|        | $a_0 = 1.7759551270441452, a_1 = -5.80962622717102, a_2 = 5.443480702119006, a_3 = -0.07412292107957123, a_4 = 0.0004159131325961609, a_5 = 7.961795301486655, a_6 = 11.73275892363784, a_7 = 0.016826350223086005, a_8 = -0.017399372941681875, a_9 = -0.2782491442556176, a_{10} = -0.11371661344558, a_{11} = -0.027965672997077445, a_{12} = 0.006784425140302514, a_{13} = 0.00010720863674163795, a_{14} = 1.9084544590438695e - 05$      | PHIN, VSH,<br>U, DT  | 0.9766 | 0.0619 |
|        | $a_0 = 0.5380603970712831, a_1 = 0.6021705087260848, a_2 = 0.010703699802194386, a_3 = -0.1393301600584096, a_4 = 0.2849687942356671, a_5 = -0.6762405367795117, a_6 = 0.19611504854389938, a_7 = 0.16150108424301157, a_8 = -0.49626455471649317, a_9 = -0.09752544883572759, a_{10} = -0.022634808679411263, a_{11} = -0.007279723929822696, a_{12} = 0.0072927556209730965, a_{13} = 0.002875256592379741, a_{14} = -0.009096428890426953$   | PHIN, VSH,<br>U, AI  | 0.9799 | 0.0509 |
|        | $a_0 = -1.7249151094248925, a_1 = -0.6966734036434727, a_2 = 4.644355294480772, a_3 = 0.004413809351676134, a_4 = 0.12417222109538886, a_5 = 0.18915876877462762, a_6 = 10.520524566402793, a_7 = -0.002584603922109746, a_8 = -0.5621482858113397, a_9 = -0.3386947760339574, a_{10} = -0.024994486435148535, a_{11} = -0.03163582840256458, a_{12} = 2.858291682491648e - 06, a_{13} = 0.0009600255368781455, a_{14} = -0.004822233951765434$ | PHIN, VSH,<br>DT, AI | 0.9810 | 0.0498 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format   | Coff.  | Logs                         | R2     | MAE    |
|--|--|------------------------------|--------|--------|
|  | $a_0 = -3.559654766131164, a_1 = -14.77730855399362, a_2 =$<br>$-0.0392670582492687, a_3 = 0.033214291747087246, a_4 = -0.03466312216612037, a_5 =$<br>$-19.73712004424867, a_6 = 0.3952066973408673, a_7 = 0.0911847944291782, a_8 =$<br>$-0.732589318691871, a_9 = 0.005658272219590301, a_{10} =$<br>$-0.0006406992404660439, a_{11} = 0.0029456588088960555, a_{12} =$<br>$-0.0001030620962760112, a_{13} = 0.0019022353410419887, a_{14} =$<br>$-0.0033038614178690223$   | PHIN, U, DT,<br>AI           | 0.9804 | 0.0508 |
|  | $a_0 = -4.339541276748185, a_1 = 2.389164577236634, a_2 = -0.34585764239484473, a_3 =$<br>$0.010000505655481527, a_4 = 0.6710457178645242, a_5 = 0.1716311265681416, a_6 =$<br>$-0.16114250962342602, a_7 = -0.0036829192908332084, a_8 =$<br>$-0.08569254365286129, a_9 = 0.012065184646641872, a_{10} =$<br>$0.0005843182633478081, a_{11} = 0.003465344370416928, a_{12} = -6.7661098832362644e -$<br>$06, a_{13} = -0.00037859148464384676, a_{14} = -0.013905412560616094$  | VSH, U, DT,<br>AI            | 0.9740 | 0.0584 |
| $y = a_0 + a_1x_1 +$<br>$a_2x_2 + a_3x_3 +$<br>$a_4x_4 + a_5x_5 +$<br>$a_6x_1^2 + a_7x_1x_2 +$<br>$a_8x_1x_3 +$<br>$a_9x_1x_4 +$<br>$a_{10}x_1x_5 +$<br>$a_{11}x_2^2 + a_{12}x_2x_3 +$<br>$a_{13}x_2x_4 +$<br>$a_{14}x_2x_5 +$<br>$a_{15}x_3^2 + a_{16}x_3x_4 +$<br>$a_{17}x_3x_5 + a_{18}x_4^2 +$<br>$a_{19}x_4x_5 + a_{20}x_5^2$ | $a_0 = 174.77564864444972, a_1 = -126.22932253880941, a_2 = -33.80001940916579, a_3 =$<br>$28.662444098398772, a_4 = 4.816312998342644, a_5 = -0.30049139425519766, a_6 =$<br>$22.580715299311105, a_7 = 5.960919163803592, a_8 = -7.653161737341511, a_9 =$<br>$-1.7109506237406378, a_{10} = 0.11816587410220723, a_{11} = -4.083340533830569, a_{12} =$<br>$10.860845670215758, a_{13} = -0.11690927059695962, a_{14} = 0.05848471688898586, a_{15} =$<br>$-0.29147832261624423, a_{16} = 0.07726382143467553, a_{17} =$<br>$-0.05064916399143594, a_{18} = 0.03804829131057148, a_{19} =$<br>$-0.004652322452383536, a_{20} = 9.957056767389782e - 05$ | RHOB,<br>PHIN, VSH,<br>U, DT | 0.9788 | 0.0600 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.   | Logs                          | R2     | MAE    |
|--------|---|-------------------------------|--------|--------|
|        | $a_0 = 55.88016708939078, a_1 = -46.77192030255278, a_2 = -59.269094018556125, a_3 = 5.06627392503311, a_4 = 1.8033496325169727, a_5 = 0.08480478015285974, a_6 = 10.069752788793599, a_7 = 25.52617656540573, a_8 = -2.0209712987971664, a_9 = -0.8325083380672418, a_{10} = 0.04467448252065355, a_{11} = 15.500848243373621, a_{12} = -2.519522552080384, a_{13} = -0.8787544389804267, a_{14} = -0.6218588789916726, a_{15} = -0.03216085838682977, a_{16} = 0.003770730329209529, a_{17} = 0.005393988038861809, a_{18} = 0.02687267727967884, a_{19} = 0.0017050064282872754, a_{20} = -0.00878830359332775$              | RHOB,<br>PHIN, VSH,<br>U, AI  | 0.9811 | 0.0499 |
|        | $a_0 = 34.18251851844799, a_1 = -2.042814313548202e - 05, a_2 = -5.803122332490044, a_3 = 26.06685489678431, a_4 = -0.07360755789766399, a_5 = -0.2938518228675341, a_6 = 3.3963505818974116, a_7 = 2.994908083060142, a_8 = -6.347946055177506, a_9 = 0.02118922474017707, a_{10} = 0.13668277677294227, a_{11} = 5.043908541746857, a_{12} = 12.302030301869422, a_{13} = -0.0171170916157072, a_{14} = -0.6389692925278091, a_{15} = -0.25725361177556844, a_{16} = -0.051264993135522414, a_{17} = -0.018478290644570405, a_{18} = 6.533246511308102e - 05, a_{19} = -0.020428143444834505, a_{20} = -0.00658413093195389$  | RHOB,<br>PHIN, VSH,<br>DT, AI | 0.9820 | 0.0487 |
|        | $a_0 = 195.7092501467225, a_1 = -0.00013330871058201102, a_2 = -28.785963182575493, a_3 = 5.742596045490251, a_4 = -0.3524353196248777, a_5 = -0.6873824560394339, a_6 = 23.05384213176869, a_7 = 3.927096924341339, a_8 = -1.9570253811298626, a_9 = 0.13327459627763616, a_{10} = 0.22986895253756304, a_{11} = -22.905091891092685, a_{12} = 0.23939253890832052, a_{13} = 0.11763798119645774, a_{14} = -0.7340522019081847, a_{15} = 0.04426998049524897, a_{16} = -0.006326978863350493, a_{17} = -0.0035381310544150583, a_{18} = 7.110268444510099e - 05, a_{19} = -0.1333087098441365, a_{20} = -0.004560026561041578$ | RHOB,<br>PHIN, U, DT,<br>AI   | 0.9810 | 0.0500 |

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Table 3: Logs - TD - Polynomial regression (Continued)

| Format | Coff.  | Logs                    | R2     | MAE    |
|--------|--|-------------------------|--------|--------|
|        | $a_0 = 247.70016705359748, a_1 = -0.0001707815991621689, a_2 =$<br>$22.84523817285665, a_3 = 6.304465411379885, a_4 = -0.5162758275435735, a_5 =$<br>$0.13351113806931, a_6 = 28.867178877239667, a_7 = -6.9511044576269185, a_8 =$<br>$-2.212610274443206, a_9 = 0.17881590141242612, a_{10} = 0.19372528835548436, a_{11} =$<br>$0.037657137493795664, a_{12} = 0.09046107253850548, a_{13} =$<br>$-0.024561032543367476, a_{14} = -0.07586262914860051, a_{15} =$<br>$0.04916035145971229, a_{16} = -0.006397738181606606, a_{17} =$<br>$-0.0023736032657232227, a_{18} = 0.00026750947430651206, a_{19} =$<br>$-0.17078159936988638, a_{20} = -0.015225124987011483$   | RHOB, VSH,<br>U, DT, AI | 0.9755 | 0.0570 |
|        | $a_0 = -4.462463598542351, a_1 = -9.467831840476757, a_2 = 7.129650900856353, a_3 =$<br>$-0.0979444439621194, a_4 = 0.02414683567127118, a_5 = 0.09561844674681066, a_6 =$<br>$-7.992798690041159, a_7 = 12.167458034933652, a_8 = 0.2950024254319072, a_9 =$<br>$0.03805198164912936, a_{10} = -0.6110869858134177, a_{11} =$<br>$-0.21255865178179495, a_{12} = -0.2034957523543313, a_{13} =$<br>$-0.03155291737777215, a_{14} = -0.026762041986872914, a_{15} =$<br>$0.009684089579542334, a_{16} = -0.0003149295068432331, a_{17} =$<br>$0.002437041070391699, a_{18} = -4.466579996378468e - 05, a_{19} =$<br>$0.00155339636825075, a_{20} = -0.0052068201565466255$ | PHIN, VSH,<br>U, DT, AI | 0.9815 | 0.0496 |

Continued on next page

Table 3: Logs - TD - Polynomial regression (Continued)

| Format  | Coff.   | Logs                             | R2     | MAE    |
|---|---|----------------------------------|--------|--------|
| $y =$<br>$a_0 + a_1x_1 + a_2x_2 +$<br>$a_3x_3 + a_4x_4 +$<br>$a_5x_5 + a_6x_6 +$<br>$a_7x_1^2 + a_8x_1x_2 +$<br>$a_9x_1x_3 +$<br>$a_{10}x_1x_4 +$<br>$a_{11}x_1x_5 +$<br>$a_{12}x_1x_6 +$<br>$a_{13}x_2^2 + a_{14}x_2x_3 +$<br>$a_{15}x_2x_4 +$<br>$a_{16}x_2x_5 +$<br>$a_{17}x_2x_6 +$<br>$a_{18}x_3^2 + a_{19}x_3x_4 +$<br>$a_{20}x_3x_5 +$<br>$a_{21}x_3x_6 +$<br>$a_{22}x_4^2 + a_{23}x_4x_5 +$<br>$a_{24}x_4x_6 + a_{25}x_5^2 +$<br>$a_{26}x_5x_6 + a_{27}x_6^2$ | $a_0 = 182.66237123063956, a_1 = -0.0001267671405961565, a_2 =$<br>$-26.788327006010864, a_3 = 28.652072409821695, a_4 = 4.8824459320661395, a_5 =$<br>$-0.3368327806818689, a_6 = -0.44291400777026657, a_7 = 22.25713095806146, a_8 =$<br>$7.884754862096661, a_9 = -7.537072952442698, a_{10} = -1.705597435576048, a_{11} =$<br>$0.120838283276868, a_{12} = 0.19307068183882797, a_{13} = -2.456815237178299, a_{14} =$<br>$10.75763774963587, a_{15} = -0.0848268433206097, a_{16} = 0.034193491471259996, a_{17} =$<br>$-0.6265342169933655, a_{18} = -0.31223287922295223, a_{19} =$<br>$0.07817219012271533, a_{20} = -0.05079340851378664, a_{21} =$<br>$-0.016760766269975757, a_{22} = 0.03809832917881687, a_{23} =$<br>$-0.004853688177422685, a_{24} = -0.003349562414937287, a_{25} =$<br>$0.0001494917902609921, a_{26} = -0.1267671402435425, a_{27} = -0.006620532672611194$ | RHOB,<br>PHIN, VSH,<br>U, DT, AI | 0.9827 | 0.0481 |