

Details of 50 Nos of Surface Bedrock samples along with analysis of 34 elements by ICP-MS of Sumarasar area, District: Kachehh, Gujarat

| Sl. No. | Sample No. | Easting    | Northing  | Lithology                          | Li     | Sc    | V      | Cr     | Co    | Ni     | Cu     | Zn     | Ga    | Se   | Rb     | Sr     | Y      | Zr     | Nb    | Mo    | La     | Ce     | Pr    | Nd     | Sm    | Eu   | Gd    | Tb   | Dy    | Ho   | Er    | Tm   | Yb   | Lu   | Hf    | Pb    | Th     | U     |
|---------|------------|------------|-----------|------------------------------------|--------|-------|--------|--------|-------|--------|--------|--------|-------|------|--------|--------|--------|--------|-------|-------|--------|--------|-------|--------|-------|------|-------|------|-------|------|-------|------|------|------|-------|-------|--------|-------|
| 1       | SMR/BRS/01 | 2576432    | 556778    | Ferruginous Shale                  | 29.27  | 10.34 | 80.04  | 92.51  | 6.11  | 22.00  | 20.59  | 60.31  | 11.53 | 0.96 | 68.91  | 261.62 | 45.42  | 222.71 | 3.03  | 0.79  | 42.49  | 77.12  | 9.69  | 37.15  | 7.34  | 1.42 | 7.08  | 1.31 | 7.99  | 1.60 | 4.54  | 0.71 | 4.13 | 0.63 | 4.57  | 15.77 | 16.50  | 2.28  |
| 2       | SMR/BRS/02 | 2574550    | 556517    | Shale                              | 32.02  | 14.29 | 145.01 | 129.08 | 5.34  | 29.12  | 63.19  | 66.33  | 29.03 | 0.92 | 24.52  | 145.83 | 42.36  | 537.98 | 11.81 | 1.85  | 144.13 | 233.47 | 28.22 | 100.99 | 17.22 | 1.73 | 13.67 | 2.00 | 9.44  | 1.55 | 3.97  | 0.56 | 3.39 | 0.54 | 16.15 | 32.18 | 68.33  | 6.69  |
| 3       | SMR/BRS/03 | 2574547    | 556501    | Kaolinite                          | 37.78  | 26.73 | 142.67 | 144.29 | 3.57  | 27.83  | 55.31  | 39.36  | 40.98 | 2.07 | 47.78  | 285.06 | 66.51  | 912.29 | 18.87 | 1.16  | 246.33 | 382.25 | 46.42 | 164.40 | 27.23 | 2.65 | 21.20 | 3.07 | 14.74 | 2.52 | 6.51  | 0.97 | 5.76 | 0.85 | 24.13 | 42.85 | 122.54 | 10.06 |
| 4       | SMR/BRS/04 | 2575835    | 562556    | Shale                              | 27.92  | 15.06 | 117.75 | 131.96 | 2.74  | 16.19  | 36.45  | 36.67  | 30.96 | 0.35 | 124.39 | 156.07 | 34.60  | 323.77 | 11.32 | 0.72  | 73.04  | 134.84 | 16.55 | 60.73  | 10.40 | 1.75 | 8.01  | 1.26 | 6.86  | 1.29 | 3.44  | 0.51 | 3.18 | 0.46 | 9.69  | 19.93 | 31.21  | 3.84  |
| 5       | SMR/BRS/05 | 2575543    | 554770    | Ferruginous Shale                  | 39.90  | 17.61 | 105.52 | 89.27  | 17.53 | 58.35  | 33.45  | 116.20 | 18.80 | 0.46 | 84.27  | 241.55 | 45.05  | 251.16 | 6.08  | 0.83  | 41.14  | 68.10  | 9.24  | 35.95  | 6.88  | 1.57 | 6.71  | 1.30 | 7.75  | 1.57 | 4.36  | 0.68 | 3.87 | 0.58 | 7.61  | 30.53 | 13.38  | 2.86  |
| 6       | SMR/BRS/06 | 2581907.14 | 556647.84 | Ferruginous Shale                  | 53.01  | 23.80 | 145.85 | 120.37 | 25.36 | 59.74  | 46.42  | 77.46  | 30.05 | 1.88 | 94.01  | 220.63 | 156.23 | 386.41 | 10.38 | 1.10  | 76.13  | 151.25 | 19.65 | 80.87  | 17.92 | 4.13 | 21.36 | 4.00 | 23.66 | 4.58 | 11.40 | 1.51 | 8.30 | 1.19 | 10.88 | 21.70 | 28.01  | 4.87  |
| 7       | SMR/BRS/07 | 2576432    | 556778    | Gypseous shale                     | 16.99  | 8.70  | 94.49  | 53.03  | 12.21 | 23.26  | 20.54  | 46.17  | 5.40  | 0.12 | 21.07  | 303.32 | 16.89  | 80.22  | 2.13  | 0.59  | 12.24  | 20.74  | 2.98  | 11.55  | 2.29  | 0.51 | 2.34  | 0.46 | 2.85  | 0.59 | 1.73  | 0.28 | 1.72 | 0.27 | 2.19  | 6.79  | 4.75   | 0.87  |
| 8       | SMR/BRS/08 | 2574452    | 555749    | Shale                              | 67.94  | 21.30 | 166.47 | 123.03 | 50.63 | 108.90 | 47.04  | 185.54 | 30.51 | 0.81 | 79.82  | 315.72 | 54.95  | 397.53 | 10.96 | 1.24  | 78.95  | 143.59 | 17.75 | 64.88  | 11.84 | 2.26 | 10.20 | 1.78 | 10.09 | 2.00 | 5.81  | 0.91 | 5.52 | 0.82 | 12.19 | 19.88 | 29.15  | 3.82  |
| 9       | SMR/BRS/09 | 2576065.74 | 563094.36 | Feldspathic Sandstone              | 6.47   | 5.41  | 54.32  | 103.47 | 2.10  | 14.06  | 17.97  | 25.11  | 13.74 | 0.38 | 67.48  | 83.92  | 18.63  | 229.04 | 7.02  | 0.84  | 68.42  | 120.64 | 14.82 | 54.97  | 9.39  | 0.98 | 6.90  | 0.95 | 4.31  | 0.67 | 1.70  | 0.25 | 1.45 | 0.22 | 7.03  | 18.48 | 31.56  | 2.70  |
| 10      | SMR/BRS/10 | 2576639.89 | 562934.43 | Ferruginous Shale                  | 31.17  | 14.94 | 116.22 | 105.67 | 39.37 | 84.93  | 30.14  | 201.10 | 22.45 | 0.81 | 70.63  | 123.60 | 29.75  | 329.92 | 8.51  | 1.52  | 70.63  | 131.01 | 15.62 | 56.59  | 10.10 | 1.22 | 8.41  | 1.27 | 6.36  | 1.13 | 2.90  | 0.43 | 2.52 | 0.41 | 10.21 | 28.87 | 36.49  | 3.97  |
| 11      | SMR/BRS/11 | 2574129    | 555928    | Ferruginous                        | 13.05  | 3.04  | 34.91  | 122.26 | 8.99  | 36.05  | 30.26  | 161.46 | 5.49  | 0.61 | 6.87   | 63.31  | 10.20  | 102.60 | 2.75  | 34.58 | 28.19  | 40.81  | 5.20  | 18.04  | 2.89  | 0.34 | 2.24  | 0.34 | 1.87  | 0.35 | 0.95  | 0.15 | 0.95 | 0.16 | 2.88  | 14.70 | 16.06  | 1.31  |
| 12      | SMR/BRS/12 | 2581542    | 555128    | Shale                              | 60.72  | 17.41 | 128.98 | 101.33 | 18.44 | 54.51  | 39.91  | 132.90 | 24.71 | 0.96 | 86.52  | 188.16 | 36.95  | 262.87 | 8.21  | 1.35  | 49.26  | 84.63  | 10.65 | 39.08  | 7.10  | 1.42 | 6.43  | 1.16 | 6.88  | 1.42 | 3.86  | 0.64 | 3.97 | 0.60 | 7.82  | 21.60 | 18.95  | 3.32  |
| 13      | SMR/BRS/13 | 2574175    | 555913    | Feldspathic Sandstone              | 17.98  | 4.78  | 37.84  | 141.04 | 1.85  | 12.85  | 15.21  | 31.49  | 9.49  | 0.50 | 29.76  | 258.44 | 21.84  | 186.64 | 3.83  | 1.82  | 61.58  | 116.08 | 14.84 | 57.39  | 10.33 | 1.55 | 7.33  | 1.03 | 5.04  | 0.85 | 2.13  | 0.30 | 1.83 | 0.27 | 4.64  | 28.57 | 20.23  | 2.07  |
| 14      | SMR/BRS/14 | 2575824.1  | 562793.93 | Shale                              | 11.01  | 11.07 | 118.32 | 121.31 | 2.32  | 8.97   | 37.20  | 26.07  | 25.07 | 0.69 | 115.69 | 56.22  | 23.78  | 301.56 | 11.21 | 1.28  | 66.25  | 121.61 | 14.40 | 51.49  | 8.61  | 1.41 | 6.70  | 1.01 | 5.15  | 0.90 | 2.29  | 0.35 | 1.96 | 0.32 | 8.83  | 9.45  | 28.48  | 4.15  |
| 15      | SMR/BRS/15 | 2576164    | 562449    | Shale                              | 15.91  | 11.17 | 158.91 | 131.41 | 26.40 | 18.52  | 35.36  | 58.54  | 22.00 | 0.38 | 122.45 | 102.28 | 26.27  | 233.52 | 8.44  | 1.12  | 55.11  | 106.02 | 12.39 | 44.37  | 7.66  | 1.47 | 6.36  | 1.02 | 5.17  | 0.97 | 2.63  | 0.40 | 2.31 | 0.35 | 7.44  | 15.23 | 21.35  | 2.37  |
| 16      | SMR/BRS/16 | 2579879.09 | 555001.71 | Shale                              | 53.27  | 20.24 | 160.10 | 87.91  | 17.95 | 48.19  | 42.72  | 119.89 | 26.72 | 0.59 | 84.19  | 353.31 | 54.60  | 261.25 | 9.55  | 1.54  | 67.51  | 132.88 | 15.62 | 57.86  | 11.03 | 2.27 | 10.25 | 1.76 | 10.72 | 2.12 | 5.90  | 0.91 | 5.33 | 0.76 | 8.03  | 31.57 | 28.28  | 3.81  |
| 17      | SMR/BRS/17 | 2777996.35 | 562856    | Shale                              | 25.97  | 18.98 | 131.93 | 94.62  | 13.41 | 28.75  | 40.04  | 71.60  | 28.02 | 0.48 | 113.77 | 233.00 | 39.94  | 183.25 | 8.27  | 1.39  | 67.62  | 133.02 | 14.90 | 55.35  | 10.37 | 2.03 | 9.12  | 1.53 | 8.46  | 1.59 | 4.29  | 0.60 | 3.70 | 0.49 | 6.07  | 22.92 | 26.55  | 3.15  |
| 18      | SMR/BRS/18 | 2578007    | 562895    | Shale                              | 69.56  | 19.14 | 127.36 | 83.59  | 14.81 | 33.99  | 40.64  | 84.76  | 27.38 | 1.07 | 86.48  | 236.94 | 49.77  | 341.56 | 10.07 | 1.65  | 68.16  | 132.31 | 15.22 | 56.09  | 10.66 | 2.09 | 9.33  | 1.70 | 10.01 | 1.95 | 5.42  | 0.85 | 5.13 | 0.73 | 11.18 | 30.39 | 27.77  | 3.73  |
| 19      | SMR/BRS/19 | 2574730    | 562221    | Basalt                             | 5.60   | 33.10 | 235.71 | 28.88  | 37.46 | 21.12  | 123.29 | 101.81 | 18.86 | 0.69 | 169.24 | 191.83 | 59.27  | 462.23 | 14.77 | 0.98  | 38.52  | 71.94  | 9.11  | 37.61  | 8.37  | 2.97 | 9.17  | 1.75 | 11.07 | 2.30 | 6.32  | 0.94 | 5.64 | 0.79 | 13.02 | 7.77  | 5.38   | 0.82  |
| 20      | SMR/BRS/20 | 2577553    | 563076    | Shale                              | 40.87  | 17.93 | 137.74 | 86.49  | 13.90 | 32.25  | 42.37  | 79.81  | 26.79 | 1.00 | 80.82  | 233.24 | 53.19  | 249.94 | 10.00 | 1.22  | 67.46  | 136.23 | 15.67 | 59.52  | 11.88 | 2.42 | 10.90 | 1.84 | 10.22 | 1.94 | 5.03  | 0.74 | 4.22 | 0.61 | 8.40  | 24.36 | 28.48  | 4.45  |
| 21      | SMR/BRS/21 | 2578916    | 563856    | Ferruginous shale                  | 74.32  | 21.88 | 147.71 | 88.60  | 17.06 | 36.49  | 42.46  | 89.48  | 28.32 | 1.14 | 83.68  | 240.62 | 48.24  | 268.25 | 9.08  | 1.47  | 63.64  | 127.95 | 14.70 | 54.20  | 10.52 | 2.21 | 9.41  | 1.64 | 9.93  | 1.93 | 5.36  | 0.83 | 4.88 | 0.71 | 8.61  | 27.46 | 26.84  | 3.75  |
| 22      | SMR/BRS/22 | 2577381.53 | 563568.83 | Shale                              | 59.70  | 19.36 | 122.84 | 87.86  | 16.48 | 32.75  | 39.01  | 79.44  | 26.43 | 0.79 | 91.03  | 235.07 | 53.52  | 314.32 | 8.62  | 1.47  | 66.63  | 128.60 | 14.69 | 54.39  | 10.25 | 2.09 | 9.45  | 1.68 | 10.25 | 2.03 | 5.56  | 0.86 | 5.27 | 0.79 | 9.99  | 26.96 | 27.44  | 3.80  |
| 23      | SMR/BRS/23 | 2577922    | 562828    | Shale                              | 43.44  | 23.21 | 145.35 | 75.06  | 20.88 | 50.44  | 40.78  | 102.48 | 18.01 | 0.76 | 60.16  | 210.36 | 61.23  | 263.19 | 5.90  | 1.68  | 50.22  | 103.06 | 11.85 | 46.09  | 9.39  | 1.99 | 9.41  | 1.78 | 11.46 | 2.31 | 6.58  | 1.07 | 6.22 | 0.94 | 8.10  | 25.32 | 22.06  | 4.80  |
| 24      | SMR/BRS/24 | 2579214    | 558522    | Shale                              | 102.29 | 20.85 | 173.36 | 110.51 | 22.67 | 49.56  | 51.51  | 110.88 | 33.94 | 1.38 | 95.39  | 201.98 | 49.18  | 480.62 | 14.68 | 2.22  | 72.01  | 138.85 | 15.46 | 56.63  | 10.05 | 2.18 | 9.13  | 1.68 | 10.06 | 1.97 | 5.49  | 0.91 | 5.70 | 0.83 | 14.31 | 34.26 | 26.76  | 4.27  |
| 25      | SMR/BRS/25 | 2574518    | 561186    | Kaolinized sst                     | 5.71   | 2.40  | 18.21  | 14.33  | 3.20  | 6.09   | 12.37  | 60.78  | 2.00  | 0.26 | 8.45   | 28.15  | 8.69   | 52.95  | 1.25  | 0.36  | 7.92   | 17.23  | 2.44  | 10.42  | 2.43  | 0.60 | 2.26  | 0.40 | 2.06  | 0.36 | 0.82  | 0.10 | 0.57 | 0.09 | 1.65  | 5.59  | 3.39   | 0.68  |
| 26      | SMR/BRS/26 | 2574047    | 561646    | Ferruginous band within yellow and | 33.71  | 22.55 | 291.43 | 109.04 | 14.60 | 53.34  | 38.07  | 179.60 | 12.44 | 1.51 | 22.13  | 425.40 | 33.37  | 231.08 | 4.54  | 2.12  | 29.17  | 71.84  | 7.90  | 31.41  | 6.55  | 1.77 | 7.47  | 1.49 | 8.68  | 1.48 | 3.47  | 0.51 | 2.90 | 0.42 | 6.14  | 75.96 | 11.06  | 4.99  |
| 27      | SMR/BRS/27 | 2577727    | 557751    | Ferruginous band within yellow and | 75.59  | 18.31 | 143.97 | 110.48 | 4.65  | 17.94  | 47.83  | 42.45  | 34.31 | 1.58 | 101.13 | 409.44 | 41.21  | 484.61 | 15.12 | 1.85  | 75.17  | 134.77 | 15.32 | 54.59  | 9.71  | 2.00 | 8.02  | 1.44 | 8.56  | 1.73 | 4.82  | 0.79 | 5.24 | 0.77 | 14.48 | 27.96 | 27.98  | 4.75  |
| 28      | SMR/BRS/28 | 2575101    | 562148    | Shale                              | 51.22  | 18.41 | 152.46 | 108.19 | 29.48 | 59.59  | 42.23  | 174.13 | 28.46 | 1.45 | 96.00  | 146.81 | 43.56  | 415.29 | 14.52 | 3.92  | 93.03  | 163.53 | 18.44 | 66.98  | 12.13 | 2.12 | 10.55 | 1.77 | 9.75  | 1.86 | 4.90  | 0.78 | 4.57 | 0.66 | 12.40 | 40.57 | 47.95  | 4.65  |
| 29      | SMR/BRS/29 | 2577384    | 557677    | Ferruginized Shale                 | 21.96  | 19.20 | 209.04 | 59.16  | 8.71  | 26.18  | 55.43  | 104.43 | 7.20  | 1.68 | 20.67  | 171.65 | 92.69  | 141.87 | 2.80  | 2.28  | 30.89  | 72.34  | 9.14  | 40.61  | 9.94  | 2.82 | 12.87 | 2.62 | 15.98 | 3.26 | 8.05  | 1.08 | 5.99 | 0.82 | 3.26  | 12.15 | 6.80   | 4.86  |
| 30      | SMR/BRS/30 | 2579214    | 558522    | Shale                              | 67.52  | 26.45 | 183.28 | 94.19  | 21.36 | 47.91  | 49.79  | 116.46 | 23.70 | 1.25 | 73.36  | 546.21 | 61.86  | 380.30 | 9.72  | 1.78  | 50.28  | 99.81  | 11.68 | 43.89  | 8.69  | 2.03 | 8.90  | 1.75 | 11.12 | 2.41 | 7.01  | 1.12 | 6.87 | 1.02 | 10.89 | 26.51 | 21.64  | 3.95  |
| 31      | SMR/BRS/31 | 2577711    | 556605    | Ferruginous Shale                  | 74.82  | 19.46 | 148.41 | 90.52  | 22.55 | 46.76  | 37.15  | 124.07 | 23.05 | 1.08 | 90.42  | 250.89 | 40.13  | 375.13 | 10.58 | 1.74  | 51.91  | 103.40 | 11.86 | 43.70  | 8.06  | 1.61 | 7.24  | 1.33 | 8.33  | 1.67 | 4.79  | 0.82 | 5.08 | 0.72 | 11.49 | 24.78 | 21.53  | 3.34  |
| 32      |            |            |           |                                    |        |       |        |        |       |        |        |        |       |      |        |        |        |        |       |       |        |        |       |        |       |      |       |      |       |      |       |      |      |      |       |       |        |       |