

## OIL SHALE CORE DESCRIPTION

| DEPTH  | LITHOLOGY | COLOR |      |       |         |       | BEDDING |      |          | EST. RICHNESS |      |      | CALCAREOUSNESS |      | ACCESSORY |            |      | MISC.  |             |        | GULF MINERAL RESOURCES CO. |      |        |         |         |                                  |
|--------|-----------|-------|------|-------|---------|-------|---------|------|----------|---------------|------|------|----------------|------|-----------|------------|------|--------|-------------|--------|----------------------------|------|--------|---------|---------|----------------------------------|
|        |           | TAN   | GRAY | BROWN | GRY-BRN | BLACK | OTHER   | LAM. | CONFORM. | OTHER         | POOR | FAIR | MOD.           | RICH | SLIGHTLY  | MODERATELY | VERY | PYRITE | SALINE MIN. | CARBON | FOSSILS                    | VUGS | FRACT. | BRECCIA | WELL    | LOCATION                         |
|        |           |       |      |       |         |       |         |      |          |               |      |      |                |      |           |            |      |        |             |        |                            |      |        |         | REMARKS |                                  |
| 180.9  | OS.       | X     |      |       |         |       | X       |      |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | Pyrite crystals                  |
| 186.4  | OS.       |       |      |       | X       |       | X       |      |          |               |      | X    |                |      |           |            |      | X      |             |        |                            |      |        |         |         | mica xls, pyrite in bands        |
| 187.8  | OS.       |       |      |       | X       |       |         |      | X        |               | X    |      |                |      |           |            | X    |        |             |        |                            |      |        |         |         | calcareous matrix, carbonaceous  |
| 187.9  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 189.2  | OS.       |       | X    |       |         |       |         | X    |          | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | slightly platy                   |
| 189.9  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 190.9  | OS.       |       |      | X     |         |       |         |      |          | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | small grains, calcite in matrix  |
| 191.1  | OS.       |       |      | X     |         |       |         |      | X        |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         | w/ thin calc. band at 191.3      |
| 191.9  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        | X           |        |                            |      |        |         |         | thin carbonaceous band at 191.3  |
| 193.4  | OS.       |       |      | X     |         |       |         |      | X        |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         | thin calc. band at 194.3         |
| 197.4  | OS.       |       |      |       | X       |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | mica crystals                    |
| 201.4  | OS.       |       |      | X     |         |       |         |      |          | X             |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         | MAGNETIC MARKER - w/             |
| 201.8  | OS.       |       |      |       | X       |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | thinly bed at 201.1              |
| 203.4  | OS.       |       |      | X     |         |       |         |      | X        |               |      | X    |                |      |           |            |      |        |             | X      |                            |      |        |         |         | w/ carb. bed at 203.45           |
| 205.9  | OS.       |       |      | X     |         |       |         |      | X        |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 209.2  | OS.       |       |      | X     |         |       |         |      |          | X             | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | small grains                     |
| 209.3  | OS.       |       |      | X     |         |       |         |      | X        |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 211.05 | OS.       |       | X    |       |         |       |         |      |          | X             | X    |      |                |      |           |            |      |        |             | X      |                            |      |        |         |         | w/ thin carb. band               |
| 211.4  | OS.       |       |      |       | X       |       |         |      | X        |               |      |      | X              |      |           |            |      |        |             |        |                            |      |        |         |         | w/ thin calc. band at 212.6 (60) |
| 214.0  | OS.       |       | X    |       |         |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 214.8  | OS.       |       |      |       | X       |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 215.7  | OS.       |       |      | X     |         |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 217.9  | OS.       |       |      | X     |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | richer top 0.4'                  |
| 220.0  | OS.       |       |      |       | X       |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 227.6  | OS.       |       |      | X     |         |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 230.4  | OS.       |       |      |       | X       |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         | here                             |
| 236.6  | OS.       |       | X    |       |         |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 241.7  | OS.       |       | X    |       |         |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         | w/ thin calc. bands              |
| 241.9  | OS.       |       | X    |       |         |       |         | X    |          |               |      | X    |                |      |           |            |      |        |             |        |                            |      |        |         |         | w/ thin calc. band at 242.8      |
| 247.2  | OS.       |       |      |       | X       |       |         |      | X        | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | calcareous matrix                |
| 249.0  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | slightly platy                   |
| 250.7  | OS.       |       |      | X     |         |       |         | X    |          |               | X    |      |                |      |           |            | X    |        |             |        |                            |      |        |         |         | calcareous matrix                |
| 255.0  | OS.       |       |      |       | X       |       |         |      | X        |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 256.2  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 268.5  | OS.       |       | X    |       | X       |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | shaly - calc. in zones           |
| 272.6  | OS.       |       | X    |       |         |       |         | X    |          | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | hard                             |
| 273.0  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        | X           |        |                            |      |        |         |         | w/ carb. band at top             |
| 274.6  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | platy                            |
| 275.6  | OS.       |       | X    |       |         |       |         |      | X        | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | thin calc. band, calc. in matrix |
| 277.5  | OS.       |       |      | X     |         |       |         |      | X        | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | turbidite - calc. in matrix      |
| 281.2  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | thin calc. band                  |
| 289.2  | OS.       |       |      |       | X       |       |         |      | X        |               | X    |      |                |      |           |            |      |        | X           |        |                            |      |        |         |         | thin calc. band                  |
| 290.1  | OS.       |       | X    |       |         |       |         | X    |          | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         | thin calc. band                  |
| 291.1  | OS.       |       |      |       | X       |       |         |      | X        |               | X    |      |                |      |           |            |      |        | X           |        |                            |      |        |         |         | thin calc. band                  |
| 296.15 | OS.       |       | X    |       |         |       |         | X    |          | X             |      |      |                |      |           |            | X    |        |             |        |                            |      |        |         |         | calcareous band                  |
| 307.6  | OS.       |       |      |       | X       |       |         |      | X        |               | X    |      |                |      |           |            |      |        | X           |        |                            |      |        |         |         | appears harder than above        |
| 315.4  | OS.       |       | X    |       |         |       |         | X    |          | X             |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 338.6  | OS.       |       | X    |       |         |       |         | X    |          |               | X    |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| 340.0  | OS.       |       |      |       |         |       |         |      |          |               |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |
| TD     |           |       |      |       |         |       |         |      |          |               |      |      |                |      |           |            |      |        |             |        |                            |      |        |         |         |                                  |