

# Northwest Geological Service



LOG NO. 245

COMPANY **CARDINAL PETRO. CO.** LEASE AND NO. **#1 HAGEN-OLSON**  
 STATE OR PROVINCE **MONTANA** COUNTY **SHERIDAN** AREA \_\_\_\_\_  
 LOCATION **SE SE** SEC. **23** T. **37N** R. **57E** GRND. ELEV. **2235'** **KB. 2244'**  
 TOTAL DEPTH **6600'** SPUDDED **8-20-63** COMPLETED **9-15-63**  
 REMARKS: **Photo Enlargement X 10**

GEOLOGIC SECTION **MISSISSIPPIAN: Charles** DATE **Mar. 1964**

| GAMMA | Depth - Testing | PHOTO - LOG  | LATEROLOG | REMARKS  |
|-------|-----------------|--|-----------|--|
|       | 6000            | ++<br>   |           | Salt, intel anhy & sh.                                       |
|       |                 |  |           | Dolo, chky, slty, argil, salt incls.                         |
|       |                 | ++<br>++<br>++<br>   |           | Salt, strks dolo, as abv, s/ anhy.                           |
|       |                 | ++<br>   |           | Salt.  |
|       |                 | ++<br>   |           | Salt, w/ anhy, argil & dolo, slty.                           |
|       |                 |  |           | Anhy, argil, salt incls, strks dolo, slty.                   |
|       |                 | ++<br>   |           | Salt.  |
|       |                 |  |           | Ls, dns, sl argil, intel anhy, anhy xls.                     |
|       |                 |  |           | Anhy, acicular, intel ls, m/ salt.                           |
|       | 6100            |  |           | Anhy, acicular, dns, m/ ls, dns, tr fn fos frgs, tr ools.    |
|       |                 |  |           | Ls, dns, argil, anhytc, intel anhy, strks slst.              |
|       |                 |  |           | Ls, dns, argil, tr ools, salt & anhy incls.                  |
|       |                 |  |           | Anhy, acicular, argil, salt incls, strks slst & ls.          |
|       |                 | ++<br>   |           | ? Salt, intel anhy, strks dolo, slty.                        |
|       |                 |  |           | Ls, dns, argil, anhy xls, salt incls.                        |
|       |                 | No Sample  |           |  |
|       | 6200            |  |           | Ls, c-ltc, fn fos frgs, slty, argil, anhy incls.             |
|       |                 |  |           | Ls, c-etc loc, f/ fos frgs, f/ ools, intel anhy, salt incls. |
|       |                 |  |           | Ls, dns, argil, salt incls.                                  |
|       |                 |  |           | Ls, c-ltc loc, slty, argil, tr fos frgs, salt mat.           |
|       |                 | Dolo, argil, strks ls & anhy.  |           |  |
|       | ++<br>          | ? Salt, m/ anhy, dns, argil, pyr.  |           |  |
|       |                 | Anhy, argil, strks dolo & sh.  |           |  |
|       |                 | Anhy, w/ argil, dolote.  |           |  |
|       |                 | Ls, dns, anhy xls, intel anhy.   |           |  |
| 6300  | ++<br>          | ? Salt, intel anhy argil, strks ls, c-etc.   |           |  |
|       |                 | Anhy, acicular, dns, m/ salt, tr intel ls.   |           |  |
|       |                 | Anhy, acicular, intel salt, tr ls frs.   |           |  |
|       |                 | Ls, subchky, sl dolote, argil, silc, tr ch, sl chky por.   |           |  |
|       |                 | Ls, fnly foslf, s/ lime mud, chky loc, dolote, sl por.   |           |  |
|       |                 | Anhy, acicular, dns, strks dolo & ls.  |           |  |
|       |                 | Anhy, argil, dns, sdy, strks ss.   |           |  |
|       | ++<br>          | ? Salt, intel anhy, argil.   |           |  |
|       |                 | Ls, anhytc, chky loc, dolote, slty, fnly foslf, grd to dolo, sl por.                               |           |  |
|       |                 | Ls, argil, frgtl, reworked lime mud, anhy, sl slty, dolote, sl por.                                |           |  |
| 6400  |                 | Anhy, argil, dns, dolote, strks dolo, argil.   |           |  |
|       |                 | Anhy, as abv.  |           |  |
|       |                 | Anhy, argil, dolote, strks dolo, argil, sl sdy.  |           |  |
|       |                 | Anhy, argil, dolote, sl slty, strks dolo & ls, argil.  |           |  |
|       |                 | Anhy, argil, dolote, sl slty.  |           |  |
|       |                 | Ls, anhytc, argil, fn fos frgs, pyr.   |           |  |
|       |                 | Ls, argil, s/c-l, f/ calcisphaeres slty.   |           |  |
|       |                 | Anhy, argil, dolote, sl slty, strks ls, mud, s/c-l.  |           |  |
|       |                 | Ls, mud, dns to subchky, f/ fos frgs, anhytc, sl sdy.  |           |  |
| 6500  |                 | Dolo, chky, argil, sl por.   |           |  |
|       |                 | Ls, mud, f/ ostr, argil, tr xln clc.   |           |  |
|       |                 | Ls, chky, v dolote, tr fos frgs, sl por.   |           |  |
|       |                 | Ls, c-c, f/ ools, tr ostr frgs, s/xln anhy mat, fair por.  |           |  |
|       |                 | Ls, peld, fn fos frgs, dolote, tr xln anhy, sl por intbd ls, argil, spels, conodonts frgs, sl por. |           |  |
|       |                 | Ls, alg, piso, peld, m/ xln anhy, sl por.  |           |  |
|       |                 | Ls, alg, piso, peld, m/ xln clc, tr xln anhy, fair por.  |           |  |
|       |                 | Ls, subchky, fnly foslf, calcisphaeres, spels, sl dolote, sl por.                                  |           |  |
|       |                 | Ls, c-etc, dtrl piso, ools, calcisphaeres, tr alg, m/ xln anhy, sl por.                            |           |  |
|       |                 | Anhy, xln, qtz xls, intel ls, c-etc, s/ metasomatic, strks ls, mud, argil.                         |           |  |
|       |                 | Ls, mud, peld loc, m/ sec anhy, argil.   |           |  |
|       |                 | Dolo, argil, anhytc, anhy incls. Ls, mud, peld, argil, f/ ostr, m/ sec anhy.                       |           |  |
|       |                 | Dolo, chky, argil, sl anhytc, sl slty, pyr.  |           |  |
|       |                 | Ls, chky, dolote, argil, f/ fos frgs, sl por.  |           |  |
|       |                 | Ls, fnly foslf, brach, bryon, argil, dolote loc.   |           |  |
|       |                 | Dolo, argil, slty, pyr.  |           |  |
|       |                 | Ls, foslf, brach, ostr, spels, argil, strks ls, fos frgtl; @ 6511-92.                              |           |  |