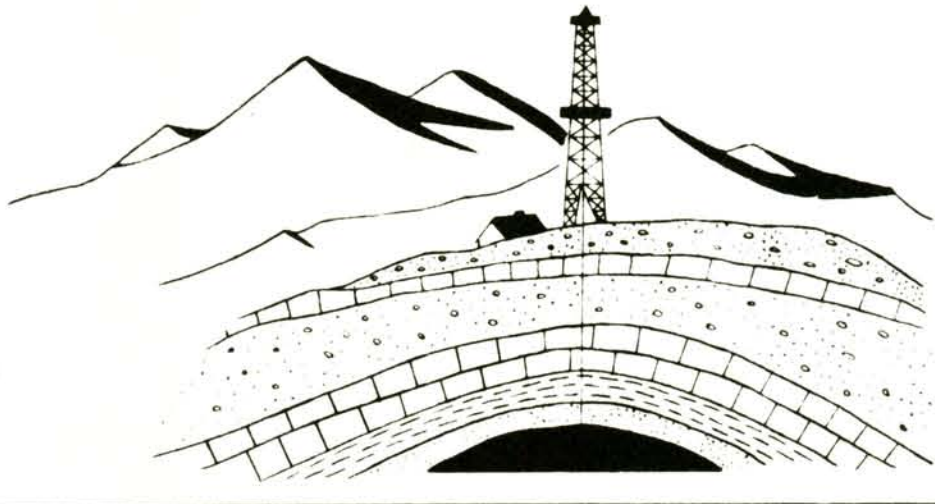


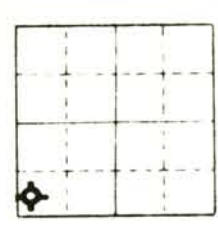
# Northwest Geological Service



LOG NO. 116

COMPANY PAN AMER. PET. CORP.-AMERADA PET. CO. LEASE AND NO. I NP - P

STATE OR PROVINCE MONTANA COUNTY DAWSON AREA



LOCATION W/2 SW SW SEC. 31 T. 19N R. 51E GRND ELEV. 2996' K.B. 3009'

TOTAL DEPTH 10,863 SPUDDED 3-24-58 COMPLETED 5-22-58

REMARKS: Photo Enlargement X10

GEOLOGIC SECTION MISSISSIPPIAN: Charles, Mission Canyon, Lodgepole DATE MAR, 1961

| GAMMA RAY | DEPTH TESTING | PHOTO - LOG | LATERALOG | REMARKS  |
|-----------|---------------|-------------|-----------|--|
|           | 7900          |             |           | Salt, w/sh, dolotc, slty, strks dolo.                            |
|           |               |             |           | Salt w/dolo, argil, anhytc w/ anhy.                              |
|           |               |             |           | Salt w/sh, slty, dolotc, w/ anhy.                                |
|           |               |             |           | Salt w/sh, slty, anhy incls, s/ dolo, slty.                      |
|           |               |             |           | Ls, dns, fn fos frgs, anhy xls, sl slty, radial ools?            |
|           |               |             |           | Sh, w/anhy.  |
|           |               |             |           | Ls, dns, anhy & qtz xls.   |
|           | 8000          |             |           | Ls, dns, argil, pyr w/sh.  |
|           |               |             |           | Anhy, argil w/dolo, chky.  |
|           |               |             |           | Salt w/dolo, slty sdy & anhy.                                    |
|           |               |             |           | Salt w/anhy, argil.  |
|           |               |             |           | Ls, dns, anhy incls.   |
|           |               |             |           | Ls, dns.   |
|           |               |             |           | Ls, dns, argil, fn fos frgs.                                     |
|           |               |             |           | Ls, dns to chky, v/fn fos frgs.                                  |
|           |               |             |           | Ls, dns, argil.  |
|           | 8100          |             |           | Sh, dolotc, sl slty; s/foslf ls.                                 |
|           |               |             |           | Anhy, acicular, argil, dolotc.                                   |
|           |               |             |           | Anhy, acicular.  |
|           |               |             |           | Salt?, w/ls, argil.  |
|           |               |             |           | Anhy, acicular.  |
|           |               |             |           | Anhy, s/dolo, sdy, slty.   |
|           |               |             |           | Anhy, acicular, argil, sl slty.                                  |
|           |               |             |           | Dolo, chky, calc, arg to ls.                                     |
|           |               |             |           | Ls, dns, faint peld, anhytc.                                     |
|           |               |             |           | Ls, dns, argil, anhy incls.                                      |
|           | 8200          |             |           | Ls, dns, argil, tr c-l, anhytc.                                  |
|           |               |             |           | Anhy, v argil, sdy w/sh.   |
|           |               |             |           | Anhy, acicular, argil.   |
|           |               |             |           | Ls, subchky, anhytc.   |
|           |               |             |           | Ls, foslf, argil, tr c-c and c-r, anhytc.                        |
|           |               |             |           | Ls, argil, fos frgs, strks dolo, sdy and anhy.                   |
|           |               |             |           | Dolo, dns to chky, argil, anhy incls.                            |
|           |               |             |           | Ls, dns to chky, dolotc, anhytc w/anhy incls.                    |
|           |               |             |           | Dolo, chky, argil, sl slty.                                      |
|           | 8300          |             |           | Dolo, chky, argil, conodont frgs.                                |
|           |               |             |           | Ls, foslf, crin, cor, argil, sl silc.                            |
|           |               |             |           | Ls, dns to chky dolotc, foslf, argil, slty, arg to dolo, sl cor. |
|           |               |             |           | Ls and dolo as abv, sl silc.                                     |
|           |               |             |           | Ls, foslf, dns, argil, sl silc, dolotc.                          |
|           |               |             |           | Ls, foslf, dns, argil, sl silc, s/ch.                            |
|           |               |             |           | Ls, foslf, argil, dns.   |
|           | 8400          |             |           | Ls, dns, foslf, argil, sl silc, alvae? frgs.                     |
|           |               |             |           | Ls, dns, fn fos frgs, faint peld.                                |
|           |               |             |           | Ls, dns, fn fos frgs, argil, pyr.                                |
|           |               |             |           | Ls, dns, foslf, argil.   |
|           |               |             |           | Ls, c-c, forams?, sl por.  |
|           |               |             |           | Ls, c-c to cl, v silc, por.                                      |
|           |               |             |           | Ls, c-c to fos frgtl, sl silc.                                   |
|           | 8500          |             |           | Ls, c-c to fos frgtl, argil.                                     |
|           |               |             |           | Ls, c-c, foslf, argil, sl slty.                                  |
|           |               |             |           | Ls, fos frgtl, to c-c, silc loc, ch.                             |
|           |               |             |           | Ls, fos frgtl, c-ctc, dolotc, sl por.                            |
|           |               |             |           | Dolo, chky, argil w/ls, fos frgtl, por.                          |
|           |               |             |           | Ls, foslf, chky, argil, dolotc, sl por.                          |
|           |               |             |           | Ls, foslf, argil, sl por.  |
|           | 8600          |             |           | Ls, foslf, dolotc, argil, sl por.                                |
|           |               |             |           | Ls, foslf, dolotc, sl por.                                       |
|           |               |             |           | Ls, dns, fn fos frgs.  |
|           |               |             |           | Ls, foslf, argil.  |
|           |               |             |           | Ls, foslf, argil, silc, s/ch.                                    |
|           |               |             |           | Ls, foslf, argil.  |
|           |               |             |           | Ls, foslf, argil.  |
|           | 8700          |             |           | Ls, dns, f/fos frgs.   |
|           |               |             |           | Ls, foslf, argil.  |
|           |               |             |           | Ls, dns, sl foslf, argil.  |
|           |               |             |           | Ls, fos frgtl, argil.  |
|           |               |             |           | Ls, dns, foslf loc, argil.                                       |
|           |               |             |           | Ls, foslf, dns, argil.   |
|           |               |             |           | Ls, dns, foslf, argil.   |
|           | 8800          |             |           | Ls, fos frgtl, argil.  |
|           |               |             |           | Ls, dns to chky, foslf, dolotc, sl por.                          |
|           |               |             |           | Ls, foslf, argil.  |
|           |               |             |           | Ls, chky, foslf, dolotc, argil, sl por.                          |
|           |               |             |           | Ls, dns to chky, foslf, dolotc, argil, sl por.                   |
|           |               |             |           | Ls, gran, foslf, dolotc, sl por.                                 |
|           | 8900          |             |           | Ls, gran, foslf, dolotc, sl por.                                 |
|           |               |             |           | Ls, foslf, c-ctc, dolotc, sl por.                                |
|           |               |             |           | Ls, fnly foslf, dolotc, sl por.                                  |
|           |               |             |           | Ls, foslf, argil.  |
|           |               |             |           | Ls, argil, sncls, sl dolotc.                                     |
|           |               |             |           | Ls, fnly foslf, argil, sl c-ltc.                                 |
|           | 9000          |             |           | Ls, c-ltc, foslf, argil.   |