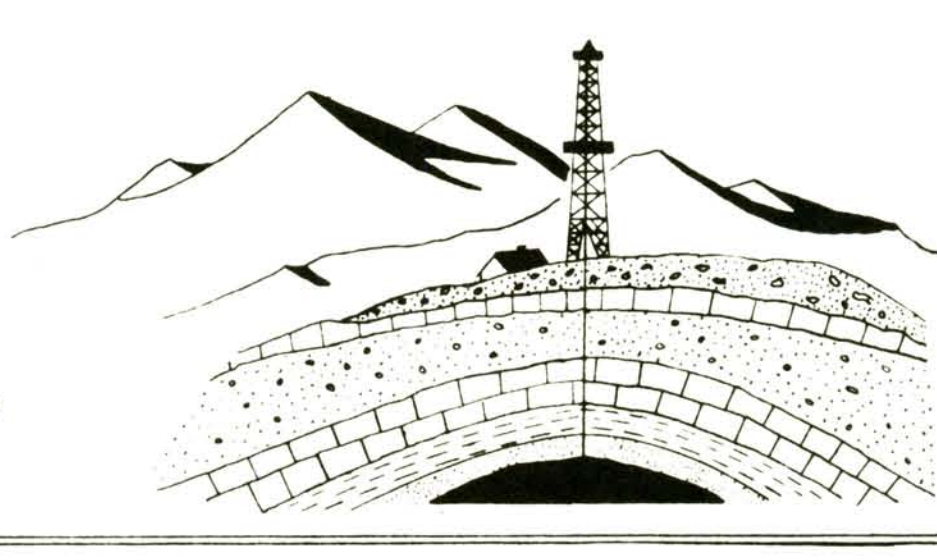


# Northwest Geological Service



LOG NO. 196

COMPANY SUN OIL COMPANY LEASE AND NO. # HELLEGAARD  
 STATE OR PROVINCE MONTANA COUNTY SHERIDAN AREA \_\_\_\_\_  
 LOCATION SE. NE. SEC. 8 T. 37 N. R. 57 E. GRND. ELEV. 2282' K.B. 2298'  
 TOTAL DEPTH 10,439' SPUNDED 9-11-62 COMPLETED 12-31-62  
 REMARKS: Photo Enlargement X:10

GEOLOGIC SECTION MISSISSIPPIAN: Charles, Mission Canyon, Lodgepole DATE Feb. 1963

GAMMA	Depth Testing	PHOTO LOG	LATER LOG	REMARKS
				Sh, slty w/slt.
				Dolo, dns to chky, argil, slty.
				Anhy, dns, argil, dolotc.
				Dolo, argil, slty, intel anhy & salt.
				Salt w/anhy, tr ls.
				Salt w/anhy & dolo.
				Salt w/anhy & dolo.
				Ls, dns, anhy xls & incls, prbl salt incls.
				Salt w/anhy, s/ls.
				Ls, oolte, slty, pyr, prbl salt mat.
				?Salt, intel anhy & ls.
				Anhy, dns, argil, w/ls & salt.
				Anhy, dns, argil, w/silty dolo & salt.
				Salt.
				Anhy, argil, w/dolo, slty & salt.
				Ls, dns, anhy xls, salt incls.
				Ls, dns, fn fos frgs, tr ools, anhy & salt incls.
				Ls, dns, argil, silc strks ls, argil, slty.
				Ls, dns, s/peld, f/ost, tr ools, sl argil.
				Ls, dns, argil, tr fos frgs.
				Anhy, dns, argil, slty w/argil slst.
				Salt w/anhy s/ls.
				Anhy, dns, argil, slty.
				Anhy, dns, argil w/dolo, subchky.
				Anhy, dns, argil, dolotc.
				Ls, c-c, oolte, anhy incls, prbl salt mat.
				Ls, dns, faint peld, tr ools, fn fos frgs, anhy incls, psbl salt incls.
				Ls, dns, argil, anhy xls, strks dolo chky, slty & anhy.
				Anhy, argil, sdy, strks ss.
				Ls, c-ctc, fn fos frgs, anhytc, pyr.
				?Salt w/anhy, dolotc, argil.
				Anhy, argil, slty, dolotc.
				Anhy, dolotc, argil, slty, salt incls.
				?Salt w/anhy, argil, slty, tr ls.
				Anhy, dns, argil, dolotc w/salt.
				Ls, frgtl, v anhytc, salt incls.
				Anhy, dns, argil, slty, salt incls & frgtl ls, tr calcisphaeres.
				Ls, argil, fnly foslf, slty, strks dolo.
				Ls, c-c, foslf, bryon, brach, crin, foram reworked lime mud. Ls, pld, ool, alg, m/cic mat.
				Ls, mud, argil, fn fos frgs, ostr, calcisphaeres, anhy vns.
				Ls, mud, faint peld, fn fos frgs, ostr, spcls.
				Ls, pld, alg, m/xln c/c tr xln anhy, strks ls, chky, faint peld, fn fos frgs, fair por.
				Ls, mud, fn peld, fn fos frgs, calcisphaeres, sl por.
				Ls, pld, mud, m/xln c/c & anhy, sl por.
				Ls, mud, faint peld, fn fos frgs, anhytc, dolotc, sl chky por.
				Anhy, acicular, dns, w/chky, argil dolo.
				Ls, fn peld, mud, argil, anhytc. Dolo, chky, argil, slty, tr conodonts, fair chky por.
				Ls, fnly foslf, spcls, brachs, chky, dolotc, sl por.
				Ls, c-c, brachs, ele mat.
				Ls, fos frgtl, brach, bryon, argil.
				Ls, c-c, f/ools, fos frgs, fair por.
				Ls, chky, dolotc, argil, tr spcls, sl por.
				Ls, fnly foslf, spcls, bryon, crin, dolotc, sl por.
				Ls, fos frgtl, bryon, crin, argil, sl por.
				Ls, fnly foslf, spcls, bryon, foram, sl slty, argil, sl por.
				Ls, foslf, bryon, brach, argil, sl slty.
				Ls, foslf, bryon, brach, conodonts, argil, sl slty.
				Ls, fos frgtl, bryon, brach, crin, argil.
				Ls, fos frgtl, brach, crin, cor, argil, sl slty.
				Ls, argil, slty, fn fos frgs, pyr.
				Ls, chky, dolotc, argil, fn fos frgs, fair por.
				Ls, argil, slty, sl sdy, dolotc, fn fos frgs.
				Ls, argil, slty, fn fos frgs.
				Ls, foslf, bryon, crin, c-ctc, argil.
				Ls, argil, foslf, bryon, silc, s/ch.
				Ls, argil, slty, fn fos frgs, s/ch.
				Ls, fos frgtl, bryon, crin, argil, sl silc, sl slty.
				Ls, argil, fnly foslf, brach, crin, conodonts.
				Ls, foslf, argil, s/crinal, silc, sl por.
				Ls, fos frgtl, crin, bryon, argil.
				Ls, fnly foslf, subchky, argil, sl dolotc, sl por.
				Ls, foslf, brach, crin, bryon, argil.
				Ls, fos frgtl, bryon, crin, argil.
				Ls, fos frgtl, sl c-ctc, silc, argil, sl por.
				Ls, argil, foslf, brach, bryon, crin, sl por.
				Ls, fos frgtl, crin, brach, bryon, argil.
				Ls, fos frgtl, bryon, crin, silc, sl por.
				Ls, argil, foslf, bryon, crin.
				Ls, fos frgtl, crin, bryon, silc, sl por.
				Ls, argil, foslf, silc, s/fos frgtl.
				Ls, fnly foslf, chky, argil, sl por.
				Ls, fnly foslf, argil, silc, sl chky por.
				Ls as abv.
				Ls, fnly foslf, spcls, bryons, argil, silc, s/ch.
				Ls, fnly fos frgtl, bryon, spcls, silc, s/ch.
				Ls, foslf, s/crinal, argil, silc, s/ch, sl por.
				Ls, fos frgtl, crin, bryon, silc, argil, sl por.
				Ls, foslf, brach, crin, bryon, argil, silc, sl por.
				Ls, crinal, bryon, silc, sl argil, sl por.
				Ls, fnly fos frgtl, argil, sl silc, sl por.
				Ls as abv.
				Ls, fnly foslf, dns, argil, silc, s/ch.
				Ls, fnly fos frgtl, bryon, sl c-ctc, argil, silc, sl por.
				Ls, fnly fos frgtl, argil, silc, sl por, s/ch.
				Ls, fn fos frgtl, bryon, argil, silc, dolotc, stylos, sl por.
				Ls, fnly foslf, spcls, argil, f/silt grs, sl dolotc.
				Ls as abv, s/ch, sl por.
				Ls, dns, fn fos frgs, silc, argil.
				Ls, dns to chky, fnly foslf, spcls, bryon, argil, sl dolotc, sl por.
				Ls, dns, fnly foslf, spcls, argil, sl silc.