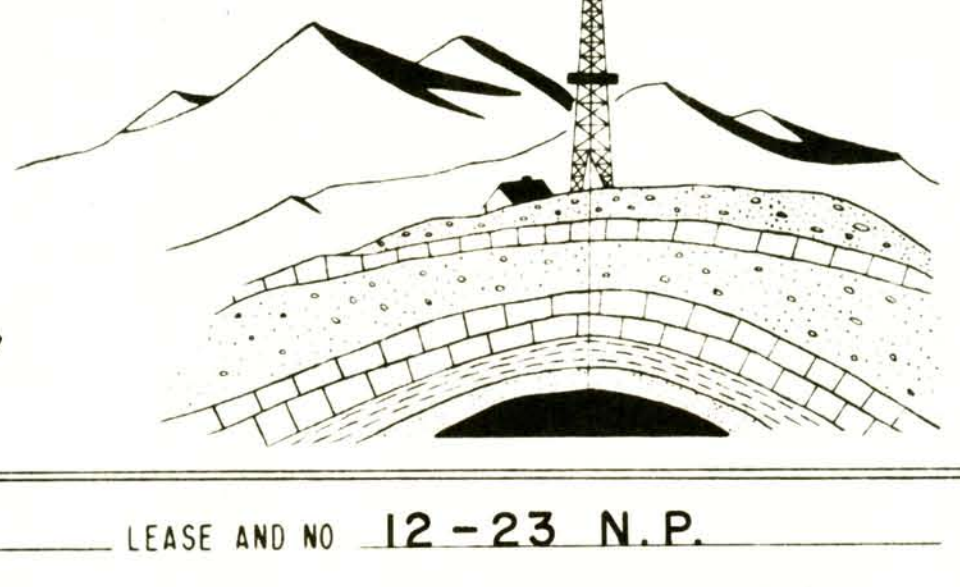


Northwest Geological Service



LOG NO. 143

COMPANY **SHELL OIL CO. - NORTHERN PACIFIC** LEASE AND NO. **12-23 N.P.**

STATE OR PROVINCE **MONTANA** COUNTY **FALLON** AREA **MONARCH**

LOCATION **C SW NW SEC. 23 T 9 N. R 58 E. GRND ELEV 2958' K.B. 2970'**

TOTAL DEPTH **9175'** SPUNDED **9-20-58** COMPLETED **11-18-58**

REMARKS: **I.P.P. 218 B.O., 13 B.W.P.D., 30.8° Gravity (8400-8506', Interlake). Photo Enlargement X 10.**

GEOLOGIC SECTION **MISSISSIPPIAN: Charles, Mission Canyon, Lodgepole** DATE **NOV, 1961**

DEPTH TESTING	PHOTO - LOG	LATERALOG	REMARKS
			Sh, lmpyrv slty, dolote, anhytc, grdg to slst & dolopspbl salt incls.
7000			Dolo, microgran, argil, slty, anhytc.
			ls, dns, argil, slty loc, w/ anhy incls; c-ctc loc; strks ools.
			ls, dns, argil, w/ anhy incl; m/ ools, slty loc.
			ls, dns to subchky, argil, sl slty, w/ anhy incl; m/ ools.
			ls, dns, argil, slty loc.
			ls as abvs; ls, dns to subchky, argil, slty & oolte loc, tr ch.
			ls, dns, fn fos frgs, argil, sl slty; c-ctc loc, silc.
			ls, dns to subchky, fn fos frgs, spcls, argil, tr silt; sl por.
			ls, dns, f/ fn fos frgs, spcls, peld?, argil, sl silc loc, anhy incls.
			ls, dns, sl argil; ls, c-ctc, fn fos frgs; anhy, acicular.
			Anhy, acicular; ls, dns, spcls, & c-ctc; tr ch.
			ls, subchky, dolote, argil, fair por.
			ls, dns, fn fos frgs, crin, argil, anhytc, slty loc.
			Salt?; ls, dns to subchky, sl dolote, fn fos frgs, spcls, argil, w/ intcl anhy.
			Salt?; ls & anhy as abvs; oolte ls; tr ss, dolote.
			ls, dns, dolote, argil, slty; m/ fos frgs loc, w/ anhy incl, peld & ools.
			ls, subchky, dolote, f/ fn fos frgs, argil, sl por, grdg to dolo, dns, argil, slty, w/ anhy incl.
			ls, dns, frgtl, s/ fos frgs, crin, foram?, argil, w/ s/ anhy xln incls; dolo, chky, argil, slty.
			ls, dns to subchky, argil; s/ dolo, subchky, argil, slty, ch.
			Dolo, subchky, argil, slty, fair por; s/ anhy, dns, argil, dolote.
			ls, subchky, dolote, fn fos frgs, crin, bryon?, argil, sl slty, sl por; s/ dolo as abv & fosif ch.
			ls, dns, fn fos frgs, crin, spcls, foram, argil, silc; s/ ch.
			ls, dns, fn fos frgs, crin, bryon, foram?, argil, sl por.
			ls, subchky, dolote, fn fos frgs, bryon, spcls, argil, slty loc; s/ chky dolo, gd por.
			ls, dns, subchky, fn fos frgs, argil, slty; fair por loc.
			ls, fos frgtl, crin, bryon, argil, tr por.
			ls, dns to c-ctc, fn fos frgs, argil, sl slty, gd por loc; f/ anhy vns.
			ls, dns to subchky, dolote, f/ fn fos frgs, conodonts?, argil, silc loc; s/ frgtl ls w/ anhy xln mat.
			Anhy, dns, argil; strks ls, fosif, argil.
			Dolo, subchky, argil s/ anhy, dns to acicular & ls, dns, s/ fos frgs.
			Anhy, dns, argil, dolote; s/ dolo as abvs; ls, c-ctc.
			ls, dns to fn fos frgtl, crin, bryon, dolote, argil, anhytc, por; s/ dolo, chky, v anhytc; s/ dns anhy.
			Anhy, dns, argil, dolote; s/ dolo, subchky, argil, slty, w/ anhy xln incls.
			Dolo, chky, calc, c-ctc, lchd, argil, anhytc, slty loc; gd por.
			Dolo, chky, fn fos frgs, calc, argil, anhytc, sl por; ls, fn fos frgtl, argil.
			Dolo, chky, fn fos frgs, c-ctc, argil, anhytc, fair por; ls as abv.
			Dolo, subchky, calc, argil, fair por; s/ ls, c-ctc, fos frgs.
			Dolo, microgran, calc, fn fos frgs, lchd, anhytc loc, argil, good por.
			Dolo, chky, fos casts, argil, gd por; s/ ls, subchky, dolote, fos frgtl.
			Dolo, subchky, argil, anhytc, s/ ls as abv.
			ls, subchky, dolote, fos frgtl, crin, bryon, argil, sl por; s/ dolo as abv.
			ls & dolo as abv.
			ls, subchky, dolote, fn fos frgs, crin, bryon, argil; s/ dolo, chky, anhytc, gd por.
			Dolo, microgran, argil, fos frgs, lchd, fair por; s/ ls as abv.
			ls, chky, fosif, crin, bryon, spcls, dolote, rrdg to dolo, sl por.
			Dolo, microgran, argil, fos remnants, sl por; s/ ls, subchky, argil, fos frgtl.
			Dolo as abvs; ls, dns, spcls, argil.
			ls, subchky, dolote, fn fos frgs, crin, spcls, argil, silc loc; s/ dolo, subchky, argil.
			Dolo, chky, calc, fn fos frgs, argil, fair por; s/ ls, subchky, dolote, fos frgtl.
			Dolo, dns to subchky, argil, slty to sdy loc, gd por; s/ ls, c-ctc, argil.
			ls, subchky, dolote, c-ctc, fn fos frgs, argil; s/ dolo, chky, sl argil, fair por.
			ls & dolo as abv.
			ls, oolte, calc mat, sl por; s/ fn fos frgtl, argil, dolote.
			ls, dns to subchky, sl dolote, fn fos frgs, crin, spcls, argil, s/ ls, oolte, as abv & dolo, subchky, argil, sl por.
			ls, ool, c-ctc, sl dolote; s/ dolo, microxin, calc, c-ctc, fos frgs, f van, argil.
			ls & dolo as abv.
			Dolo, microxin, microgran, gd por; s/ ls, mud, ools, peld, calc mat w/ sec dolo.
			ls, dns to chky, fn fos frgs, crin, bryon, argil, sl por; s/ dolo as abv.
			Dolo, microxin, microgran, sl por; s/ ls, c-ctc, oolte, dolote.
			Dolo as abvs; ls, c-ctc, oolte, argil, calc mat.
			Dolo, microxin, microgran, argil, m/ fos remnants loc, fair por; s/ ls as abv.
			Dolo, as abvs; ls, c-ctc, fosif, calc mat, sl por.
			Dolo, microxin, microgran, fair por, v argil loc; s/ ls as abv.
			ls, fos frgtl, peld, crin, ools?, argil w/ dolo mat, grdg to dolo, anhytc.
			ls, c-ctc to c-ctc, fn fos frgs, crin, v argil, dolote, s/ dolo, microgran, argil, pyr.
			ls, c-ctc to c-ctc, fn fos frgs, crin, bryon, v argil, dolote loc, pyr.
			ls, c-ctc, fn fos frgs, crin, bryon, dolote, grdg to dolo, pyr, sl por.
			ls, c-ctc, argil, sl slty, sl dolote.
			ls, c-ctc, argil, slty, s/ fn pyr, sl dolote, fos frgs.
			ls, as abvs; ls, c-ctc, ools, argil.
			ls as abv.
			ls, c-ctc, subchky, dolote, argil, sl slty.
			ls, c-ctc, argil, sl dolote, sl anhytc, sl slty.
			ls as abvs; ls, dns, argil, sl slty.
			ls, c-ctc, fn fos frgs, argil; s/ ls, dns, argil, slty, w/ fos frgs, crin, bryon.
			ls, c-ctc, argil, w/ f/ large fos frgs, car?, anhytc loc.
			ls, dns to c-ctc, argil, slty.
			ls, c-ctc, fn fos frgs, crin, bryon, argil, slty, dolote, dns & silc loc.
			ls, dns, argil, c-ctc, sl slty, m/ fn fos frgs loc; s/ ch.
			ls, dns, argil, f/ spcls, bryon, pyr; ch.
			ls, subchky, sl dolote, fn fos frgs, crin, bryon, spcls, argil, s/ large silc fos frgs; s/ ch.
			ls, dns to subchky, sl dolote, fn fos frgs, crin, bryon, spcls, argil, silc; s/ fosif ch.
			ls & ch as abv.
			ls, dns to subchky, sl dolote, crin, spcls, argil, silc; s/ ch.
			Dolo, microxin, microgran, calc, fos frgtl, crin, sl por; s/ fosif ch.
			Sh, bit, calc loc, r/ fos frgs.