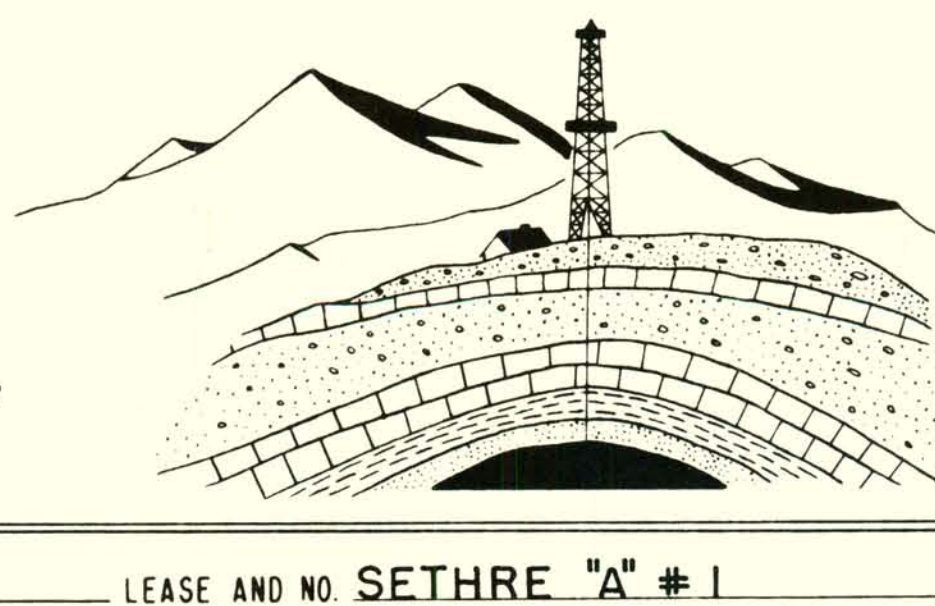


# Northwest Geological Service



LOG NO. 31

COMPANY PHILLIPS PETROLEUM COMPANY LEASE AND NO. SETHRE "A" # 1  
 STATE OR PROVINCE MONTANA COUNTY ROOSEVELT AREA TUK CREEK  
 LOCATION SE SE SEC. 20 T 30N R 48 E GRND ELEV. 2605' 2616' DF  
 TOTAL DEPTH 9385 SPUDED 12-24-56 COMPLETED 4-5-57  
 REMARKS: Photo enlargement X 10

GEOLOGIC SECTION MISSISSIPPIAN - Charles, Mission Canyon, Lodgepole DATE NOV 1958

DEPTH TESTING	PHOTO - LOG	POSSIBILITY	REMARKS
			Sh, w/anhys, salt
			Salt
5800		N	Salt, w/anhys, dolote loc, s/dms dolo
			Salt
		N	Anhy, dolote, argil loc, s/dms dolo
			Salt
5900		N	Ls, lith, w/anhys incls & frac filling
		N	Ls, lith, mud, w/anhys xl incls, slty loc
		N	Ls, lith, slty loc, argil, anhy xl incls
		N	Ls, lith, slty loc, oolite loc
		N	Salt, w/strikes lith & oolite ls, slty loc, f/ostrea
			Salt
6000		N	Ls, lith, f/ostrea, pyr xls, s/intbd anhy
		N	Ls, lith, fos frgtl, s/argil lam, forams
		N	Ls, c-ctc, intst salt, f/anhys xls
		N	Anhy, w/strikes lith ls
		N	Ls, lith, f/ostrea, intbd anhy w/slty strikes
		N	Salt, w/strikes dns, dolote anhy
		N	Anhy, dolote loc, s/slty strikes
		N	Anhy, dolote loc
		N	Salt, w/strikes anhy & c-ctc ls
			Salt
6100		N	Ls, mud, w/fn fos frgs, anhy incls, slty loc, strikes calc slst
		N	Anhy, w/strikes lith ls
		N	Anhy, w/dolote motling, pyr xls
		N	Ls, mud, f/anhys xl incls
		N	Ls, c-ctc?, dolote, tr intst por
		N	Anhy, w/dolote motling
6200		N	Ls, mud, w/c-ctc to c-ltc loc, f/thin argil lam
		N	Ls, c-ctc, intst c/c & salt?
		N	Ls, mud, argil, slty, worm trail chky por
		N	Ls, lith, w/anhys xl incls
			Salt
		N	Ls, lith, sl slty, strikes anhy
			Salt
		N	Anhy, w/strikes lith ls & dolo, w/pyr xls
		N	Ls, c-ctc, oolite loc, intst c/c
		N	Ls, fos frgtl, ostrf, sl chky por
		N	Ls, lith, sl slty, pyrte, f/fn fos frgtl strikes
		N	Ls, lith, fn fos frgs, ostrs, strikes anhy
		N	Dolo, v slty, argil, c-ctc loc
		N	Ls, dns, algf, anhy xls
		N	Ls, slty, dolote, s/pyr, anhy incls & xls
		N	Dolo, algf, calc loc, anhyte
		N	Ls, c-c, s/metamorphic anhy xls slty loc, fn fos deb
		N	Dolo, lith, slty, pyr
		N	Ls, fn fos frgtl, intbd w/c-c
		N	Dolo, slty, argil, grgd to slst, pyrte, ostr
		N	Ls, slty, sdy, fn fos frgs
6400		7	Ls, fos frgtl, brachs, crins, single foram
		7	Ls, fos frgtl, slty loc, crins, brachs, forams, fenestrate bryon
		2	Ls, fos frgtl, crins, brachs, forams, fenestrate bryon
		2	Ls, fos frgtl, crins, brachs, bryon
		N	Ls, fn fos frgtl, crins, brachs, ostrs, silc loc
		N	Ls, fos frgtl, crins, brachs, ostrs, argil lam, silc loc
		N	Ls, fos frgtl, crins, brachs, bryons, sl argil, silc loc
		N	Ls, fos frgtl, crins, brachs, bryons, argil, v silc
		N	Ls, fos frgtl, argil loc, silc, w/c-ctc strikes
		N	Ls, fn fos frgtl, argil, silc
		N	Ls, fn fos frgtl, argil, silc, w/c-ctc strikes
		N	Ls, fos frgtl, argil, silc
		N	Ls, fos frgtl, argil, silc, pyrte
6500		N	Ls, v fn fos frgtl, w/spcls argil, silc, pyrte
		N	Ls, v fn fos frgtl, argil, silc, pyrte
		N	Ls, v fn fos frgtl, argil lam, silc
		N	Ls, fn fos frgtl, w/spcls, v silc
		N	Ls, c-ltc, fn fos frgtl, silc loc
		N	Ls, dolote, v fn fos frgtl, argil lam, silc
		N	Ls, c-ctc, w/fos frgtl strikes, silc loc
		N	Ls, fn fos frgs, silc
		N	Ls, fos frgtl, argil, silc, pyrte
		N	Ls, c-c of crin deb
		N	Ls, argil, spcls
		5	Ls, c-c of crin deb
		N	Ls, c-r of crin, brach, bryon deb
		10	Ls, c-c of crin deb
		10	Ls, c-r of crin deb
		5	Ls, fos frgtl, fenestrate bryon w/crin & brach frgs, intbd w/c-c
		12	Ls, c-r of crin deb w/abd fenestrate bryon frgs
		8	Ls, c-c of crin deb
		5	Ls, c-c of crin & fenestrate bryon deb
		7	Ls, c-c of crin & bryon deb
		N	Ls, c-c, crinal loc, silc
		N	Ls, c-c, crin & bryon deb, silc
6900		N	Ls, c-c, crin & bryon deb, silc
		5	Ls, c-c, crin & bryon deb, dolote loc, silc
		N	Ls, c-c, crin & bryon deb, silc
		5	Ls, c-c, crin & bryon deb, silc
		N	Ls, c-c, crin & bryon deb, silc
		N	Ls, mud, fn fos frgtl, silc
		N	Ls, mud, fn fos frgtl, silc
		N	Ls, mud, w/fn fos frgs, silc, sl argil, pyrte
		N	Ls, mud, f/fn fos frgs, ostrs?, silc, pyrte
		N	Ls, mud, f/fn fos frgs, ostrs?, silc, pyrte
		N	Ls, mud, argil, silc, f/fn fos frgs, sl pyrte
		N	Ls, mud, argil, silc, f/fn fos frgs, sl pyrte
		N	Ls, mud, argil, silc, f/fn fos frgs, sl pyrte
		N	Ls, mud, argil, silc, f/fn fos frgs, sl pyrte
		N	Ls, mud, w/strikes c-l, silc, argil pyrte
		N	Ls, mud, w/strikes c-l, silc, argil pyrte
7100		N	Ls, mud, silc, argil, pyrte, fn fos frgs, bryons
		N	Ls, mud, silc, sl argil, pyrte
		N	Ls, mud, silc, sl argil, pyrte, spcls