

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7603	HUNGRY HORSE	31-31N-18W		692	5350	40	E	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
B2	1-15	10YR5/4	2F CR	CAMBIC	5.5	5.7	.0	.00	6.3	.0	.00	.6	6.0	21.8	053	02.60	.00	.106
IIA&B	15-30	10YR5/4	1F SBK		5.3	5.8	.0	.00	7.5	.0	.00	.3	2.2	12.2	078	01.20	.00	.052
IIB21T	30-106	10YR6/4	1F SBK	ARGILLIC	6.5	6.1	.0	.00	10.1	.0	.00	.3	.0	18.2	100	01.70	.00	.031
IIB22T	106-127	10YR6/6	2F SBK	ARGILLIC	7.0	6.1	.0	.00	8.7	.0	.00	.2	1.0	15.2	090	01.70	.00	.021

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL	AL	FE	FE	
B2	14	60.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0
IIA&B	13	20.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0
IIB21T	13	2.7	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0
IIB22T	19	3.8	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0

HORIZON	VERY FINE SAND PERCENT					VERY FINE SAND	***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND		C.F.	S	SI	C						***** BARS *****	1/3	2	4	15	AWC	LL	PL
B2	.0	.0	.0	.0	.0	15.	47.	37.	16.	GL	ML	.00	.00	0	31	0	0	11	20				
IIA&B	.0	.0	.0	.0	.0	20.	57.	32.	11.	GSL	SM	.00	.00	0	21	0	0	9	12				
IIB21T	.0	.0	.0	.0	.0	20.	45.	29.	26.	GSL	SM	.00	.00	0	21	0	0	12	9				
IIB22T	.0	.0	.0	.0	.0	25.	41.	28.	30.	GCL	CL	.00	.00	0	23	0	0	8	15				

REMARKS: THIS SOIL IS SIMILAR TO LANDTYPE 57-9 FROM A WEAATHERED ARGILLITE MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

- FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7605	HUNGRY HORSE	35-31N-19W			260	4690	10	S	40		0	LIMESTONE *

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT PASTE		EC X1000*					EXCHANGEABLE CATIONS		MEG/100 GM* B.S. %	O.M. %	D.C. %	TOTAL N
						PH	PH	*CA	MG	NA	K	H	CEC*	%				
B21	1-20	10YR5/4	1F CR	CAMBIC	6.2	5.8	.0	.00	6.5	.0	.00	.4	4.0	14.0	063	02.00	.00	.070
B22	20-53	10YR7/4	1F SBK	CAMBIC	6.5	5.9	.0	.00	4.8	.0	.00	.2	1.6	12.2	076	0.80	.00	.034
IIB2T	53-79	10YR6/8	2M SBK	ARGILLIC	8.0	6.9	.0	.00	14.5	.0	.00	.3	.0	19.6	100	01.40	.00	.062
IIC1CA	79-109	10YR6/8	0 MAS	CALCIC	8.2	7.6	.0	.00	.0	.0	.00	.1	.0	11.8		0.60	.00	.063
IIC2CA	109-140	10YR6/6	0 MAS	CALCIC	8.0	7.8	.0	.00	.0	.0	.00	.1	.0	8.2		0.10	.00	.020

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION							***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	PY-PH	FE		DI-DC	PY-PH
B21	17	28.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	.0
B22	14	8.9	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	.0
IIB2T	13	3.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	.0
IIC1CA	5	3.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	.0
IIC2CA	3	1.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	.0

HORIZON	VERY FINE SAND					PERCENT				VERY FINE SAND				***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2						4	15	AWC	LL	PL	PI		
B21	.0	.0	.0	.0	.0	20.	53.	34.	13.	GSL	ML	.00	.00	0	23	0	0	6	17											
B22	.0	.0	.0	.0	.0	30.	54.	28.	18.	GSL	ML	1.90	.00	0	19	0	0	6	13											
IIB2T	.0	.0	.0	.0	.0	30.	44.	29.	26.	GL	ML	2.08	.00	0	30	0	0	8	22											
IIC1CA	.0	.0	.0	.0	.0	20.	57.	14.	28.	GSCL	ML	1.99	.00	0	31	0	0	9	22											
IIC2CA	.0	.0	.0	.0	.0	20.	53.	31.	16.	GSL	ML	1.82	.00	0	21	0	0	7	14											

REMARKS: THIS SOIL IS SIMILAR TO A LANDTYPE 57 SOIL.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7405	SWAN LAKE	25-18N-16W		692	4440	5	NW	25-35		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT PASTE		EC		EXCHANGEABLE CATIONS					MEQ/100 GM*	B. S. %	O. M. %	O. C. %	TOTAL N
						PH	PH	MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N	
B2	3- 23	75YR5/4	2M GR	CAMBIC	6.0	5.2	.0	.00	30.4	2.7	.10	.6	33.8	19.9	067	.00	1.66	.106	
A&BB	23- 51	05YR7/3	1M SBK		5.4	5.2	.0	.00	1.1	.3	.01	.1	1.5	8.8	043	.00	.15	.013	
B2T	51- 91	05YR7/4	2M SBK	ARGILLIC	5.4	6.6	.0	.00	6.0	2.1	.10	.1	8.3	9.7	089	.00	.00	.000	

**\*\* EXCHANGEABLE MICRONUTRIENTS \*\***

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %
		P.	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SD4	AL DI-DC	AL PY-PH	FE DI-DC	
B2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.4		1.4	.2	.0
A&BB	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1		.5	.0	.0
B2T	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1		.9	.0	.0

*Since there isn't anything here, don't use this one*

HORIZON	VERY ... PERCENT ... VERY					**** % TOTAL *****				USDA	UNIFIED	SOIL DENSITY	% OPTM.	PERCENT WATER (WT) ***** BARS *****					* LIMITS *			
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI
B2	6.6	3.1	2.2	13.8	13.5	15.	39.	43.	18.	GL	ML	.76	.00	0	38	0	0	14	24			
A&BB	6.7	5.4	5.1	12.7	21.8	35.	51.	41.	7.	GFSL	GM	.00	.00	0	0	0	0	2	0			
B2T	8.1	5.7	7.5	19.5	5.9	40.	47.	34.	19.	VGSL	GM	.00	.00	0	0	0	0	6	0			

REMARKS: ANDERSON-HARRISON-MURRAY/SCS-MISSOULA/CAL-LAB/SHERLOCK SERIES.  
 LOCATION LAKE INEZ, MISSOULA COUNTY SURVEY.  
 SIMILAR TO LANDTYPE 26L.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7806	TALLY LAKE	13-34N-24W	26L-B	670	5200	40	S	40		0	LIMESTONE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF FINE LOAMY

HORIZON	DEPTH (CM)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT			EC					MEG/100 GM*	B.S. %	D.M. %	D.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
A1	0-25	10YR3/2	1F BR	CHRIC	6.5	5.9	0	0.00	5.9	9	0.05	9	0	0	11.50	0.00	0.00	
IIA2	30-46	10YR7/4	2M SBK		7.5	6.2	0	0.00	5.4	5	0.05	2	0	0	2.30	0.00	0.00	
IIB2T	46-102	10YR6/4	2M ABK	ARGILLIC	7.5	6.4	0	0.00	7.9	7	0.01	2	0	10.5	*85	*1.64	0.00	0.049
IIC	117-00	10YR7/4	0 MAS		7.5	6.6	9.4	0.00	0	0	0.00	0	0	0	0.00	0.00	0.00	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
A1	0	4.8	46	54	6.0	8.6	0	.56	.14	.04	.34	.00	.87	.09	0	0	0	0	0	0
IIA2	0	5	25	26	4.0	4.6	9	.24	.04	.02	.02	.00	.35	.03	0	0	0	0	0	0
IIB2T	0	1.2	39	16	6.0	20.0	7	.23	.04	.42	.01	.00	.37	.04	0	0	0	0	0	0
IIC	0	0	35	30	8.0	20.5	0	.25	.07	.02	.01	.00	.36	.04	0	0	0	0	0	0

use these, but leave out the IIC because it's 0

HORIZON	VERY COS. SAND		PERCENT MED. SAND		VERY FINE SAND		***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	Z OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG # LIMITS #			
	1/3	2	4	15	AWC	LI	PL	PI														
A1	4.1	5.3	2.9	5.8	5.2	5	23	55	22	GSIL	ML	.00	.00	0	0	0	0	0	0	0	0	0
IIA2	3.9	6.7	3.6	5.8	5.0	20	25	54	21	GSIL	ML	.00	.00	0	0	0	0	0	0	0	0	0
IIB2T	4.8	5.6	2.8	5.4	2.3	30	21	51	27	CLL	GC	.00	.00	0	25	0	0	10	0	20	21	07
IIC	3.5	5.4	2.8	5.5	5.0	30	22	52	26	GSIL	ML	.00	.00	0	41	0	0	9	0	29	19	10

REMARKS: ASSUME CRYIC AND UDIC  
SIRUCEK/STILLWATER S.F./IDAHO LAB/STRYKER RIDGE.  
THIS IS A HIGHLY WHEAFHERED LIMESTONE TILL

FOOTNOTE: Z B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: Z D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: Z COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7601	HUNGRY HORSE	13-30N	-19W		620	3550	100		40		0	* QUARTZITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*		B.S.	D.M.	D.C.	TOTAL
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N	
B2IR	2-25	10YR5/4	1F CR	CAMBIC	6.5	6.0	.0	.00	5.2	.0	.00	.4	5.0	24.2	053	02.60	.00	.095	
IIA&B	25-43	10YR5/3	2F SBK		5.5	5.9	.0	.00	3.9	.0	.00	.1	.3	6.0	093	0.30	.00	.020	
IIB2T	43-142	10YR5/6	1F SBK	ARGILLIC	7.0	6.2	.0	.00	8.0	.0	.00	.2	.5	11.7	094	0.40	.00	.039	
IIIB2T	142-197	10YR5/6	0 MAS	ARGILLIC	7.5	6.7	.0	.00	7.4	.0	.00	.2	.2	10.0	097	0.30	.00	.020	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	CAC03
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
B2IR	16	35.0	0	.00	.0	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	9	8.9	0	.00	.0	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2T	6	3.8	0	.00	.0	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIIB2T	8	6.2	0	.00	.0	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	1/3						2	4	15	AWC	LL	PL	PI	
B2IR	.0	.0	.0	.0	.0	5.	42.	47.	13.	L	ML	.00	.00	0	31	0	0	12	20				
IIA&B	.0	.0	.0	.0	.0	5.	44.	38.	19.	L	ML	.00	.00	0	22	0	0	7	15				
IIB2T	.0	.0	.0	.0	.0	40.	54.	22.	24.	VG SCL	GM	.00	.00	0	20	0	0	13	2				
IIIB2T	.0	.0	.0	.0	.0	10.	46.	22.	32.	SCL	SM	.00	.00	0	27	0	0	9	17				

REMARKS: MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK. SIMILAR TO LANDTYPE 26J.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D.M. WITH \* DENOTES A COLDRMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7611	HUNGRY HORSE	1	-30N-19W		620	3600	20	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC					MEQ/100 GM* CEC*	B. S. %	D. M. %	D. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K					
B2	2-25	10YR4/4	1F CR	CAMBIC	6.5	6.4	.0	.00	.0	.0	.00	.0	.0		02.10	.00	.006
IIA&B	25-56	10YR5/3	1F CR		6.0	6.3	.0	.00	.0	.0	.00	.0	.0		0.27	.00	.020
IIB&A	56-83	10YR5/4	1F SBK	ARGILLIC	6.0	6.0	.0	.00	.0	.0	.00	.0	.0		0.07	.00	.019
IIB21T	83-107	10YR5/4	1F SBK	ARGILLIC	5.8	5.9	.0	.00	.0	.0	.00	.0	.0		0.09	.00	.014
IIB22T	107-152	10YR5/4	2F SBK	ARGILLIC	5.8	6.6	.0	.00	.0	.0	.00	.0	.0		0.22	.00	.021

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B2	14	35.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	8	1.4	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB&A	2	3.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB21T	4	2.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB22T	6	4.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					VERY ***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
B2	.0	.0	.0	.0	.0	15.	38.	50.	12.	L	ML	.00	.00	0	25	0	0	7	18			
IIA&B	.0	.0	.0	.0	.0	30.	56.	34.	9.	GL	ML	.00	.00	0	12	0	0	4	8			
IIB&A	.0	.0	.0	.0	.0	50.	51.	33.	16.	VGL	GM	.00	.00	0	13	0	0	5	8			
IIB21T	.0	.0	.0	.0	.0	60.	49.	32.	19.	VGL	GM	2.05	.00	0	13	0	0	4	9			
IIB22T	.0	.0	.0	.0	.0	60.	42.	45.	16.	VGL	GM	2.10	.00	0	17	0	0	5	12			

REMARKS: CLAYS: B21, AMORP&ILL-MEDIUM, VERM-LOW; IIB22T, ILL-HIGH, KAOL&SMECT-LOW SIMILAR TO LANDTYPE 26J. MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
8002	GLACIER VIEW	4	-36N-22W	26J-7	660	4300	5	E	30	SEPT	10	SANDSTONE TERT.

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM*		B. S.		O. M.		O. C.		TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	%				
B2IR	0-30	75YR4/4	1F SBK	CAMBIC	7.0	5.5	.0	.00	5.4	2.3	.10	.5	15.1	23.6	036	02.40	.00	.083				
IIA2	30-63	10YR6/3	2M SBK		6.5	5.9	.0	.00	.7	1.04	.3	4.9	6.0	018	0.50	.00	.007					
IIA&B	63-88	10YR5/4	2M SBK		6.5	5.7	.0	.00	.8	.5	.03	.3	3.1	4.7	034	0.60	.00	.006				
IIB2T	88-116	10YR5/4	1M ABK	ARGILLIC	6.0	5.7	.0	.00	1.1	.3	.02	.3	4.2	5.9	029	0.40	.00	.006				
IIC	116-0	10YR5/6	1M ABK		6.0	5.6	.0	.00	1.1	.6	.10	.4	3.2	5.4	041	0.50	.00	.000				

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2IR	0	27.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIA2	0	25.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIA&B	0	27.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB2T	0	27.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIC	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0

HORIZON	VERY COS. SAND		PERCENT MED. SAND		VERY FINE SAND		**** % TOTAL ****			USDA TEXTURE	UNIFIED CLASS	SOIL BULK DENSITY	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *			
	SAND	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	1/3	2	4	15	AWC	LL	PL	PI	
B2IR	.0	.0	.0	.0	.0	.0	15.	25.	53.	22.	GSIL	ML	.00	.00	0	37	0	0	11	26			
IIA2	.0	.0	.0	.0	.0	.0	20.	58.	38.	4.	GSL	SM	1.63	1.86	12	17	0	0	5	12			
IIA&B	.0	.0	.0	.0	.0	.0	32.	52.	42.	6.	GSL	GM	1.65	1.94	11	16	0	0	5	11			
IIB2T	.0	.0	.0	.0	.0	.0	43.	50.	41.	9.	VGL	GM	1.51	2.01	11	17	0	0	5	12	ND	NP	NP
IIC	.0	.0	.0	.0	.0	.0	35.	55.	39.	6.	GSL	GM	1.44	1.88	12	0	0	0	0	0	ND	NP	NP

REMARKS: MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
 CLAYS: IIB2T, ILLITE-HIGH, KAOLINITE&INTER-STRATIFICATION-LOW, SMELTITE-TRACE  
 KLIEN, SIRUCEK, GRAHAM/KLIEN THESIS/MSU-LAB TEEPEE LAKE.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8016	GLACIER VIEW	04-36N-22W	26J-7	660	4300	5	E	30		0	SANDSTONE TERT.

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT PASTE PH	NAF PH	EC X1000* MMOH	EXCHANGEABLE *CA	MG	NA	K	H	MEG/100 CEC*	B.S. %	O.M. %	O.C. %	TOTAL N
SANDSTN	0- 0				.0	6.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****										**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****										AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH			
SANDSTN	0	.0	.0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0		

HORIZON	VERY COS. SAND		PERCENT MED. FINE SAND			VERY FINE SAND			***** % TOTAL *****			USDA UNIFIED CLASS		SOIL DENSITY BULK MAX.		% OPTM. MOIST		PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI			
SANDSTN	.0	.0	.0	.0	.0	0.	68.	25.	7.			.00	.00	0	0	0	0	0	0	0					

REMARKS: THIS IS A SAMPLE OF THE TERTIARY SANDSTONE BEDROCK FROM GVRD. KLIEN, SIRUCEK, GRAHAM/KLIEN THESIS/MSU-LAB/TEEPEE CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7610	HUNGRY HORSE	1 -30N-19W		620	4000	25	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BQRALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT				EC				CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	EXCHANGEABLE *CA	MG NA	K	H	MEQ/100 GM*					
B2	1- 41	10YR4/4	1F CR	CAMBIC	6.0	6.3	.0	.00	6.6	.0	.00	1.0	1.3	25.1	081	02.70	.00	.071
IIA&B	41- 81	10YR5/4	1F SBK		6.5	7.0	.0	.00	3.5	.0	.00	.2	.0	6.3	100	0.90	.00	.014
IIB&A	81-132	10YR5/6	1F SBK	CAMBIC	6.7	6.8	.0	.00	4.1	.0	.00	.1	.1	6.8	098	0.10	.00	.013
IIB2T	132-152	10YR5/6	1F SBK	ARGILLIC	7.0	7.2	.0	.00	4.4	.0	.00	.3	.0	7.6	100	0.10	.00	.013

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
B2	22	38.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIA&B	37	8.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB&A	4	5.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB2T	4	2.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
B2	.0	.0	.0	.0	.0	10.	60.	32.	8.	SL	SM	.00	.00	0	23	0	0	12	11			
IIA&B	.0	.0	.0	.0	.0	30.	79.	13.	8.	GLS	SM	.00	.00	0	11	0	0	8	3			
IIB&A	.0	.0	.0	.0	.0	25.	72.	15.	13.	GSL	SM	.00	.00	0	10	0	0	3	7			
IIB2T	.0	.0	.0	.0	.0	20.	65.	21.	15.	GSL	SM	.00	.00	0	15	0	0	6	9			

REMARKS: SIMILAR TO LANDTYPE 26C.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7609	HUNGRY HORSE	1 -30N-19W		620	4650	36	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LGAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B. S. CEC*	% D. M.	% O. C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
B2	1- 25	10YR4/4	1F CR	CAMBIC	5.7	6.2	.0	.00	1.9	.0	.00	.1	5.3	27.5	027	03.20	.00	.072
IIA&B	25- 46	10YR5/4	1F SBK		6.0	6.1	.0	.00	2.5	.0	.00	.1	1.5	5.6	063	0.30	.00	.021
IIB21T	46-107	10YR6/4	1F SBK	ARGILLIC	6.5	7.1	.0	.00	6.0	.0	.00	.1	.0	6.8	100	0.30	.00	.017
IIB22T	107-147	10YR6/4	2F SBK	ARGILLIC	8.0	7.4	.0	.00	10.0	.0	.00	.1	.0	9.5	100	0.20	.00	.016

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B2	20	15.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIA&B	8	2.2	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB21T	10	1.6	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB22T	7	27.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0

HORIZON	VERY FINE SAND PERCENT					C.F.	% TOTAL			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND		S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2	.0	.0	.0	.0	.0	10.	53.	44.	4.	SL	SM	.00	.00	0	32	0	0	11	21			
IIA&B	.0	.0	.0	.0	.0	20.	55.	34.	11.	GSL	SM	.00	.00	0	16	0	0	3	13			
IIB21T	.0	.0	.0	.0	.0	20.	59.	25.	16.	GSL	SM	.00	.00	0	16	0	0	5	11			
IIB22T	.0	.0	.0	.0	.0	15.	59.	23.	18.	GSL	SM	1.83	.00	0	15	0	0	7	8			

REMARKS: SIMILAR TO LANDTYPE 26C. MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
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 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7614	HUNGRY HORSE	1 -30N-19W		620	3900	20	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS MEQ/100 GM*				B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* *CA	MG	NA	K	H	CEC*				
A2	0-23	10YR4/4	1F CR	OCHRIC	6.0	6.1	.0	.00	.0	.0	.00	.0	.0	.0	02.60	.00	.072
IIA&B	23-68	10YR6/3	1F SBK	OCHRIC	5.0	5.5	.0	.00	.0	.0	.00	.0	.0	.0	0.03	.00	.006
IIB21T	68-112	10YR5/4	1F SBK	ARGILLIC	5.8	5.7	.0	.00	.0	.0	.00	.0	.0	.0	0.15	.00	.016
IIB22T	112-132	10YR5/4	1F SBK	ARGILLIC	6.5	6.3	.0	.00	.0	.0	.00	.0	.0	.0	0.19	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %			
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL		FE	FE	
A2	21	12.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0
IIA&B	25	1.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0
IIB21T	5	2.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0
IIB22T	0	7.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0

HORIZON	VERY FINE SAND PERCENT					VERY FINE SAND PERCENT					***** % TOTAL *****					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	1/3	2	4	15	AWC	LL						PL	PI						
A2	.0	.0	.0	.0	.0	10.	28.	59.	13.	SIL	ML	.00	.00	0	30	0	0	10	20									
IIA&B	.0	.0	.0	.0	.0	30.	35.	48.	17.	GL	ML	1.93	.00	0	15	0	0	4	11									
IIB21T	.0	.0	.0	.0	.0	40.	38.	44.	18.	VGL	GM	1.91	.00	0	15	0	0	6	9									
IIB22T	.0	.0	.0	.0	.0	30.	37.	36.	27.	GL	GM	1.78	.00	0	21	0	0	11	10									

REMARKS: SIMILAR TO LANDTYPE 26C.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
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 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEC. C	LITHOLOGY
7805	TALLY LAKE	22-33N-23W	26C-B	692	5300	40	SW	35		0	ARGILLITE-CAC03

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT					EC					MEQ/100 GM* B.S. CEC*	G.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	MG	NA				
B2IR	0-18	10YR6/4	1F SBK	CAMBIC	7.0	5.7	.0	.00	1.3	.4	.03	.2	.0	20.1	*10	*6.20	.00	.136	
IIA2	18-64	10YR6/2	1 SBK		7.0	5.6	.0	.00	1.4	.5	.09	.1	.0	.0	*	*.85	.00	.000	
IIB2T	64-102	10YR7/1	2M SBK	ARGILLIC	7.5	5.8	.0	.00	1.8	.7	.05	.1	.0	4.6	*06	*1.50	.00	.023	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION							*****							AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2IR	0	3.0	260	.80	6.0	86.0	26.	.13	.06	.16	.03	.00	.68	.49	.0	.0		.0	.0	.0
IIA2	0	3.5	74	.18	3.0	28.5	60.	.10	.04	.10	.01	.00	.29	.25	.0	.0		.0	.0	.0
IIB2T	0	1.0	90	.18	4.0	28.5	9.	.07	.04	.03	.01	.00	.24	.21	.0	.0		.0	.0	.0

HORIZON	VERY COARSE SAND					PERCENT FINE SAND					VERY FINE SAND					% TOTAL					USDA TEXTURE		UNIFIED CLASS		SOIL DENSITY		OPTM. MOIST	% PERCENT WATER (WT)				ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C	CL	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO	CO
B2IR	8.5	8.7	3.7	6.1	7.4	10.	34.	58.	7.	SIL	ML	.00	.00	0	38	0	0	17	0															
IIA2	23.7	19.1	6.3	6.5	4.2	40.	60.	36.	4.	VGCSL	GM	.00	.00	0	0	0	0	0	0															
IIB2T	7.3	7.6	3.6	6.2	4.9	30.	30.	62.	8.	CSIL	NL	.00	.00	0	20	0	0	4	0	ND	NP	NP												

REMARKS: ASSUME CRYIC AND UDIC; OLD 22-B-8 LANDTYPE THAT IS SHALLOW TO BEDROCK SIRUCEK/STILLWATER S.F./IDAHO LAB/STRYKER RIDGE.

- FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC
- FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD
- FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE
- FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD
- FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8008	GLACIER VIEW	34-36N-22W	26C-8	625	4400	15	SE	30	SEPT	10	SILTSTONE TERT.

SOIL CLASSIFICATION: ANDEPTIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100	GM#	B. S.	O. M.	O. C.	TOTAL
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N		
B2IR	0-19	75YR4/4	1F SBK	OCHRIC	7.0	5.6	.0	.00	2.1	.6	.10	.7	13.5	17.0	021	03.20	.00	.077		
IIA2	19-53	10YR6/3	3M SBK	ALBIC	6.5	5.5	.0	.00	2.2	1.1	.10	.3	5.0	8.7	043	01.10	.00	.020		
IIA&B	53-90	10YR6/3	3C ABK	ARGILLIC	5.8	6.0	.0	.00	4.7	2.9	.10	.4	4.7	12.8	063	0.80	.00	.220		
IIB2T	90-155	10YR5/4	3C ABK	ARGILLIC	7.5	7.0	.0	.00	6.1	3.4	.10	.4	6.2	16.2	062	0.50	.00	.220		
IICCA	155-0	10YR5/4	0 MAS		8.0	7.6	.0	.00	23.4	2.4	.10	.2	.0	11.0	100	0.60	.00	.000		

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
	C-N RATIO	P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B2IR	0	26.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA2	0	20.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	0	19.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2T	0	14.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IICCA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA	UNIFIED	SOIL DENSITY	%	PERCENT WATER (WT)					ATTERBURG			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	OPTM. MOIST	1/3	2	4	15	AWC	* LL	PL	PI
B2IR	.0	.0	.0	.0	.0	5.	36.	56.	8.	SIL	ML	.00	.00	0	31	0	0	12	19			
IIA2	.0	.0	.0	.0	.0	20.	24.	60.	16.	OSIL	ML	1.66	1.94	11	18	0	0	10	8			
IIA&B	.0	.0	.0	.0	.0	25.	20.	56.	24.	GSIL	ML	1.55	1.91	13	21	0	0	12	9			
IIB2T	.0	.0	.0	.0	.0	36.	22.	54.	26.	VGSIL	GM	1.44	1.88	14	22	0	0	13	9	25	18	07
IICCA	.0	.0	.0	.0	.0	40.	20.	57.	23.	VGSIL	GM	1.48	1.92	13	0	0	0	0	0	23	18	05

REMARKS: MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
 CLAYS: IIB2T, ILLITE-HIGH, SMECTITE&CHLORITE-LOW, KAOLNITE-TRACE  
 KLIEN, SIRUCEK, GRAHAM, /KLIEN THEISIS/MSU-LAB CENTER MTN.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7913	TALLY LAKE	2 -31N-26W		620	4825	16	NE	30		0	LIMESTONE

SOIL CLASSIFICATION: ANDEPTIC CRYD BORALF MEDIAL OVER LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC							MEG/100 GM* B.S. %	D.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*				
B2IR	7-26	75YR4/4	2M SBK	CAMBIC	6.0	5.5	.0	.11	2.1	.2	.01	.2	19.4	21.9	012	04.90	2.80	.000
IIA21	26-35	25YR6/6	2M SBK		7.0	6.4	.0	.07	4.9	.8	.00	.1	1.6	7.6	078	0.80	.50	.000
IIA22	35-46	25YR6/6	2M SBK		7.0	6.3	.0	.06	5.3	1.0	.01	.2	1.7	8.3	080	0.80	.50	.000
IIA&B	46-61	05YR6/8	2M SBK	ARGILLIC	7.5	6.0	.0	.05	6.7	1.3	.02	.1	2.6	10.9	076	0.60	.30	.000
IIB&A	61-75	25YR6/6	2M SBK	ARGILLIC	7.5	6.7	.0	.11	7.2	1.3	.02	.1	3.3	12.2	072	0.80	.50	.000
IIB21T	75-101	05YR6/6	2M SBK	ARGILLIC	7.5	6.8	.0	.07	7.4	1.4	.01	.2	1.2	10.2	088	01.30	.70	.000
IIB22T	101-140	05YR6/6	3C SBK	ARGILLIC	7.5	6.7	.0	.10	6.7	1.3	.00	.1	.5	8.7	094	0.50	.30	.000
IIC1CA	140-180	05YR6/8	2M SBK		8.0	6.9	.0	.20	26.5	1.2	.01	.2	.0	7.2	100	0.70	.40	.000

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
	C-N RATIO	AVAILABLE IN PARTS/MILLION						CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
B2IR	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA21	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA22	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB&A	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB21T	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB22T	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC1CA	0	5.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		***** BARS *****	1/3	2	4	15	AWC	LL	PL
B2IR	.0	.0	.0	.0	.0	10.	31.	65.	4.	SIL	ML	.49	1.31	27	75	0	0	16	0	ND	NP	NP
IIA21	.0	.0	.0	.0	.0	30.	23.	66.	11.	GSIL	ML	1.60	1.88	16	30	0	0	14	0	23	21	02
IIA22	.0	.0	.0	.0	.0	30.	25.	59.	16.	GSIL	ML	1.72	1.93	15	29	0	0	10	0	25	21	04
IIA&B	.0	.0	.0	.0	.0	15.	44.	50.	6.	GL	ML	1.41	1.87	16	0	0	0	15	0	27	21	06
IIB&A	.0	.0	.0	.0	.0	15.	21.	58.	21.	GSIL	ML	1.36	1.88	16	29	0	0	14	0	28	22	06
IIB21T	.0	.0	.0	.0	.0	15.	26.	52.	22.	GSIL	ML	1.62	1.89	15	32	0	0	12	0	28	21	07
IIB22T	.0	.0	.0	.0	.0	15.	27.	53.	20.	GSIL	ML	.00	1.88	17	0	0	0	13	0	27	21	06
IIC1CA	.0	.0	.0	.0	.0	15.	33.	48.	19.	GL	ML	.00	2.00	13	0	0	0	12	0	26	19	07

REMARKS: BULK DENSITY IS BY PED METHOD. FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 CLAYS: B2IR, AMORPHOUS-HIGH FOOTNOTE: % D.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 CULLEN/COMPACTION STUDY/MSU-LAB BOWEN CREEK. FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 SIMILAR TO LANDTYPE 26A FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T							MONTH	DEG. C	
7914	TALLY LAKE	2	-31N-26W		620	4825	22	NE	30		0	LIMESTONE

SOIL CLASSIFICATION: ANDEPTIC CRYD BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* CEC*	B. S. %	D. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
A2	0-5	10YR3/2	1F SBK	OCHRIC	4.3	4.7	.0	.14	2.9	.9	.05	.2	11.2	15.2	026	04.50	2.60	.000
B2IR	5-26	10YR4/6	2M SBK	CAMBIC	6.5	5.7	.0	.05	.7	.2	.06	.2	16.9	18.1	06	03.40	1.90	.000
IIA21	26-35	25YR6/4	1VFSBK		6.5	5.9	.0	.03	5.4	.6	.05	.1	.3	6.5	095	01.00	.60	.000
IIA22	35-55	25YR6/4	2M SBK		6.5	6.0	.0	.03	2.4	.7	.23	.1	1.8	5.2	065	0.40	.20	.000
IIA&B	55-72	25YR6/4	2M SBK	ARGILLIC	7.0	5.9	.0	.03	5.7	1.7	.08	.1	.9	8.5	089	0.30	.20	.000
IIB&A	72-92	25YR6/6	2M SBK	ARGILLIC	7.0	5.7	.0	.07	7.0	1.3	.16	.2	3.0	10.7	072	0.30	.20	.000
IIB21T	92-136	05YR6/8	2M SBK	ARGILLIC	7.3	6.1	.0	.05	6.0	1.4	.17	.2	3.3	11.1	070	0.20	.10	.000
IIB22T	136-160	05YR5/6	3C SBK	ARGILLIC	8.0	6.7	.0	.08	5.9	1.1	.02	.1	1.7	8.9	081	0.60	.30	.000
IIC1CA	160-180	05YR6/8	2M SBK		8.0	6.5	.0	.16	27.7	1.7	.06	.2	.0	6.1	100	0.30	.20	.000

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****						**** SESQUIOXIDS (%) ****				CACO3 %		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	PY-PH		DI-DC	PY-PH
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIA21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIA22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIA&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB&A	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB21T	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB22T	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIC1CA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	7.2

HORIZON	VERY FINE SAND					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	VERY COS. SAND	.... COS. SAND	PERCENT MED. SAND	..... FINE SAND	VERY FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	0.	27.	54.	19.	SIL	ML	.00	.00	0	0	0	0	11	0			
B2IR	.0	.0	.0	.0	.0	10.	28.	59.	3.	GSIL	ML	.52	1.44	20	94	0	0	15	0	ND	NP	NP
IIA21	.0	.0	.0	.0	.0	30.	43.	52.	5.	GSIL	ML	1.56	1.85	12	28	0	0	6	0	ND	NP	NP
IIA22	.0	.0	.0	.0	.0	30.	37.	57.	6.	GSIL	ML	1.47	1.87	12	28	0	0	2	0	ND	NP	NP
IIA&B	.0	.0	.0	.0	.0	15.	28.	58.	14.	GSIL	ML	1.46	1.84	13	29	0	0	13	0	23	22	01
IIB&A	.0	.0	.0	.0	.0	15.	30.	54.	16.	GSIL	ML	1.42	1.84	15	32	0	0	14	0	26	21	04
IIB21T	.0	.0	.0	.0	.0	10.	27.	57.	16.	SIL	ML	1.46	1.96	12	0	0	0	15	0	28	20	08
IIB22T	.0	.0	.0	.0	.0	10.	31.	52.	17.	SIL	ML	1.59	1.83	13	34	0	0	13	0	28	21	08
IIC1CA	.0	.0	.0	.0	.0	15.	24.	56.	20.	GSIL	ML	.00	1.92	13	0	0	0	13	0	27	20	06

REMARKS: BULK DENSITY BY PED METHOD.  
 CLAYS: IIC1CA, ILL-HIGH, KAOL&VERM&SMECT-LOW, CHLOR-TRACE; B2IR, AMORP-HIGH  
 CULLEN/COMPACTION STUDY/MSU-LAB BOWEN CREEK.  
 SIMILAR TO LANDTYPE 26A

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8117	TALLY LAKE	23-29N-25W	14-2	620	4900	10	NW	20-30		0	

SOIL CLASSIFICATION: GLOSSIC CRYO BORALF FINE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 CEC*	GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
IIA2	8-31	2.5Y7/2	2C SBK	ALBIC	5.0	5.3	7.9	.09	1.7	1.2	.09	.1	4.9	7.0	039	0.59	.35	.032
IIA&B	31-51	2.5Y7/4	2C SBK	ARGILLIC	5.0	5.5	8.0	.11	4.0	3.1	.10	.2	4.0	9.7	065	0.42	.24	.031
IIB&A	51-69	2.5Y7/4	2C SBK	ARGILLIC	7.0	6.4	8.0	.09	5.4	4.4	.20	.2	2.3	10.7	081	0.30	.17	.031
IIB2T	69-115	2.5Y6/4	3VCPR	ARGILLIC	7.0	6.7	8.0	.10	5.4	4.5	.20	.2	2.1	10.9	083	0.27	.16	.029
IIC	115-153	10YR7/1	3VCPL		7.0	6.8	8.0	.09	4.5	3.9	.20	.3	1.9	9.1	082	0.19	.11	.027

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								*****				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
IIA2	11	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIA&B	8	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB&A	6	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIB2T	5	.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0
IIC	4	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0			.0	.0	.0

HORIZON	VERY FINE SAND					PERCENT FINE SAND				VERY FINE SAND				***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	PERCENT WATER (WT) ***** BARS *****	ATTERBURG * LIMITS *		
	COARSE SAND	MED. SAND	FINE SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	CL	ML	SH	PT	1/3	2	4	15					AWC	LL	PL
IIA2	.1	.2	.3	.3	1.9	0.	3.	81.	16.	SIL	ML	.00	.00	0	32	0	0	26	6					
IIA&B	.1	.1	.2	.4	1.1	0.	2.	76.	22.	SIL	ML	.00	.00	0	32	0	0	27	5					
IIB&A	.1	.0	.1	.0	1.0	0.	1.	74.	25.	SIL	CL	.00	.00	0	0	0	0	0	0					
IIB2T	.0	.0	.0	.1	.8	0.	1.	75.	24.	SIL	CL	.00	.00	0	0	0	0	0	0					
IIC	.0	.0	.0	.0	.6	0.	1.	78.	22.	SIL	ML	.00	.00	0	0	0	0	0	0	36	28	08		

REMARKS: SIRUCEK/FNF/IDAHO LAB; GRIFFIN CREEK; ASSUMED CRYIC & UDIC.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-14-2



SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
B115	HUNGRY HORSE	01-27N-17W		26L-7	624	4150	10	W	50		0	PREWISCONSIN

SOIL CLASSIFICATION: GLOSSIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS MEQ/100 GM*					B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*				
B2IR	0- 15	75YR4/4	1F GR	CAMBIC	6.5	5.8	8.2	.24	4.6	.6	.09	.6	12.3	18.5	032	04.68	2.72	.109
IIA2	15- 40	10YR6/4	2F SBK		6.0	5.8	8.0	.17	4.0	.6	.10	.3	3.6	9.5	058	0.75	.44	.040
IIA&B	40- 50	10YR6/6	2C SBK	ARGILLIC	5.5	4.8	7.9	.17	5.8	.9	.09	.4	3.8	13.0	065	0.45	.26	.036
IIB&A	50- 70	10YR5/6	2C SBK	ARGILLIC	5.5	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
IIB2T	70- 85	10YR5/8	2C ABK	ARGILLIC	5.0	5.1	7.9	.16	7.5	.6	.09	.4	3.2	14.1	073	0.60	.35	.038
IIC	85-155	10YR5/6	1C SBK		5.0	5.5	8.0	.02	6.1	.4	.09	.3	4.7	11.9	060	0.92	.54	.039

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****						**** SESQUIOXIDS (%) ****				CACD3 %		
		AVAILABLE IN PARTS/MILLION						*****						AL		FE				
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2IR	25	5.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA2	11	.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	7	.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB&A	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2T	9	.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC	14	3.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL ****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
B2IR	4.1	5.4	2.9	2.3	8.8	10.	24.	62.	14.	SIL	ML	.00	.00	0	0	0	0	0	0	0	0	
IIA2	5.1	5.1	2.6	4.6	6.1	35.	23.	59.	18.	VGSIL	GM	.00	.00	0	0	0	0	0	0	0	0	
IIA&B	3.4	3.3	2.0	1.1	8.2	30.	18.	57.	25.	GSIL	ML	.00	.00	0	0	0	0	0	0	0	0	
IIB&A	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0	0	
IIB2T	4.7	4.6	2.3	4.7	5.8	40.	22.	51.	27.	VGSIL	GM	.00	.00	0	0	0	0	0	0	0	0	
IIC	6.0	4.5	2.4	1.5	8.7	45.	23.	56.	21.	VGSIL	GM	.00	.00	0	0	0	0	0	0	0	0	

REMARKS: MARTINSON, SIRUCEK/FNF/IDAHO LAB; PAINT CREEK; ASSUMED CRYIC & UDIC.  
NOTE THIS SITE HAS GOOD ASH CAP BUT 2CMS SHORT FOR ANDEPTIC SUBGROUP.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-26L

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7627	HUNGRY HORSE	1	-38N-22W		620	0	0				0	SHALE

SOIL CLASSIFICATION: TYPIC CRYO BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H				
A21	0- 7			OCHRIC	.0	.0	.0	7.80	.5	.3	.01	.3	3.9	.0	02.50	1.40	.000
A22	7- 14				.0	.0	.0	7.40	1.2	.3	.10	.2	3.6	.0	02.00	1.20	.000
B21T	14- 44			ARGILLIC	.0	.0	.0	9.99	3.3	2.5	.10	.2	2.8	.0	01.20	.70	.000
B22T	44- 66			ARGILLIC	.0	.0	.0	9.99	5.6	4.7	.10	.1	.0	.0	01.30	.70	.000
CCA	66- 81				.0	.0	.0	9.99	6.4	4.5	.10	.1	.0	.0	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	AL. PY-PH	FE DI-DC		FE PY-PH
A21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
A22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B21T	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B22T	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	2.9
CCA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	7.4

HORIZON	VERY COS. SAND		PERCENT MED. SAND		VERY FINE SAND		***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C					1/3	2	4	15	AWC	LL	PL	PI	
A21	.0	.0	.0	.0	.0	34.	54.	38.	8.	GCOSL	GP	.00	.00	0	15	0	0	5	10			
A22	.0	.0	.0	.0	.0	35.	39.	50.	11.	GL	GM	.00	.00	0	0	0	0	0				
B21T	.0	.0	.0	.0	.0	41.	36.	38.	26.	VGL	GM	.00	.00	0	0	0	0	0				
B22T	.0	.0	.0	.0	.0	35.	38.	41.	21.	GL	GM	.00	.00	0	0	0	0	0				
CCA	.0	.0	.0	.0	.0	35.	41.	43.	16.	GL	GM	.00	.00	18	19	0	0	9	10			

REMARKS: THIS IS A GLACIAL TILL FROM MIX OF PRECAMBRIAN AND MESOIZIC ROCKS FROM WATERTON N.P. SOIL SURVEY, ALBERTA CANADA, SIMILAR TO L.T. 261

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7404	SWAN LAKE	12-19W-16W		692	4400	12	E	25-40		0	ARGILLITE-CAC03

SOIL CLASSIFICATION: TYPIC CRYD BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*		B. S.	O. M.	O. C.	TOTAL
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N	
A2	0-10	10YR7/2	2M GR	OCHRIC	5.4	5.0	.0	.00	3.9	1.0	.10	.4	6.6	16.6	045	.00	1.00	.067	
A&B	10-30	10YR7/2	1M SBK		5.6	5.2	.0	.00	4.5	1.1	.10	.2	5.0	11.4	055	.00	.48	.041	
B&A	30-56	10YR7/3	1M SBK		6.0	5.9	.0	.00	7.7	1.7	.01	.2	3.2	12.9	075	.00	.39	.000	
B2T	56-91	75YR6/4	2M SBK	ARGILLIC	7.0	6.8	.0	.00	12.1	2.8	.10	.2	2.8	18.0	084	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL		FE	FE
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1			.8	.1	.0
A&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1			1.0	.1	.0
B&A	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1			1.0	.0	.0
B2T	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1			1.5	.1	.0

HORIZON	VERY COS.		PERCENT			VERY FINE		**** % TOTAL ****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI	
A2	17.4	4.0	2.1	2.9	5.9	15.	32.	52.	16.	GL	ML	.00	.00	0	0	0	0	6	0				
A&B	10.4	4.4	2.9	5.1	7.8	25.	30.	52.	17.	GL	ML	1.37	.00	0	25	0	0	6	19				
B&A	7.2	3.9	3.2	4.8	7.7	30.	27.	51.	22.	GCL	CL	.00	.00	0	0	0	0	8	0				
B2T	12.7	4.0	2.1	4.0	8.0	35.	31.	41.	28.	GCL	GC	.00	.00	0	0	0	0	11	0				

REMARKS: ANDERSON-HARRISON/MISSOULA COUNTY/CAL LAB/WOROCK SERIES.  
MISSOULA COUNTY-OWL CREEK. SIMILAR TO LANDTYPE 26C.

- FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC.
- FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEC. C	LITHOLOGY
8103	HUNGRY HORSE	16-29N-18W	2&C-7	624	3800	15	E	40		0	ARGILLITE

SOIL CLASSIFICATION: TYPIC CRYD BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
O2	4- 0				6.0	6.0	6.0	0.00	0.0	0.0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.000	
B2IR	0- 20	75YR4/4	1F SBK	CAMBIC	6.0	5.8	9.8	.13	4.6	.7	.10	.3	16.7	21.1	026	03.94	2.29	.118	
IIA2	20- 42	10YR6/3	1M SBK		6.0	5.7	8.2	.15	4.2	1.0	.09	.2	3.3	9.2	061	0.79	.46	.034	
IIB2T	42- 77	10YR5/3	2C SBK	ARGILLIC	7.0	5.8	8.0	.21	13.3	3.6	.10	.5	3.0	20.8	054	0.64	.07	.029	
IIB3	77-105	10YR5/4	1M SBK		7.0	6.3	7.9	.16	7.2	2.0	.10	.2	1.3	11.2	088	0.37	.21	.016	
IIC	105- 0	10YR5/3	0 MAS		7.0	6.6	7.9	.18	8.4	2.2	.09	.2	1.5	12.0	083	0.50	.29	.025	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****					CACO3 %
		AVAILABLE IN PARTS/MILLION							*****							AL	AL	FE	FE		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH		
O2	0	0	0	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0		
B2IR	19	7	0	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0		
IIA2	13	3	0	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0		
IIB2T	13	4	0	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0		
IIB3	13	0	0	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0		
IIC	12	2	0	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0		

HORIZON	VERY COARSE SAND		PERCENT MED. SAND		VERY FINE SAND		***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL BULK	DENSITY MAX.	% OPTM. MGIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	FINE SAND	FINE SAND	C. F.	S	SI	C					1/3	2	4	15	AWC	LL	PL	PI	
O2	0	0	0	0	0	0	0	0	0			0.00	0.00	0	0	0	0	0	0	0	0	0
B2IR	2.1	4.7	2.9	5.3	7.4	10.	22.	62.	15.	GSIL	ML	0.00	0.00	0	0	0	0	0	0	0	0	0
IIA2	6.4	8.8	4.5	4.9	5.3	40.	30.	59.	11.	VGSIL	GM	0.00	0.00	0	0	0	0	0	0	0	0	0
IIB2T	2.4	5.8	4.2	8.1	11.1	35.	31.	41.	28.	VGCL	GC	0.00	0.00	0	0	0	0	0	0	0	0	0
IIB3	22.7	17.2	5.8	2.5	9.1	45.	57.	31.	12.	VGCDL	SM	0.00	0.00	0	0	0	0	0	0	0	0	0
IIC	9.2	10.1	4.1	6.6	8.6	50.	39.	42.	19.	VGL	GM	0.00	0.00	0	0	0	0	0	0	0	0	0

REMARKS: SIRUCEK, PIERCE/FNF/IDAHO LAB; WOUNDED BUCK CK; ASSUMED CRYIC & UDIC.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LF-26C

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7B04	TALLY LAKE	25-35N-25W		21-8	850	6200	30	S	70		0	LIMESTONE

SOIL CLASSIFICATION: TYPIC CRYD BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 CEC*	GM% B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H					
A2	0- 8	10YR4/3	1F GR	OCHRIC	5.8	4.8	9.0	.00	1.8	1.2	.03	.2	.0	19.7	*16	.00	.00	.170
B2IR	8- 15	10YR5/6	1F GR	CAMBIC	6.3	5.3	11.2	.00	.3	.2	.03	.1	.0	26.5	*03	7.10	.00	.038
IIA2	15- 31	10YR6/4	1F SBK		5.5	5.3	.0	.00	.3	.3	.04	.1	.0	10.0	*07	*2.20	.00	.031
IIB2T	31- 61	25YR6/4	1F ABK	ARGILLIC	5.5	5.2	.0	.00	.7	.7	.04	.1	.0	9.2	*17	*2.14	.00	.000
IIC	61- 84	25YR7/2	1F SBK		5.5	5.5	10.3	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****					
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE	FE	CAC03 %
A2	0	3.0	360	1.66	5.0	2.4	20.	.16	.13	.16	.04	.00	.56	.38	.0	.0			.0	.0	.0
B2IR	0	12.0	160	.87	4.0	3.6	21.	.11	.09	.19	.02	.00	.65	.38	.0	.0			.0	.0	.0
IIA2	0	1.0	65	.27	3.0	6.6	18.	.05	.04	.10	.01	.00	.33	.17	.0	.0			.0	.0	.0
IIB2T	0	1.5	37	.27	2.0	5.0	9.	.05	.03	.08	.01	.00	.24	.24	.0	.0			.0	.0	.0
IIC	0	.0	0	.00	.0	.0	0.	.08	.06	.14	.01	.00	.38	.25	.0	.0			.0	.0	.0

HORIZON	VERY FINE SAND					PERCENT FINE SAND				VERY FINE SAND				***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL BULK DENSITY	SOIL DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *						
	VERY COS. SAND	..... COS. SAND	..... MED. SAND	..... FINE SAND	VERY FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4						15	AWC	LL	PL	PI							
A2	.0	.0	.0	.0	.0	15.	0.	0.	0.						.00	.00	0	0	0	0	0	0												
B2IR	2.0	3.3	1.8	4.7	8.4	20.	20.	69.	11.	GSIL	ML	.00	.00	0	44	0	0	23	0															
IIA2	3.6	3.7	1.9	5.5	8.9	60.	24.	62.	14.	VGSIL	GM	.00	.00	0	0	0	0	0	0															
IIB2T	4.1	5.4	2.5	6.1	7.7	60.	26.	55.	19.	GSIL	GM	.00	.00	0	24	0	0	17	0	ND	NP	NP												
IIC	6.5	9.9	4.8	7.7	6.9	80.	36.	48.	16.	EGL	GM	.00	.00	0	0	0	0	0	0	ND	NP	NP												

REMARKS: ASSUME CRYIC AND UDIC; NOTE DEPTH OF ASH IS 1 INCH SHORT FOR ANDEPTIC SUBGROUP  
 SIRUCEK/STILLWATER S.F./IDAHO LAB/MT. MARSTON.  
 NOTE THIS SITE HAS AN OLD SURFACE INFLUENCED SUBSOIL

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7907	SWAN LAKE	12-21N-17W	26C-7	640	3700	5		30		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM*	B. S.	O. M.	O. C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N	
B2IR	0- 18	75YR4/4	1F SBK	CAMBIC	5.5	5.4	8.0	.25	3.8	1.2	.10	.2	5.5	11.4	049	01.82	1.06	.059	
IIA21	18- 40	10YR5/3	2M SBK		6.2	5.7	7.9	.14	2.9	.8	.00	.1	1.9	5.4	067	0.40	.23	.022	
IIA22	40- 54	10YR5/3	1M SBK		6.5	6.3	7.9	.15	2.8	.9	.00	.1	1.0	4.6	079	0.20	.12	.014	
IIB2T	54- 74	10YR4/3	2M SBK	ARGILLIC	6.9	6.5	7.9	.22	5.6	1.5	.10	.2	1.9	11.6	080	0.52	.30	.027	
IIC	74- 0	10YR4/3	2		6.5	6.7	7.9	.35	4.9	1.5	.10	.1	1.9	9.8	078	0.56	.33	.029	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %						
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE		FE					
B2IR	18	4.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
IIA21	10	1.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
IIA22	9	.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
IIB2T	11	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
IIC	11	.4	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT)				ATTERBURG * LIMITS *							
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI				
B2IR	3.5	5.5	3.7	5.8	8.5	10.	27.	64.	9.	SIL	ML	.00	.00	0	15	14	10	10	5							
IIA21	5.0	8.9	5.9	9.9	10.6	30.	40.	54.	6.	GSIL	ML	.00	.00	0	16	8	6	6	10							
IIA22	7.9	12.6	8.8	12.2	13.0	35.	54.	40.	6.	GFSL	GW	.00	.00	0	12	5	5	4	8							
IIB2T	4.7	9.8	6.6	11.2	11.9	35.	44.	41.	14.	GL	GM	.00	.00	0	18	9	8	8	10	19	NP	ND				
IIC	13.9	17.3	8.0	7.8	6.9	54.	54.	38.	8.	VGCSL	SM	.00	.00	0	19	8	7	7	12	15	NP	ND				

REMARKS: ASSUME FRIGID AND UDIC; MEETS FIELD ANDEPTIC CRITERIA  
COYNER/FNF-BN/IDAHO-LAB/CONDON LOOP ROAD.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8012	GLACIER VIEW	34-36N-22W		625	4400	15	SE	30		0	SILTSTONE TERT.

SOIL CLASSIFICATION: ANDEPTIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM*	B.S.	O.M.	O.C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N	
SILTSTN	0- 0				.0	6.7	.0	.00	.0	.0	.00	.0	.0	.0	.0	.00	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****						**** SESQUIOXIDS (%) ****					
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH
SILTSTN	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0		.0	.0	.0

HORIZON	VERY FINE PERCENT					VERY FINE SAND	***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COARSE SAND	MED. SAND	FINE SAND	FINE SAND	C.F.		S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
SILTSTN	.0	.0	.0	.0	.0	0.	5.	82.	13.			.00	.00	0	0	0	0	0	0			

REMARKS: THIS IS A SAMPLE OF THE TERTIARY SILTSTONE BEDROCK FROM GVRD.  
CLAYS: SILTSTONE-ILLITE-HIGH, KAOLINITE&CHLORITE&SMECTITE-LOW  
KLIEN, SIRUCEK, GRAHAM/KLIEN THESIS/MSU-LAB1 CENTER MTN.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7902	SWAN LAKE	32-21N-17W	14-3	650	3600	2		30		0	

SOIL CLASSIFICATION: AQUIC EUTR BORALF CLAYEY FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B.S. %	O.M. %	D.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N
A1	0- 2	10YR4/3	1F SBK	OCHRIC	6.2	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
A2	2- 7	10YR5/3	2M SBK	OCHRIC	6.5	6.2	8.2	.11	7.2	4.6	.10	.2	4.8	17.5	072	01.13	.66	.073
B21T	7- 61	75YR5/4	3VCPR	ARGILLIC	6.5	6.7	8.3	.08	11.4	4.1	.10	.3	3.0	22.2	084	0.49	.29	.036
B22T	61-800	75YR5/4	3TKPL	ARGILLIC	7.0	6.7	8.2	.10	12.6	4.3	.10	.2	2.8	23.0	086	0.34	.20	.027

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
A1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
A2	9	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0
B21T	8	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0	.0
B22T	7	.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.1	.0	.0	.7	.0	.0	.0

HORIZON	VERY COARSE SANDS					PERCENT FINE SANDS					VERY FINE SANDS			**** % TOTAL ****			USDA TEXTURE		UNIFIED CLASS	SOIL DENSITY BULK	PERCENT OPTM. MOIST	PERCENT WATER (WT) ***** BARS ****				ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C	S	SI	C	S	SI	C	1/3	2	4				15	AWC	LL	PL	PI		
A1	.0	.0	.0	.0	.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	.00	.00	0	0	0	0	0	0	0	0	0	0	0
A2	.2	.4	.5	1.2	3.2	0.	5.	64.	31.	SICL	CL	.00	.00	0	30	25	22	22	8	8								
B21T	.1	.1	.0	.1	.3	0.	1.	48.	52.	SIC	MH	.00	.00	0	36	25	26	26	10	10	43	06	37					
B22T	.0	.0	.0	.2	1.0	0.	1.	51.	47.	SIC	MH	.00	.00	0	35	29	25	25	10	10								

REMARKS: ASSUME FRIGID AND UDIC  
COYNER/FNF-BN/IDAHO LAB/PECK LAKE AREA.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7904	SWAN LAKE	34-25N-18W	26A-7	571	3160	6	E	30		0	LIMESTONE

SOIL CLASSIFICATION: GLOSSIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B.S. %	O.M. %	O.C. %	TOTAL N
						PH	PH	X1000* MMDH	*CA	MG	NA	K	H						
A2	0- 3	10YR5/2	1F SBK	OCHRIC	6.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.0	.00	.00	.000	
B2IR	3- 25	75YR4/4	1M SBK	CAMBIC	6.5	6.2	10.2	.15	3.0	.7	.10	.3	11.5	17.7	026	02.70	1.57	.078	
IIA2	25- 56	10YR6/2	1M SBK		6.3	6.3	8.0	.09	3.6	.8	.00	.1	1.7	7.3	073	0.25	.14	.016	
IIA&B	56- 74	10YR6/3	2M SBK		6.5	6.6	7.9	.10	5.2	1.2	.00	.1	1.7	9.1	079	0.25	.14	.017	
IIB&A	74- 86	10YR6/3	2M SBK	ARGILLIC	7.0	6.9	7.9	.15	7.0	1.3	.10	.2	1.7	10.5	083	0.44	.26	.022	
IIB2T	86- 97	10YR5/4	2M ABK	ARGILLIC	7.5	7.5	7.9	.22	5.7	.9	.00	.2	1.7	7.3	091	0.20	.12	.017	
IICCA	97-152	10YR6/4	0 MAS	CALCIC	8.0	8.2	.0	.19	3.4	.7	.10	.1	.1	4.1	*99	0.10	.06	.010	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****						**** SESQUIOXIDS (%) ****				CACO3 %		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH		FE DI-DC	FE PY-PH
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
B2IR	20	1.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.2	.0			.8	.0	.0
IIA2	9	.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIA&B	8	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIB&A	12	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIB2T	7	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IICCA	6	1.4	0	.00	.0	.0	0.	.60	.10	.10	.00	.00	.80	.10	.1	.0		.0	.0	26.6

HORIZON	VERY COARSE PERCENT FINE FINE					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	PERCENT WATER (WT) ***** BARS *****	***** PERCENT WATER (WT) *****			***** ATTERBURG * LIMITS * *****					
	COARSE SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	OPTM. MOIST					1/3	2	4	15	AWC	LL	PL	PI	
A2	0	0	0	0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0				
B2IR	1.9	2.8	2.4	4.3	11.2	10.	22.	71.	6.	SIL	ML	.00	.00	0	34	16	13	13	20			
IIA2	1.6	2.1	2.3	5.2	9.9	35.	21.	71.	8.	GSIL	GM	.00	.00	0	20	13	9	9	11			
IIA&B	2.8	2.9	2.3	5.5	9.7	35.	23.	65.	12.	GSIL	GM	.00	.00	0	22	13	9	10	12			
IIB&A	1.9	2.5	2.4	5.2	10.1	50.	22.	64.	14.	VGSIL	GM	.00	.00	0	23	14	11	11	13			
IIB2T	1.9	2.6	2.3	6.0	10.2	50.	23.	66.	10.	VGSIL	GM	.00	.00	0	23	12	9	9	14	21	14	07
IICCA	4.0	4.3	3.0	5.5	9.8	35.	27.	64.	9.	GSIL	GM	.00	.00	0	21	12	9	8	12	19	NP	ND

REMARKS: NOTE ASH MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
ASSUME FRIGID AND UDIC  
CONYNER/FNF-BN/IDAHO-LAB/PORCUPINE CREEK.

FOOTNOTE: X COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

LT-26A

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7909	SWAN LAKE	11-19N-16W	26L-7	520	4280	5	N	30		0	PREWISCONSIN

SOIL CLASSIFICATION: GLOSSIC EUTR BORALF COARSE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B. S. %	D. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
B2IR	2-14	75YR4/4	2M SBK	CAMBIC	5.5	5.1	7.9	.21	4.1	1.6	.10	.3	7.0	15.2	047	02.21	1.29	.073	
IIA2	4-21				6.0	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000	
IIA&B	21-37	75YR6/4	2M SBK		6.5	5.2	7.9	.14	6.6	2.2	.10	.2	4.3	16.3	068	0.64	.37	.032	
IIB2T	37-53	75YR4/4	2M SBK	ARGILLIC	7.0	6.7	8.0	.38	10.0	3.2	.50	.2	2.3	21.6	086	0.56	.33	.031	
IIB3CA	53-133	75YR4/4	2M SBK	CALCIC	8.0	8.0	.0	.27	7.1	1.2	.10	9.1	.0	13.6	*63	0.12	.07	.015	
IICCA	133-175	75YR5/4	0 MAS	CALCIC	8.0	8.1	.0	.23	6.6	1.3	.10	.1	.0	9.8	*83	0.10	.06	.012	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****					CAC03 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH		
B2IR	18	1.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.2	.0		.0		.6	.0
IIA2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0		.0	.0
IIA&B	12	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0		.0	.0
IIB2T	11	.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0		.0	.0
IIB3CA	5	1.7	0	.00	.0	.0	0.	.70	.30	.40	.00	.00	1.00	.04	.1	.0		.0		.0	26.1
IICCA	5	2.1	0	.00	.0	.0	0.	.70	.20	.30	.00	.00	1.00	.03	.1	.0		.0		.0	24.6

HORIZON	VERY PERCENT VERY					***** % TOTAL *****					USDA	UNIFIED	SOIL	DENSITY	%	PERCENT WATER (WT)					ATTERBURG				
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	OPTM. MOIST	*****	BARS	*****	*****	*****	*****	*****	*****	*****	*****	
B2IR	4.0	3.4	1.8	3.1	7.0	5.	19.	68.	12.	SIL	ML	.00	.00	0	29	18	14	9	20						
IIA2	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0						
IIA&B	3.4	2.6	1.6	2.8	6.2	10.	17.	61.	22.	SIL	ML	.00	.00	0	25	18	15	10	14						
IIB2T	2.4	3.2	1.9	3.9	6.6	10.	18.	51.	31.	SICL	CL	.00	.00	0	28	19	17	14	14	31	14	17			
IIB3CA	3.1	3.5	2.4	3.9	7.3	20.	20.	60.	19.	GSIL	ML	.00	.00	0	26	19	15	12	14						
IICCA	2.3	2.2	1.6	3.8	8.8	15.	19.	67.	14.	GSIL	ML	.00	.00	0	25	13	11	7	17	22	NP	ND			

REMARKS: CLAYS: IIB2T, ILLITE&CHLORITE-HIGH, KAOLINITE-MED., VERMICULITE-METAHALL. -LOW  
 ASSUME FRIGID AND UDIC, NOTE ASH RICH SURFACE BUT SHALLOW <18CM  
 COYNER/FNF-BN/IDAHO-LAB OWL CREEK LOOP.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7625	HUNGRY HORSE	11-30N-19W		620	3450	0		40		0	

SOIL CLASSIFICATION: TYPIC EUTR BORALF FINE LOAMY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT PASTE		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B.S. %	O.M. %	O.C. %	TOTAL N
						PH	PH	MMGH	*CA	MG	NA	K	H					
IIA&B	2- 15	10YR4/2	1F CR	OCHRIC	6.0	5.7	.0	.00	5.6	.0	.00	.6	3.3	.0	062	02.60	.00	.087
IIB21T	15- 28	10YR4/3	1F CR	ARGILLIC	6.0	5.7	.0	.00	4.9	.0	.00	.4	4.6	.0	054	01.90	.00	.080
IIB22T	28- 43	10YR5/3	1M SBK	ARGILLIC	6.0	5.4	.0	.00	3.0	.0	.00	.0	2.0	.0	061	0.47	.00	.026
IIC1	43- 79	10YR5/3	1M SBK		5.5	5.1	.0	.00	3.8	.0	.00	.0	1.5	.0	077	0.25	.00	.021
IIC2	79-107	10YR5/3	1M SBK		.0	5.0	.0	.00	4.2	.0	.00	.0	1.8	.0	070	0.23	.00	.021
IIIC3	107-152	10YR4/4	0 MAS		.0	5.6	.0	.00	5.5	.0	.00	.0	.8	.0	088	0.23	.00	.021

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION							*****							AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
IIA&B	17	51.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0
IIB21T	14	25.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0
IIB22T	10	18.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0
IIC1	7	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0
IIC2	6	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0
IIIC3	6	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	1/3					2	4	15	AWC	LL	PL	PI	
IIA&B	.0	.0	.0	.0	.0	5.	19.	64.	17.	SIL	ML	1.48	.00	0	29	0	0	9	20			
IIB21T	.0	.0	.0	.0	.0	5.	21.	57.	22.	SIL	ML	1.28	.00	0	28	0	0	11	17			
IIB22T	.0	.0	.0	.0	.0	5.	13.	65.	22.	SIL	GM	1.83	.00	0	23	0	0	7	16			
IIC1	.0	.0	.0	.0	.0	5.	18.	61.	21.	SIL	ML	1.81	.00	0	21	0	0	6	15			
IIC2	.0	.0	.0	.0	.0	5.	34.	47.	18.	L	ML	1.82	.00	0	17	0	0	7	12			
IIIC3	.0	.0	.0	.0	.0	80.	57.	25.	18.	EGSL	GW	1.83	.00	0	16	0	0	7	9			

REMARKS: CLAYS: IIA&B, ILL. -HIGH, KAOL&VERM&AMORP-LOW; IIC3, ILL. -HIGH, KAOL&VERM&SMEC-LOW  
SIMILAR TO LANDTYPE 14-2.  
MCCONNELL/CDRAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7802	TALLY LAKE	30-33N-22W	14-2	520	3620	3	NE	35		0	

SOIL CLASSIFICATION: TYPIC EUTR BORALF FINE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 CM#	B. S.	O. M.	O. C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMQH	*CA	MG	NA	K	H	CEC*	%	%	%	N
A21	0- 8	10YR7/2	1F GR	OCHRIC	5.5	5.0	.0	.00	1.6	.3	.04	.1	.0	.0		*2.80	.00	.039
B22T	36- 58	10YR6/4	2M ABK	ARGILLIC	5.5	5.2	.0	.00	5.4	1.3	.04	.1	2.5	12.1	073	*2.14	.00	.044
CCA	71- 0	10YR7/2	3VCPL		8.0	5.9	.0	.00	6.6	1.1	.03	1.6	1.0	11.0	090	*1.85	.00	.039

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE		FE
A21	0	1.9	132	.44	5.0	17.5	0.	.20	.08	.10	.03	.00	.38	.45	.0	.0			.0	.0	.0
B22T	0	10.8	62	.48	8.0	12.5	7.	.21	.05	.13	.01	.00	.52	.46	.0	.0			.0	.0	.0
CCA	0	6.9	54	.48	8.0	16.5	0.	.98	.16	.17	.02	.12	1.16	.42	.0	.0			.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA	UNIFIED	SOIL DENSITY	% OPTM.	PERCENT WATER (WT)					ATTERBURG * LIMITS *			
	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI
A21	2.8	3.7	2.6	4.2	2.9	5.	16.	69.	15.	SIL	ML	.00	.00	0	30	0	0	17	0			
B22T	.4	.5	.2	.4	.5	5.	2.	71.	27.	SICL	CL	.00	.00	0	31	0	0	22	0	32	24	08
CCA	.1	.2	.1	.3	.5	0.	1.	72.	27.	SICL	CL	.00	.00	0	33	0	0	21	0	32	23	09

REMARKS: ASSUME FRIGID AND UDIC; NOTE VERY CLOSE TO TYPIC EUTROBORALF SIRUCEK/STILLWATER S. F. /IDAHO LAB/SWIFT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7903	SWAN LAKE	35-25N-18W	26A-7	571	3160	0		30		0	LIMESTONE

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
A2	0- 2	10YR5/2	1F SBK	OCHRIC	.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.00	.000	
B2IR	2- 31	7.5YR5/6	1M SBK	CAMBIC	6.0	6.0	10.3	.10	2.2	.6	.10	.3	13.0	20.0	020	02.60	1.51	.091	
IIA2	31- 55	10YR6/3	1M SBK		6.1	6.1	7.9	.08	2.6	.7	.00	.1	1.7	5.5	067	0.27	.16	.016	
IIA&B	55- 70	10YR6/3	1M SBK		6.3	6.3	7.9	.10	3.5	1.0	.00	.1	1.2	5.4	079	0.32	.19	.011	
IIB&A	70- 85	10YR7/4	1M SBK	ARGILLIC	6.3	6.3	7.9	.08	3.7	1.1	.00	.1	1.5	6.4	077	0.21	.12	.012	
IIB2T	85-133	10YR5/4	2M SBK	ARGILLIC	7.4	7.4	7.9	.36	7.2	1.2	.00	.1	.6	7.3	093	0.20	.12	.015	
IICCA	133- 0	10YR6/3	0 MAS	CALCIC	7.9	7.9	.0	.27	3.1	.3	.10	.1	.0	4.2	*86	0.14	.08	.009	

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						SOLUBLE IONS MEG/LITER							SESQUIDXIDS (%)				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
A2	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2IR	17	1.4	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.2	.0		.6	.0	.0
IIA2	10	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	17	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB&A	10	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2T	8	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IICCA	9	1.7	0	.00	.0	.0	0.	.80	.10	.10	.00	.00	.90	.30	.2	.0		.0	.0	51.0

HORIZON	VERY PERCENT VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A2	0	0	0	0	0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0			
B2IR	1.0	2.5	2.0	3.9	11.1	10.	20.	71.	8.	SIL	ML	.00	.00	0	35	17	14	14	21			
IIA2	2.2	4.5	3.9	8.0	12.1	25.	31.	65.	4.	OSIL	ML	.00	.00	0	19	8	5	6	39			
IIA&B	1.4	2.9	2.8	7.1	14.2	35.	28.	65.	7.	OSIL	GM	.00	.00	0	18	10	7	8	10			
IIB&A	2.3	2.7	2.3	6.6	12.3	40.	26.	63.	10.	VGSIL	GM	.00	.00	0	20	11	8	8	12			
IIB2T	.6	1.2	.9	1.7	11.2	40.	14.	72.	13.	VGSIL	GM	.00	.00	0	26	12	9	9	17	20	10	10
IICCA	1.8	4.7	4.3	7.9	9.8	40.	29.	60.	11.	VGSIL	GM	.00	.00	0	20	13	10	7	13	19	13	05

REMARKS: NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
 ASSUME FRIGID AND UDIC  
 COYNER/FNF-BN/IDAHO-LAB/PORCUPINE CREEK

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLDRMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7825	GLACIER VIEW	18-31N-19W		532	3300	1		30	JULY	10	ARGILLITE-CACO3

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC										TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	EXCHANGEABLE *CA	MG NA	CATIONS K H	MEG/100 CEC*	GM* B.S. %	O.M. %	O.C. %			
B2IR	0-24	75YR4/4	1M GR	CAMBIC	5.8	6.0	9.4	.21	6.3	1.2	.10	.3	12.9	16.8	038	02.87	1.67	.088
IIA2	24-53	10YR5/3	2M SBK		5.5	5.8	7.8	.10	3.8	1.3	.10	.1	2.7	5.9	066	0.41	.24	.016
IIB2T	53-77	10YR4/3	2M SBK	ARGILLIC	7.1	7.3	7.8	.30	9.2	2.7	.10	.2	.7	8.5	095	0.25	.15	.010
IIB3T	77-107	10YR4/3	0 MAS	ARGILLIC	7.8	8.0	8.6	.22	11.9	1.8	.10	.1	.7	6.1	095	0.16	.09	.006

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AI PY-PH	FE DI-DC	FE PY-PH	
B2IR	19	4.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA2	15	1.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2T	15	1.4	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB3T	15	1.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					VERY FINE SAND	***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	Z OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND		C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL
B2IR	1.7	4.4	3.6	6.3	9.6	5.	26.	63.	11.	SIL	ML	.00	.00	0	34	0	0	8	26	ND	NP	NP
IIA2	4.5	5.6	4.5	7.7	10.3	35.	33.	55.	13.	GSIL	GM	.00	.00	0	20	0	0	3	17	ND	NP	NP
IIB2T	4.6	5.3	4.5	7.4	9.8	45.	32.	51.	17.	VGSIL	GM	.00	.00	0	22	0	0	7	15	20	04	16
IIB3T	5.9	6.0	4.3	7.3	8.6	50.	32.	51.	17.	VGSIL	GM	.00	.00	0	20	0	0	10	10	20	12	07

REMARKS: NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP BATES/LIM/IDAHO-LAB/TEA KETTLE MTN. SIMILAR TO LAND TYPE 26A

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7826	TALLY LAKE	10-30N-23W	26B-7	640	3850	10	NE	20-30	JULY	9	LIMESTONE

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM*	B. S.	O. M.	O. C.	TOTAL
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N
B2IR	6- 27	10YR4/4	1M GR	CAMBIC	6.2	5.9	.0	.31	6.1	1.8	.10	1.0	.0	19.4	*46	03.49	2.03	.082
IIA2	27- 52	10YR6/3	1M GR		6.2	5.8	.0	.21	5.2	2.0	.10	.2	.0	12.1	*62	0.77	.45	.029
IIB2T	52- 73	10YR5/3	1M SBK	ARGILLIC	7.0	6.4	.0	.27	9.7	2.0	.10	.4	.0	21.6	*56	01.05	.61	.038
IIB3	73- 86	10YR5/4	0 MAS		7.0	6.5	.0	.27	8.7	2.9	.10	.3	.0	16.0	*75	0.60	.35	.021

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	CAC03
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
B2IR	24	9.5	0	.00	.0	.0	0.	1.30	.50	.20	.30	.00	1.30	.20	.6	.0		.0	.0	.0
IIA2	16	2.1	0	.00	.0	.0	0.	.40	.30	.20	.00	.00	.20	.10	.5	.0		.0	.0	.0
IIB2T	16	.9	0	.00	.0	.0	0.	.90	.50	.20	.00	.00	.80	.10	.5	.0		.0	.0	.0
IIB3	17	1.1	0	.00	.0	.0	0.	.90	.40	.20	.00	.00	.80	.10	.5	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT)					* ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
B2IR	4.0	4.2	2.5	5.1	11.3	10.	27.	67.	6.	SIL	ML	.00	.00	0	37	0	0	14	23	ND	NP	NP
IIA2	7.7	5.9	3.3	6.2	8.2	40.	31.	58.	11.	VGSIL	GM	.00	.00	0	24	0	0	9	15	ND	NP	NP
IIB2T	6.4	5.4	3.6	6.5	6.1	55.	32.	56.	16.	VGSIL	GM	.00	.00	0	27	0	0	14	13	32	12	20
IIB3	11.8	8.8	5.2	10.2	8.9	70.	45.	42.	13.	VGL	GM	.00	.00	0	23	0	0	10	13	24	NP	ND

REMARKS: BATES/LIM/IDAHO-LAB/LOST CREEK, TLRD.  
SIMILAR TO LANDTYPE 26C

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7807	TALLY LAKE	23-32N-24W	26C-7	640	3300	5		30		0	ARGILLITE

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	O.N. %	O.C. %	TOTAL N		
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K					H	CEC*
B2IR	0- 13	10YR5/4	1F SBK	CAMBIC	6.5	6.1	9.9	.00	4.2	.7	.04	.6	.0	17.6	*32	5.48	.00	.124
IIA2	13- 36	10YR6/1	1F SBK		6.5	5.9	.0	.00	2.2	.7	.15	.1	.0	4.3	*72	*.75	.00	.000
IIB22T	74-104	75YR6/2	2M SBK	ARGILLIC	6.5	5.5	.0	.00	3.9	1.6	.10	.1	.0	5.1	*71	*1.08	.00	.023
IIC	104- 0	75YR6/2	0 MAS		6.5	5.5	8.8	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	CaCO3 %
B2IR	0	8.9	300	1.36	6.0	100.0	9.	.20	.08	.06	.09	.00	.53	.47	.0	.0		.0	.0	.0
IIA2	0	1.9	58	.21	2.0	16.0	4.	.04	.02	.03	.01	.00	.38	.25	.0	.0		.0	.0	.0
IIB22T	0	5.1	31	.25	4.0	6.4	0.	.06	.04	.03	.01	.00	.24	.16	.0	.0		.0	.0	.0
IIC	0	.0	26	.46	4.0	9.8	0.	.03	.03	.03	.01	.00	.19	.15	.0	.0		.0	.0	.0

HORIZON	VERY FINE SAND PERCENT					VERY FINE SAND PERCENT					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COB. SAND	COB. SAND	MED. SAND	FINE SAND	FINE SAND	**** C.F.	% S	% SI	**** C	1/3						2	4	15	AWC	LL	PL	PI	
B2IR	7.6	7.6	3.8	5.8	8.0	30.	33.	58.	9.	GSIL	ML	.00	.00	0	35	0	0	9	0		NP	NP	
IIA2	4.3	5.6	3.6	8.3	9.8	40.	32.	62.	7.	VGSIL	GM	.00	.00	0	0	0	0	0	0				
IIB22T	.5	1.7	1.2	4.2	9.2	50.	17.	73.	10.	VGSIL	GM	.00	.00	0	24	0	0	4	0	24	23	02	
IIC	.8	2.2	1.1	3.2	6.8	50.	14.	75.	11.	VGSIL	GM	.00	.00	0	25	0	0	6	0	25	22	03	

REMARKS: ASSUME FRIGID AND UDIC/DISTURBED ASH SURFACE  
SIRUCEK/STILLWATER S.F./IDAHO LAB/STILLWATER BENCH.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7823	GLACIER VIEW	25-31N	-20W		531	4400	17	NE	30-40		0	LIMESTONE

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC							CEC*	% B.S.	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000*	EXCHANGEABLE	*CA	MG	NA	K	H					
B2IR	5-22	75YR4/4	1F GR	CAMBIC	6.5	5.7	.0	.20	2.9	5.3	.10	.3	.0	14.1	*61	02.67	1.55	.079	
IIA2	22-35	10YR4/3	1F GR		6.3	5.5	.0	.17	1.9	.3	.10	.1	.0	7.7	*31	0.88	.51	.034	
IIA&B	35-63	10YR5/4	1F GR		5.7	5.4	.0	.09	2.0	.7	.10	.1	.0	4.8	*60	0.28	.16	.017	
IIB2T	63-103	10YR4/3	1M GR	ARGILLIC	7.0	6.3	.0	.16	5.0	1.1	.10	.1	.0	6.9	*91	0.42	.24	.021	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEG/LITER *****										**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION							*****										AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH				
B2IR	20	1.6	0	.00	.0	.0	0.	1.10	.40	.20	.10	.00	.70	.30	.5	.0		.0	.0	.0	.0		
IIA2	15	1.3	0	.00	.0	.0	0.	.30	.10	.20	.00	.00	.40	.10	.5	.0		.0	.0	.0	.0		
IIA&B	9	.7	0	.00	.0	.0	0.	.30	.10	.10	.00	.00	.30	.10	.5	.0		.0	.0	.0	.0		
IIB2T	11	.3	0	.00	.0	.0	0.	.30	.10	.10	.00	.00	.40	.10	.5	.0		.0	.0	.0	.0		

HORIZON	VERY PERCENT					VERY					***** % TOTAL *****					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C				BULK	MAX.	1/3			2	4		15	AWC	LL	PL	PI			
B2IR	3.4	5.2	3.8	6.9	12.4	5.	32.	61.	7.	SIL	ML	.00	.00	0	30	0	0	7	23	ND	NP	NP						
IIA2	6.6	7.7	4.8	8.7	12.8	15.	41.	49.	10.	GL	ML	.00	.00	0	20	0	0	4	16	ND	NP	NP						
IIA&B	7.3	7.9	6.2	9.2	11.6	20.	42.	44.	14.	GL	ML	.00	.00	0	18	0	0	4	14	ND	NP	NP						
IIB2T	5.3	6.9	4.7	7.9	9.6	20.	34.	53.	12.	GL	ML	.00	.00	0	21	0	0	5	16	ND	NP	NP						

REMARKS: NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
 CLAYS: IIC2, ILLITE&SMECTITE&KAOLINITE&VERMICULITE&CHLORITE-PRESENT  
 BATES/LIM/IDAHO-LAB/TEA KETTLE MTN.  
 SIMILAR TO LANDTYPE 26C, NOTE MIXED PARENT MATERIAL AT THIS SITE

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7808	TALLY LAKE	23-33N-23W	26C-8	530	4100	15	E	35		0	ARGILLITE

SOIL CLASSIFICATION: TYPIC EUTR BORALF LDAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT			EC					MEG/100 GM*	B. S. %	D. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
A2	0- 5	10YR4/1	0 SO	GCHRIC	5.5	4.7	8.0	.00	2.3	.8	.09	.5	.0	.0	.00	.00	.000	
B2IR	5- 15	7.5YR4/4	0 SO	CAMBIC	5.8	5.4	.0	.00	.9	.2	.04	.2	.0	27.0	*05	*5.75	.00	.158
IIA2	15- 43	2.5Y6/2	1F SBK		6.5	5.4	.0	.00	1.0	.5	.05	.1	.0	6.1	*27	*1.58	.00	.000
IIB22T	58-102	2.5Y6/2	2M ABK	ARGILLIC	6.8	5.7	.0	.00	3.0	1.1	.05	.1	.0	4.9	*88	*1.58	.00	.035
IIC	102- 0	2.5Y6/2	0 MAS		7.0	5.9	9.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		AVAILABLE IN PARTS/MILLION						*****								AL	AI	FE	FE	CACO3
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
A2	0	5.1	500	.42	4.0	1.6	33.	.30	.18	.12	.17	.00	.69	.06	.0	.0		.0	.0	.0
B2IR	0	4.2	160	1.19	8.0	24.0	26.	.12	.04	.08	.06	.00	.53	.08	.0	.0		.0	.0	.0
IIA2	0	2.5	78	.42	4.0	10.6	18.	.06	.04	.04	.02	.00	.21	.02	.0	.0		.0	.0	.0
IIB22T	0	2.9	59	.28	7.0	26.0	0.	.04	.03	.01	.01	.00	.21	.02	.0	.0		.0	.0	.0
IIC	0	.0	110	.24	8.0	51.0	0.	.06	.04	.02	.01	.00	.28	.02	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					VERY					***** % TOTAL *****		USDA	UNIFIED	SOIL DENSITY	%	PERCENT WATER (WT)					ATTERBURG		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	OPTM. MOIST	***** BARS *****	1/3	2	4	15	AWC	* LIMITS *	LL	PL	PI
A2	.0	.0	.0	.0	.0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0				
B2IR	4.3	6.1	3.4	5.5	10.8	60.	30.	63.	6.	VGSIL	GM	.00	.00	0	24	0	0	12	0					
IIA2	11.9	11.3	5.9	9.8	6.2	40.	45.	46.	9.	VGL	GM	.00	.00	0	0	0	0	0	0					
IIB22T	3.2	4.4	2.4	5.2	5.1	40.	20.	59.	21.	VGSIL	GM	.00	.00	0	24	0	0	6	0	24	20	04		
IIC	4.0	5.3	3.0	5.9	5.1	60.	23.	57.	21.	VGSIL	GM	.00	.00	0	41	0	0	6	0	23	19	02		

REMARKS: CLAYS: IIB22T-KAOLINITE, CHLORITE, ILLITE-PRESENT; SMECTITE-TRACE  
 ASSUMED FRIGID AND UDIC; ASH SURFACE PRESENT 1 INCH SHALLOW FOR ANDEPTIC  
 STRUCK/STILLWATER S. F. /IDAHO LAB/STRYKER RIDGE.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8011	GLACIER VIEW	2	-28N-24W	26G-7	450	4000	5	N	20-30	SEPT	11	SILTSTONE TERT.

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM*		B.S. %	D.M. %	D.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%				
B2IR	0-11	10YR4/4	1F SBK	CAMBIC	7.0	.0	.0	.00	3.9	1.3	.10	1.0	9.4	15.7	040	01.70	.00	.032	
IIA2	11-55	10YR6/3	2M SBK	ALBIC	6.5	.0	.0	.00	5.0	1.5	.20	1.0	6.4	14.3	054	01.30	.00	.036	
IIB2T	55-76	10YR5/4	2M SBK	ARGILLIC	6.4	.0	.0	.00	15.0	2.2	.10	.7	2.6	20.6	087	01.00	.00	.036	
IICCA	76-152	10YR5/4	0 MAS		8.0	.0	.0	.00	36.1	1.7	.10	.4	.0	18.8	100	0.80	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SD4	DI-DC	PY-PH	DI-DC		PY-PH
B2IR	0	40.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0
IIA2	0	87.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0
IIB2T	0	80.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0
IICCA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		OPTM. MOIST	***** PERCENT WATER (WT) *****				ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	5.	22.	66.	12.	SIL	ML	.00	.00	0	37	0	0	12	25			
IIA2	.0	.0	.0	.0	.0	27.	24.	65.	11.	GSIL	ML	1.04	1.48	24	32	0	0	10	22			
IIB2T	.0	.0	.0	.0	.0	45.	31.	50.	19.	VGSIL	GM	1.16	1.76	16	27	0	0	12	15	31	25	05
IICCA	.0	.0	.0	.0	.0	65.	46.	39.	15.	EGL	GM	1.13	1.86	15	0	0	0	0	0	31	25	02

REMARKS: MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
CLAYS: IIB2T, ILLITE-MED, KAOLINITE-LOW, SMECTITE-TRACE, INTER-STRATIFICATION-LO  
KLIEN, SIRUCEK, GRAHAM/KLIEN THEISIS/MSU LAB ASHLEY LAKE.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LF-269

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
B010	GLACIER VIEW	2 -28N-24W	26G-7	420	4000	8	E	20-30	SEPT	11	SILTSTONE TERT.

SOIL CLASSIFICATION: TYPIC EUTR BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEQ/100 GM*	B. S.	O. M.	O. C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC#	%	%	%	%	
A2	0- 45	10YR5/2	2M SBK	ALBIC	5.7	5.5	.0	.00	5.2	2.0	.10	.7	9.5	17.5	046	01.50	.00	.035	
B2T	45- 64	10YR5/4	2C SBK	ARGILLIC	7.5	6.9	.0	.00	12.7	2.5	.10	.7	2.3	18.3	087	01.10	.00	.027	
CCA	64- 0	10YR5/4	1M SBK		8.0	7.5	.0	.00	36.2	2.3	.10	.5	.0	13.6	100	01.40	.00	.000	

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
A2	0	13.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
B2T	0	59.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
CCA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0

HORIZON	VERY COS. SAND		PERCENT SAND		VERY FINE SAND		***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *				
	SAND	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C		BULK	MAX.	1/3	2	4	15	AWC	LL	PL	PI		
A2	.0	.0	.0	.0	.0	.0	37.	32.	57.	11.	VGSIL	GM	1.01	1.62	18	32	0	0	11	21			
B2T	.0	.0	.0	.0	.0	.0	40.	35.	51.	14.	VGSIL	GM	.96	1.78	16	28	0	0	10	18	31	26	05
CCA	.0	.0	.0	.0	.0	.0	50.	39.	52.	9.	VGSIL	GM	1.08	1.61	21	0	0	0	0	0	38	36	02

REMARKS: MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
 CLAYS: B2T, ILLITE-HIGH, KAOLINITE-MED, SMELTITE-TRACE, INTER-STRATIFICATION-LOW  
 KLIENS, SIRUCEK, GRAHAM/KLIEN THEISIS/MSU-LAB ASHLEY LAKE.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8009	GLACIER VIEW	12-30N-22W	26G-7	470	3200	5	NW	20	SEPT	11	SILTSTONE TERT.

SOIL CLASSIFICATION: TYPIC EUTR BORALF FINE LOAMY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 CEC*	GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG NA	K	H						
A1	0- 10	10YR3/2	2M GR	OCHRIC	7.0	6.5	.0	.00	14.0	3.9	.03	1.3	6.9	26.4	074	06.30	.00	.181
A2	10- 40	10YR5/4	2M SBK		8.0	6.9	.0	.00	8.0	2.3	.02	.8	7.9	19.2	059	02.30	.00	.060
B2T	40- 54	10YR5/3	2M SBK	ARGILLIC	8.0	7.4	.0	.00	10.6	2.5	.02	.8	3.8	17.1	078	0.90	.00	.038
CCA	54- 0	10YR7/2	0 MAS		8.0	7.9	.0	.00	28.8	1.8	.01	.3	.0	6.4	100	0.80	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
A1	0	29.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
A2	0	26.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2T	0	87.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
CCA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					VERY				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	% PERCENT WATER (WT)				ATTERBURG * LIMITS *			
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	**** C.F.	% S	SI	**** C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
A1	.0	.0	.0	.0	.0	5.	26.	60.	14.	SIL	ML	.00	1.19	31	45	0	0	17	28			
A2	.0	.0	.0	.0	.0	20.	26.	60.	14.	GSIL	ML	1.35	1.64	17	29	0	0	10	19			
B2T	.0	.0	.0	.0	.0	30.	31.	53.	16.	GSIL	ML	1.32	1.81	15	25	0	0	10	15	30	25	05
CCA	.0	.0	.0	.0	.0	40.	40.	52.	8.	VGSIL	GM	1.36	1.88	13	0	0	0	0	0	ND	NP	ND

REMARKS: TYPE LOCATION FOR WHITE FISH SERIES.  
 MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
 CLAYS: B2T, ILLITE-HIGH, KAOLINITE-LOW, SMECTITE-TRACE, INTER-STRATIFICATION-LOW  
 KLIEN, SIRUCEK, GRAHAM/KLIEN'S THEISIS/MSU-LAB BLANCHARD LAKE.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8015	GLACIER VIEW	27-37N-22W		26L-7	660	4180	4	E			0	PREWISCONSIN

SOIL CLASSIFICATION: ANDEPTIC PALE BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*				
B2IR	0-33		1F SBK		.0	5.5	.0	.10	1.7	.5	.10	.0	.0	5.2		01.30	.00	.038
IIA2	3-76		2M SBK		.0	5.4	.0	.10	1.8	.4	.10	.0	.0	2.5		0.30	.00	.010
IIB2T	76-133		3M SBK		.0	7.6	.0	.00	21.0	1.1	.15	.0	.0	10.8		0.00	.00	.024

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEQ/LITER *****										**** SESQUIOXIDS (%) ****				
	C-N RATIO	AVAILABLE IN PARTS/MILLION					*****					*****					AL	AL	FE	FE	CaCO3	
	P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%			
B2IR	0	30.0	63	.10	2.0	9.6	25.	.30	.10	.20	.00	.00	.00	.00	.0				.0	.0	.0	
IIA2	0	6.0	24	.10	6.0	5.5	3.	.80	.30	.30	.00	.00	.00	.00	.0				.0	.0	.0	
IIB2T	0	20.0	19	.30	10.0	7.4	0.	3.60	.50	.30	.00	.00	.00	.00	.0				.0	.0	.0	

HORIZON	VERY PERCENT VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	15.	34.	49.	17.	GL		.00	.00	0	33	0	0	10	23			
IIA2	.0	.0	.0	.0	.0	50.	44.	47.	9.	VGL		.00	.00	0	15	0	0	3	12			
IIB2T	.0	.0	.0	.0	.0	35.	36.	38.	26.	VGL		.00	.00	0	0	0	0	0	0			

REMARKS: SIRUCEK/LARCH PLANTATION/MSU LAB; B2IR 176PPM K, 3PPM NO3; IIA 29PPM K, 4PPMNO3  
IIB2T 73PPM K.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
B013	GLACIER VIEW	09-37N-23W		26L-7	670	4120	1		60		0	PREWISCONSIN

SOIL CLASSIFICATION: TYPIC PALE BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	D.M. %	D.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
O2	5- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.00	.00	.00	.000	
A2	0- 8	10YR8/1	1C PL		4.5	4.1	7.9	.18	.6	.2	.20	.1	12.3	11.6	009	02.74	1.59	.068
B2IR	8- 30	10YR6/6	2M GR		5.7	5.4	10.8	.09	.1	.1	.10	.2	25.4	27.9	002	05.90	3.43	.143
IIA&B	73-102	10YR6/4	2M SBK		4.5	5.0	8.0	.07	1.3	.6	.50	.1	5.1	6.3	033	0.19	.11	.015
IIA2	30- 73	10YR6/4	1F SBK		5.5	5.2	8.1	.08	.3	.2	.09	.1	4.4	4.6	010	0.21	.12	.012
IIB&A	102-128	10YR5/6	2C SBK	ARGILLIC	5.5	5.4	8.0	.07	4.4	1.5	.09	.3	4.9	9.3	056	0.25	.15	.018
IIB2T	128-200	10YR5/6	2C SBK	ARGILLIC	5.7	5.8	8.0	.14	5.8	1.7	.09	.2	4.2	10.5	065	0.23	.13	.019

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %			
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE		FE		
O2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0
A2	23	3.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1					.2	.1	.0
B2IR	24	1.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	1.0				1.6	.2	.0	.0
IIA&B	7	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0	.0
IIA2	10	1.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0	.0
IIB&A	6	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0	.0
IIB2T	7	1.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0	.0

HORIZON	VERY PERCENT					VERY	***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND		C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
O2	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0			
A2	.5	.9	1.0	4.9	11.4	5.	19.	75.	6.	SIL	ML	.00	.00	0	0	0	0	0	0	0			
B2IR	.9	1.7	1.7	5.8	13.2	5.	23.	66.	11.	SIL	ML	.00	.00	0	0	0	0	0	0	0			
IIA&B	2.4	3.1	2.5	4.9	22.5	23.	35.	47.	18.	GL	GM	.00	.00	0	0	0	0	0	0	0			
IIA2	5.8	4.2	2.7	11.2	19.3	18.	43.	46.	11.	GL	SM	.00	.00	0	0	0	0	0	0	0			
IIB&A	1.9	2.4	1.8	9.7	16.2	30.	32.	41.	27.	GL	ML	.00	.00	0	0	0	0	0	0	0			
IIB2T	1.3	2.4	2.1	7.5	16.8	40.	30.	43.	27.	VGCL	GC	.00	.00	0	0	0	0	0	0	0			

REMARKS: NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
SIRUCEK, NEWHAUSER/FNF/IDAHO LAB; THOMA CREEK; ASSUMED CRYIC & UDIC.

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
B001	GLACIER VIEW	4	-36N-22W	26J-7	660	4200	3	E	30	SEPT	10	SANDSTONE TERT.

SOIL CLASSIFICATION: TYPIC PALE BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT PASTE		X1000* NAF PH	EXCHANGEABLE CATIONS *CA	MG NA	K	H	MEG/100 GM* CEC*	B.S. %	O.M. %	O.C. %	TOTAL N	
						PH	PH											
B2IR	0-24	75YR4/6	1F SBK	CAMBIC	6.5	5.7	.0	.00	7.9	3.0	.10	.6	13.9	25.5	046	03.00	.00	.089
IIA2	24-65	10YR5/4	1M SBK		6.5	6.4	.0	.00	5.3	1.4	.10	.4	3.3	10.5	069	0.70	.00	.023
IIB1	65-96	10YR5/4	2M SBK		7.0	7.4	.0	.00	4.6	1.2	.10	.3	2.9	9.1	068	0.70	.00	.019
IIB21T	96-106	10YR6/4	1M SBK	ARGILLIC	8.0	7.4	.0	.00	5.9	1.4	.10	.5	2.5	10.4	076	0.60	.00	.012
IIB22T	106-157	10YR6/4	1M SBK	ARGILLIC	8.0	8.0	.0	.00	27.1	1.1	.02	.4	.0	9.4	100	0.50	.00	.012
IICCA	157-182	10YR6/3	0 MAS		8.0	8.1	.0	.00	32.3	1.2	.01	.3	.0	8.5	100	0.50	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION							***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	*****	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH		
B2IR	0	31.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIA2	0	14.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB1	0	16.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB21T	0	19.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB22T	0	14.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IICCA	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0

HORIZON	VERY COARSE PERCENT FINE FINE					***** % TOTAL *****				USDA UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					* ATTERBURG LIMITS *			
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C					TEXTURE	1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	15.	29.	47.	24.	GL	GM	.00	.00	0	39	0	0	17	22			
IIA2	.0	.0	.0	.0	.0	15.	54.	35.	11.	GCSL	SM	1.33	2.02	11	18	0	0	6	12			
IIB1	.0	.0	.0	.0	.0	35.	58.	32.	10.	GSL	GM	1.34	1.99	10	15	0	0	6	9			
IIB21T	.0	.0	.0	.0	.0	42.	44.	40.	16.	VGL	GM	1.38	1.99	11	19	0	0	8	11	19	17	02
IIB22T	.0	.0	.0	.0	.0	50.	45.	41.	14.	VGL	GM	1.31	2.02	11	19	0	0	8	11	17	16	01
IICCA	.0	.0	.0	.0	.0	48.	45.	41.	14.	VGL	GM	1.37	2.03	11	0	0	0	0	0	18	17	01

REMARKS: NOTE SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
CLAYS: IIB21T, ILLITE&SMELTITE-MEDIUM, KAOLINITE&INTER-STRATIFICATION-LOW  
KLIEN, SIRUCEK, GRAHAM/KLIEN THEISIS/MSU-LAB TEEPEE LAKE.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8006	GLACIER VIEW	20-37N-22W		26C-7	625	4700	2	E	30	SEPT	8	SILTSTONE TERT.

SOIL CLASSIFICATION: TYPIC PALE BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	D.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*				
B2IR	0-19	75YR4/6	1M SBK	CAMBIC	7.0	5.7	.0	.00	1.4	.2	.10	.4	20.6	22.7	007	04.00	.00	.115
IIA2	19-82	10YR6/1	1M ABK	ALBIC	5.8	5.4	.0	.00	1.4	.5	.10	.4	4.0	6.4	038	0.80	.00	.009
IIB21T	82-121	10YR6/4	2C ABK	ARGILLIC	6.2	5.8	.0	.00	2.3	.9	.10	.3	4.7	8.3	043	0.60	.00	.011
IIB22T	121-178	10YR5/4	3C ABK	ARGILLIC	7.8	6.4	.0	.00	4.2	.8	.10	.3	4.1	9.5	057	0.70	.00	.014
IIC	178-0	10YR5/4	0 MAS		8.0	7.2	.0	.00	5.6	.8	.10	.3	3.1	9.9	069	0.90	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) *****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B2IR	0	66.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA2	0	44.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB21T	0	35.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB22T	0	14.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY COARSE SAND PERCENT					VERY FINE SAND	***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND		C. F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	10.	35.	61.	4.	SIL	ML	.00	.00	0	37	0	0	12	25				
IIA2	.0	.0	.0	.0	.0	30.	29.	62.	9.	GSIL	ML	1.57	1.89	13	19	0	0	9	10				
IIB21T	.0	.0	.0	.0	.0	40.	25.	58.	17.	VGSIL	GM	1.50	1.88	13	20	0	0	11	9	22	18	04	
IIB22T	.0	.0	.0	.0	.0	42.	24.	58.	18.	VGSIL	GM	1.49	1.87	14	20	0	0	12	8	22	20	02	
IIC	.0	.0	.0	.0	.0	45.	24.	58.	18.	VGSIL	GM	1.46	1.89	13	0	0	0	0	0	24	19	05	

REMARKS: NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
CLAYS: IIB22T, ILLITE&KAOLINITE-MEDIUM, SMECTITE-TRACE, INTER-STRATIFICATION-LO  
KLIEN, SIRUCEK, GRAHAM/KLIEN THEISIS/MSU-LAB KETCHIKAN AREA.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % G.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8007	GLACIER VIEW	20-37N-22W		26C-7	620	4700	3	E	30	SEPT	11	SILTSTONE TERT.

SOIL CLASSIFICATION: TYPIC PALE BORALF LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
B2IR	0- 25	75YR3/4	1M SBK	GCHRIC	7.5	5.2	.0	.00	1.8	.4	.10	.4	21.3	24.0	011	04.60	.00	.163
IIA2	25- 77	10YR7/1	1M SBK	ALBIC	5.5	5.2	.0	.00	.1	.3	.01	.2	6.4	7.0	009	0.70	.00	.016
IIA&B	77-128	10YR6/4	2M SBK	ARGILLIC	6.0	5.4	.0	.00	1.9	1.0	.10	.3	6.1	9.4	035	0.50	.00	.012
IIB2T	128-198	10YR6/4	3C ABK	ARGILLIC	6.5	6.0	.0	.00	2.8	1.4	.00	.4	5.7	10.3	045	0.70	.00	.012
IIB3	198- 0	10YR5/4	2C ABK		6.5	6.0	.0	.00	3.2	1.3	.10	.4	5.3	10.3	049	0.70	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****						
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE	FE	CACO3
B2IR	0	70.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
IIA2	0	49.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
IIA&B	0	37.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
IIB2T	0	31.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
IIB3	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0

HORIZON	VERY PERCENT					VERY				USDA TEXTURE	UNIFIED CLASS.	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	**** C.F.	% S	% SI	***** C						1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	18.	35.	60.	5.	GSIL	ML	.00	.00	0	37	0	0	13	24			
IIA2	.0	.0	.0	.0	.0	40.	33.	59.	8.	VGSIL	GM	1.28	1.87	14	19	0	0	8	11			
IIA&B	.0	.0	.0	.0	.0	50.	28.	58.	14.	VGSIL	GM	1.53	1.90	13	19	0	0	11	8			
IIB2T	.0	.0	.0	.0	.0	50.	27.	55.	18.	VGSIL	GM	1.62	1.90	11	20	0	0	10	10	21	19	02
IIB3	.0	.0	.0	.0	.0	50.	27.	56.	17.	VGSIL	GM	1.43	1.90	11	0	0	0	0	0	21	18	03

REMARKS: NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP  
 MULTIPLY SURFACE HORIZON PHOSPHORUS VALUE BY 10. NOTE TOTAL PHOSPHORUS VALUE  
 CLAYS: IIB2T, ILLITE&KAOLINITE-MEDIUM, SMECTITE&CHLORITE-LOW  
 KLIEN, SIRUCEK, GRAHAM/KLIEN THEISIS/MSU-LAB KETCHIKAN AREA.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7901	SWAN LAKE	5	-21N-17W	12-3	650	3560	1		30		0	

SOIL CLASSIFICATION: TYPIC BOR SAPRIST LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PH	NAF PH	X1000* MMQH	*CA	MG	NA	K	H					
OA1	0-20	10YR2/1	1F GR	HISTIC	7.0	6.3	7.8	.70	77.0	13.5	.10	.1	27.8	114.3	072	72.37	42.08	2.940
OA2	20-30	10YR2/1	1F GR	HISTIC	7.0	6.4	7.9	1.50	91.5	14.0	.10	.0	30.0	146.4	078	64.54	37.52	2.840
OA3	30-40	10YR2/2	1F SBK	HISTIC	7.2	6.7	8.8	.53	77.5	12.2	.10	.0	27.8	114.3	076	48.61	28.26	1.660
OA4	40-70	10YR2/1	1F SBK	HISTIC	7.0	6.3	8.6	.74	99.5	16.9	.10	.1	25.6	182.1	082	57.23	33.29	2.300
OA5	70-155	10YR2/2	1F SBK	HISTIC	7.0	5.6	7.7	1.90	97.5	14.0	.10	.1	32.3	167.9	078	71.56	41.61	2.200
ASH	0-0	10YR5/6	1F SBK		7.2	7.2	10.9	.22	14.3	1.7	.20	.0	8.3	23.9	066	05.20	3.02	.165

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								*****				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
OA1	14	29.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
OA2	13	5.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
OA3	17	1.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
OA4	14	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
OA5	19	2.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
ASH	18	.4	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG # LIMITS #		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
OA1	.0	.0	.0	.0	.0	0.	0.	0.	0.	PT	.00	.00	0	0	0	0	0	0	0	0		
OA2	.0	.0	.0	.0	.0	63.	0.	0.	0.	PT	.00	.00	0	0	0	0	0	0	0	0		
OA3	.0	.0	.0	.0	.0	33.	0.	0.	0.	PT	.00	.00	0	0	0	0	0	0	0	0		
OA4	.0	.0	.0	.0	.0	44.	0.	0.	0.	PT	.00	.00	0	0	0	0	0	0	0	0		
OA5	.0	.0	.0	.0	.0	29.	0.	0.	0.	PT	.00	.00	0	0	0	0	0	0	0	0		
ASH	.1	.2	.2	1.0	10.7	0.	12.	82.	6.	SI	.00	.00	0	0	0	0	0	0	0	0		

REMARKS: CACL2 PH'S AND PYROPHOSPHATE SOLUBILITY TEST RESULTS AVAILABLE.  
 ASSUME FRIGID AND AQUIC; NOTE ASH LAYER AT 40CM FROM SURFACE IS NOT TYPICAL.  
 COYNER, LEE/FNF-BN/IDAHO-LAB/PECK LAKE NOTE THIS IS A EUIC FAMILY NOT MEDIAL

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-12

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8116	TALLY LAKE	15-29N-25W		14-3	640	4500	1	W	20-30		0	

SOIL CLASSIFICATION: TYPIC HAPL AQUEPT COARSE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	D.M. %	D.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H				
O1	8- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.00	.00	.000	
A2G	0- 18	2.5Y6/2	2F PL	DCHRIC	6.5	6.1	.0	.19	8.6	2.3	.10	.4	.0	14.8	0.81	.47	.043
ABG	18- 27	2.5Y6/2	2C SBK	CAMBIC	7.0	.0	.0	.00	.0	.0	.00	.0	.0	.00	.00	.000	
B2	27- 45	2.5Y6/4	2C SBK	CAMBIC	7.5	7.0	.0	.13	4.1	.6	.10	.2	.0	7.5	0.25	.15	.020
C	45-152	2.5Y7/2	2M PL		8.0	7.3	.0	.16	4.2	.5	.10	.1	.0	5.5	0.11	.07	.017

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
O1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
A2G	11	.0	0	.00	.0	.0	0.	.40	.20	.20	.09	.00	.20	.20	.1	.0		.0	.0	.0
ABG	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2	7	.3	0	.00	.0	.0	0.	.20	.09	.20	.09	.00	.20	.10	.0	.0		.0	.0	.0
C	4	.1	0	.00	.0	.0	0.	.30	.09	.20	.09	.00	.30	.10	.0	.0		.0	.0	.0

HORIZON	VERY FINE SAND PERCENT					VERY FINE SAND	**** % TOTAL ****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	CDS. SAND	..... CDS. SAND	MED. SAND	FINE SAND	FINE SAND		C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
O1	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0				
A2G	.1	.1	.1	1.3	3.0	0.	5.	78.	17.	SIL	ML	.00	.00	0	0	0	0	0	0				
ABG	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0				
B2	.0	.0	.0	.4	3.3	0.	4.	85.	11.	SI	ML	.00	.00	0	0	0	0	0	0				
C	.0	.0	.0	.3	4.3	0.	5.	85.	10.	SI	ML	.00	.00	0	0	0	0	0	0				

REMARKS: MARTINSON, SIRUCEK/FNF/IDAHO LAB; SQUAW MEADOWS; ASSUMED FRIGID & UDIC.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-14-3

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7815	TALLY LAKE	1 -33N-24W	72	850	6900	50	W	60		0	LIMESTONE

SOIL CLASSIFICATION: ENTIC CRYD ANDEPT MEDIAL SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF X1000*	MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	
A1	0- 8	10YR3/1	1F GR	DCHRIC	5.5	4.8	.0	.00	2.1	.9	.04	.4	.0	.0	.00	.00	.000	
B21IR	10- 26	10YR5/6	1F GR	CAMBIC	7.0	5.7	.0	.00	1.8	.3	.05	.2	.0	24.6	.05	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		AVAILABLE IN PARTS/MILLION														AL	AL	FE	FE	CACQ3
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
A1	0	.0	0	.00	.0	.0	11.	.19	.14	.10	.13	.00	.99	.97	.0	.0		.0	.0	.0
B21IR	0	.0	0	.00	.0	.0	28.	.04	.04	.04	.03	.00	.68	.43	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA	UNIFIED	SOIL DENSITY	% OPTM.	PERCENT WATER (WT)					ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI
A1	.0	.0	.0	.0	.0	30.	0.	0.	0.			.00	.00	0	0	0	0	0	0			
B21IR	7.1	4.9	1.8	3.7	9.5	60.	27.	65.	8.	VGSIL	GM	.00	.00	0	42	0	0	13	0	ND	NP	NP

REMARKS: ASSUMED CRYIC AND UDIC CEC:15BAR=1.9:1 CLAY:BAR=.66:1  
SIRUCEK/STILLWATER S.F./IDAHO LAB/STRYKER RIDGE.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-72

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7814	TALLY LAKE	5 -32N-22W	57-B	830	6400	35	S	45		0	ARGILLITE-CACO3

SOIL CLASSIFICATION: ENTIC CRYO ANDEPT MEDIAL SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GEC*	GM* B.S. %	D.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
A1	0- 8	10YR3/1	1F GR	DCHRIC	7.0	5.0	8.8	.00	.0	.0	.00	.0	.0	.0	.0		11.16	.00	.000
B21IR	8- 51	10YR5/6	0 SG	CAMBIC	7.0	5.3	.0	.00	.2	.1	.04	.2	.0	17.1	*05	.00	.00	.000	
B22IR	51- 81	10YR5/4	0 SG	CAMBIC	6.5	5.1	.0	.00	.2	.2	.24	.1	.0	6.7	*10	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
A1	0	.0	0	.00	.0	.0	0	.25	.17	.05	.16	.00	1.02	.00	.0	.0		.0	.0	.0
B21IR	0	.0	0	.00	.0	.0	31	.11	.04	.07	.04	.00	.71	.71	.0	.0		.0	.0	.0
B22IR	0	.0	0	.00	.0	.0	9	.05	.02	.05	.01	.00	.36	.36	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL ****				USDA	UNIFIED	SOIL DENSITY	%	PERCENT WATER (WT)					ATTERBURG			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	OPTM. MOIST	1/3	2	4	15	AWC	LL	PL	PI
A1	.0	.0	.0	.0	.0	15	0	0	0			.00	.00	0	0	0	0	0	0	0	0	0
B21IR	7.9	9.6	4.2	5.9	6.2	60	34	55	10	VGSIL	GM	.00	.00	0	0	0	0	0	0	0	0	0
B22IR	6.3	10.1	5.3	8.2	5.9	75	36	50	14	EGSIL	GM	.00	.00	0	0	0	0	0	0	0	0	0

REMARKS: ASSUMED CRYIC AND UDIC AND HORIZONS MEET ANDEPT REQUIREMENTS SIRUCEK/STILLWATER S.F. /IDAHO LAB/WERNER PEAK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7408	SWAN LAKE	5 -13N-17W		670	6600	24	N	40-60		0	ARGILLITE-CAC03

SOIL CLASSIFICATION: LITHIC CRYO ANDEPT MEDIAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM*	B.S.	O.M.	O.C.	TOTAL
						PH	PH	X1000*	MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N
B2	0- 41	10YR6/4	1F CR	CAMBIC	6.0	5.4	0	.00	.4	.1	.10	.3	37.9	35.3	003	.00	30.50	70.024	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
B2	0	0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	1.0		1.5	.2	.0

HORIZON	VERY PERCENT					VERY					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	% OPTM. MOIST	PERCENT WATER (WT)				ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	**** C.F.	% TOTAL S	***** SI	***** C	***** BARS					*****	1/3	2	4	15	AWC	LL	PL
B2	8.2	3.2	3.7	6.5	13.3	25.	35.	62.	3.	CL	GM	.64	.00	.0	50	0	0	23	27			

REMARKS: ANDERSON-HARRISON/SCS-MISSOULA/CAL LAB/COEROCK SERIES.  
LOCATION - LOCKWOOD PT, MISSOULA COUNTY. SIMILAR TO LANDTYPE 57.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S-T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7602	HUNGRY HORSE	24-31N-19W	75	692	6400	45	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: LITHIC CRYO ANDEPT MEDIAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM*	B.S.	O.M.	O.C.	TOTAL
						PASTE PH	NAF PH	X1000*	MMOH	*CA	MG	NA	K	H	CEC*	%	%	%
B2	0-20	10YR6/4	1F CR	CAMBIC	6.5	6.9	.0	.00	1.0	.0	.00	.3	4.3	25.9	021	04.60	.00	.098

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SD4	DI-DC	PY-PH	DI-DC	PY-PH	
B2	27	11.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0

HORIZON	VERY COS. SAND	PERCENT			VERY FINE SAND	**** % TOTAL ****	USDA C	UNIFIED TEXTURE	SOIL DENSITY BULK	OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					AWC	ATTERBURG * LIMITS *		
		COS. SAND	MED. SAND	FINE SAND							1/3	2	4	15	5			14	
B2	.0	.0	.0	.0	.0	25.	59.	35.	6.	GSL	SM	.00	.00	0	20	0	0	5	14

REMARKS: MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-75



SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7818	TALLY LAKE	27-32N-22W	72	850	6350	65	W	45		0	ARGILLITE-CAC03

SOIL CLASSIFICATION: LITHIC CRYO ANDEPT MEDIAL SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	D.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*				
A1	0- 8	10YR3/2	1F GR	OCHRIC	7.0	5.5	.0	.00	3.9	.8	.04	.5	.0	.0	.00	.00	.000	
B2IR	8- 36	10YR5/4	1F SBK	CAMBIC	6.0	5.4	.0	.00	1.3	.3	.03	.2	.0	.0	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION							*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH		
A1	0	.0	0	.00	.0	.0	21.	.36	.12	.05	.14	.00	.79	.52	.0	.0		.0	.0	.0	
B2IR	0	.0	0	.00	.0	.0	44.	.06	.03	.02	.03	.00	.32	.32	.0	.0		.0	.0	.0	

HORIZON	VERY PERCENT					VERY				***** % TOTAL *****		USDA	UNIFIED	SOIL DENSITY	% OPTM.		***** PERCENT WATER (WT) *****				***** ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX	MOIST	1/3	2	4	15	AWC	LL	PL	PI	
A1	.0	.0	.0	.0	.0	20.	0.	0.	0.			.00	.00	0	0	0	0	0	0				
B2IR	.0	.0	.0	.0	.0	40.	0.	0.	0.			.00	.00	0	26	0	0	8	0				

REMARKS: ASSUME CRYIC AND UDIC  
SIRUCEK/STILLWATER S.F./IDAHO LAB/SMITH CREEK.  
NOTE BEDROCK AT 36 CMS

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC.  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S-T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7816	TALLY LAKE	1-33N-24W	72	850	6740	80	W	60		0	LIMESTONE

SOIL CLASSIFICATION: LITHIC CRYO ANDEPT MEDIAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMQH	*CA	MG	NA	K	H	CEC*				
A2	0- 13	10YR5/3	1F GR	OCHRIC	5.5	5.1	.0	.00	4.6	.8	.04	.4	.0	.0	.00	.00	.000	
B2IR	13- 43	10YR5/6	1F GR	CAMBIC	5.5	5.2	.0	.00	5.9	.2	.03	.2	.0	.0	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
A2	0	.0	0	.00	.0	.0	16.	.63	.20	.05	.26	.00	1.21	.00	.0	.0		.0	.0	.0
B2IR	0	.0	0	.00	.0	.0	23.	.06	.04	.03	.04	.00	.44	.44	.0	.0		.0	.0	.0

HORIZON	VERY FINE PERCENT					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0		
B2IR	7.9	8.5	4.2	6.1	2.9	30.	29.	55.	15.	GSIL	ML	.00	.00	0	29	0	0	8	0			

REMARKS: ASSUME CRYIC AND UDIC  
SIRUCEK/STILLWATER S.F./IDAHO LAB/STRYKER RIDGE.  
NOTE BEDROCK AT 43 CMS

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8107	SPOTTED BEAR	36-26N-15W	27-7	640	3660	1		30		0	

SOIL CLASSIFICATION: ANDIC EUTR OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S. %	D. M. %	D. C. %	TOTAL N
						PH	NAF X1000*	MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N
O1	2- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
A2	0- 2				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
B2IR	2- 20	75YR4/4	0 SG	CAMBIC	6.0	6.1	.0	.12	3.6	.4	.10	.4	.0	25.1	03.44	2.00	.118	
IIB2	20- 65	05YR4/4	1VQSBK	CAMBIC	8.0	7.0	.0	.25	5.9	1.3	.10	.3	.0	11.7	0.23	.14	.015	
IIC	65- 0	05YR4/4	0 SG		8.0	7.6	.0	.22	3.4	.4	.09	.1	.0	5.5	0.16	.09	.008	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %		
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	AL	AL		FE	FE
O1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
B2IR	17	.5	0	.00	.0	.0	0.	.30	.10	.20	.10	.00	.40	.30	.1	.0			.0	.0	.0
IIB2	9	1.7	0	.00	.0	.0	0.	.50	.10	.10	.09	.00	.90	.10	.1	.0			.0	.0	4.1
IIC	11	1.9	0	.00	.0	.0	0.	.40	.10	.10	.09	.00	.60	.10	.1	.0			.0	.0	14.5

HORIZON	VERY FINE PERCENT					VERY FINE				***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C	SIL	ML	GP	GP	1/3	2	4	15	AWC	LL	PL	PI				
O1	.0	.0	.0	.0	.0	0.	0.	0.	0.				.00	.00	0	0	0	0	0	0	0	0			
A2	.0	.0	.0	.0	.0	0.	0.	0.	0.				.00	.00	0	0	0	0	0	0	0	0			
B2IR	.3	.7	1.1	2.8	13.0	2.	18.	77.	5.	SIL	ML	GP	.00	.00	0	0	0	0	0	0	0				
IIB2	10.3	25.0	18.4	10.9	3.5	75.	68.	8.	24.	EGSCL	GP	GP	.00	.00	0	0	0	0	0	0	0				
IIC	9.4	19.1	21.6	16.8	8.0	90.	75.	15.	10.	EGQSL	GP	GP	.00	.00	0	0	0	0	0	0	0				

REMARKS: SIRUCEK, MURPHY/FNF/IDAHO LAB; SPOTTED BEAR AIRPORT; ASSUMED FRIGID & UDIC.  
NOTE NO ANDIC EUTROCHREPT CLASSIFICATION; HOWEVER 14% CAC03 IN C HORIZON.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-27-7

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7917	TALLY LAKE	9	-29N-25W		640	4600	9	SE	25		0	QUARTZITE

SOIL CLASSIFICATION: ANDIC DYSTRIC EUTR OCHREPT MEDIAL OVER LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC					MEG/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K						H
B2IR	4- 20	10YR4/4	2M SBK	CAMBIC	6.5	5.2	.0	.12	2.2	.5	.11	.4	15.0	18.3	018	04.00	2.30	.000
IIA21	20- 35	75YR4/6	5M SBK		4.5	6.5	.0	.07	1.8	.7	.12	.1	3.0	5.7	047	0.60	.30	.000
IIA22	35- 80	75YR4/6	2M SBK		4.5	6.0	.0	.03	1.7	.7	.06	.1	2.2	4.8	055	0.40	.20	.000
IIA&B	80-130	25YR5/4	2M SBK	CAMBIC	6.0	6.4	.0	.03	2.3	.8	.10	.1	2.2	5.4	060	0.50	.30	.000
IIC1	130-200	10YR5/4	2M SBK		7.5	6.9	.0	.06	2.5	.9	.10	.1	4.9	8.5	043	0.50	.30	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE		FE
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIA21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIA22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIA&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIC1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0

HORIZON	VERY COARSE SAND					PERCENT FINE SAND				VERY FINE SAND				***** % TOTAL *****				USDA TEXTURE		UNIFIED CLASS		SOIL DENSITY		% OPTM. MOIST		PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	1/3	2	4	15	AWC	LL	PL	PI												
B2IR	.0	.0	.0	.0	.0	5.	28.	62.	10.	SIL	ML	.72	1.35	24	34	0	0	19	0	ND	NP	NP											
IIA21	.0	.0	.0	.0	.0	20.	18.	72.	10.	GSIL	ML	1.74	1.99	13	27	0	0	8	0	ND	NP	NP											
IIA22	.0	.0	.0	.0	.0	20.	30.	67.	3.	GSIL	ML	1.89	2.00	12	50	0	0	4	0	ND	NP	NP											
IIA&B	.0	.0	.0	.0	.0	35.	20.	76.	4.	GSIL	ML	1.68	2.00	9	35	0	0	4	0	ND	NP	NP											
IIC1	.0	.0	.0	.0	.0	20.	26.	70.	4.	GSIL	ML	1.62	1.96	12	36	0	0	5	0	21	24	02											

REMARKS: BULK DENSITY BY PED METHOD.  
 CLAYS: B2IR, AMORPHOUS-HIGH. THIS IS A 14-2/26D COMPLEX AREA.  
 CULLEN/COMPACTION STUDY/MSU-LAB SQUAW MEADOWS.  
 LACUSTRINE INFLUENCED TILL SIMILAR TO 26C SOIL

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7908	SWAN LAKE	16-19N	16W	26D-7	640	4200	10	SW	30		0	QUARTZITE

SOIL CLASSIFICATION: ANDIC DYSTRIC EUTR OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H				
A2	0- 3	75YR5/4	1F GR	OCHRIC	.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000
B2IR	3- 33	75YR4/4	1F SBK	CAMBIC	6.3	5.0	8.0	.19	2.9	1.2	.00	.3	7.1	12.9	038	01.93	1.12
IIA2	33- 36	75YR4/4	1F SBK		6.1	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000
IIB2	36- 60	75YR5/4	2M SBK	CAMBIC	6.0	5.9	7.9	.07	2.0	1.0	.00	.2	1.7	4.5	065	0.86	.14
IIC	60-152	75YR5/4	0 MAS		6.0	5.7	7.9	.11	2.5	1.1	.00	.1	1.2	4.5	076	0.22	.13

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2IR	17	5.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.5	.0	.0
IIA2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2	10	2.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC	16	1.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					VERY				***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	1/3	2	4						15	AWC	LL	PL	PI			
A2	.0	.0	.0	.0	.0	10.	0.	0.	0.				.00	.00	0	0	0	0	0	0					
B2IR	2.4	3.0	1.7	3.4	6.5	15.	17.	72.	11.	GSIL	ML	.00	.00	0	32	18	13	8	24						
IIA2	.0	.0	.0	.0	.0	20.	0.	0.	0.			.00	.00	0	0	0	0	0	0						
IIB2	2.7	5.4	4.8	10.6	16.0	35.	40.	57.	3.	GSIL	GM	.00	.00	0	16	5	4	2	10	ND	NP	NP			
IIC	5.8	7.8	5.1	12.5	14.5	40.	46.	51.	3.	VGSIL	GM	.00	.00	0	15	6	4	3	12	ND	NP	NP			

REMARKS: ASSUME FRIGID AND UDIC; MEETS FIELD ANDIC CRITERIA DONT MEET ANDIC-DYSTRIC  
 COYNER/FNF-BN/IDAHO-LAB/DWL CREEK LOOP.  
 FIELD TEXTURE INDICATES GVFSL TO GFSL, (COARSE SILT ALSO NOTED)

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-26D

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7918	TALLY LAKE	9 -29N-25W		640	4784	15	NE	25		0	QUARTZITE

SOIL CLASSIFICATION: ANDIC DYSTRIC EUTR OCHREPT MEDIAL OVER LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC					MEG/100 GM* CEC*	B.S. %	O.M. %	O.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOM	EXCHANGEABLE *CA	MG	NA	K						H
A2	0- 3	10YR3/2	1F SBK	OCHRIC	5.0	5.2	.0	.25	6.3	1.1	.01	.4	9.2	17.2	046	06.60	3.80	.000
B2IR	3- 15	10YR4/4	2F SBK	CAMBIC	6.0	6.8	.0	.05	.7	.2	.01	.3	18.8	20.0	006	04.90	2.80	.000
IIA21	15- 40	25YR6/4	2F SBK		4.5	6.8	.0	.03	1.2	1.0	.01	.1	4.3	6.7	035	01.40	.80	.000
IIA22	40- 53	25YR6/4	2F SBK		4.5	6.7	.0	.02	.9	.5	.01	.1	4.4	6.1	027	0.70	.40	.000
IIA&B	53- 92	05YR5/4	1VFSBK	CAMBIC	6.3	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.00	.000
IIC1	92-148	75YR7/3	1F G		6.5	6.8	.0	.02	1.8	.5	.01	.1	2.1	4.6	055	0.50	.30	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SD4	DI-DC	AL	AL	FE		FE			
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0	.0
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0	.0
IIA21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0	.0
IIA22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0	.0
IIA&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0	.0
IIC1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0					.0	.0	.0	.0

HORIZON	VERY COS. SAND		PERCENT SAND			VERY FINE SAND			***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
			MED.	FINE	FINE	C.F.	S	SI	C	BULK	MAX.			1/3	2		4	15	AWC	LL	PL	PI		
A2	.0	.0	.0	.0	.0	5.	19.	75.	6.	SIL	ML	.00	.00	0	0	0	0	19	0					
B2IR	.0	.0	.0	.0	.0	10.	29.	65.	6.	SIL	ML	.75	1.35	30	37	0	0	19	0		NP	NP		
IIA21	.0	.0	.0	.0	.0	10.	12.	62.	26.	SIL	ML	1.81	1.80	14	23	0	0	19	0	29	25	04		
IIA22	.0	.0	.0	.0	.0	10.	11.	80.	9.	SIL	ML	1.80	1.89	15	20	0	0	8	0		NP	NP		
IIA&B	.0	.0	.0	.0	.0	80.	0.	0.	0.			1.86	.00	0	42	0	0	0	0					
IIC1	.0	.0	.0	.0	.0	80.	57.	41.	2.	EGSIL	GP	1.82	.00	0	37	0	0	3	0	NP	NP	NP		

REMARKS: CLAYS: A2, AMORP-HIGH, KAOL&ILL-LOW; B2IR, AMORP-HIGH; IIC1, ILL-HIGH, KAOL&SMC-LO  
 BULK DENSITY BY PED METHOD.  
 LACUSTRINE OVER REWORKED TILL SOIL SOMEWHAT SIMILAR TO I AND TYPE 26C SOIL  
 CULLEN/COMPACTION STUDY/MSU-LAB SQUAW MEADOWS.

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7916	TALLY LAKE	16-29N	25W	26C-7	640	4600	9	SE	25		0	QUARTZITE

SOIL CLASSIFICATION: ANDIC DYSTRIC EUTR OCHREPT MEDIAL OVER LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC							MEG/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
B2IR	0-20	10YR4/4	2M SBK	CAMBIC	4.5	5.5	.0	.10	2.4	1.1	.10	.3	10.9	14.8	026	02.70	1.60	.000	
IIA21	20-35	05YR6/4	1F SBK		6.3	5.5	.0	.04	1.0	.3	.17	.1	2.1	3.7	043	0.80	.50	.000	
IIA22	35-70	05YR6/4	1F SBK		6.3	6.0	.0	.03	1.3	.5	.06	.1	.8	2.8	070	0.50	.30	.000	
IIA&B	70-113	25YR4/3	2M SBK	ARGILLIC	7.0	6.9	.0	.03	3.0	1.4	.10	.2	3.0	7.8	061	0.50	.30	.000	
IIC1	113-150	75YR5/3	3C SBK		8.0	7.1	.0	.04	1.7	.4	.10	.1	3.7	6.1	039	0.70	.40	.000	

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
	C-N RATIO	P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *			
	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	20.	11.	76.	13.	GSIL	ML	.79	1.56	24	49	0	0	13	0	ND	NP	NP
IIA21	.0	.0	.0	.0	.0	20.	15.	79.	6.	GSIL	ML	1.66	1.97	11	30	0	0	5	0	ND	NP	NP
IIA22	.0	.0	.0	.0	.0	35.	20.	76.	4.	GSIL	GM	1.90	1.99	10	22	0	0	9	0	ND	NP	NP
IIA&B	.0	.0	.0	.0	.0	35.	20.	64.	16.	GSIL	GM	1.95	2.24	10	15	0	0	8	0	ND	NP	NP
IIC1	.0	.0	.0	.0	.0	35.	19.	71.	10.	GSIL	GM	1.72	2.07	11	16	0	0	10	0	17	18	02

REMARKS: LACUSTRINE INFLUENCED TILL SIMILAR TO 26C SOIL  
 CLAYS: IIC1, ILL. -HIGH, KAOL. &VERMIC. -TRACE; B2IR; AMORP. HIGH, KAOL. &ILL. -TRACE  
 BULK DENSITY BY PED METHOD.  
 CULLEN/COMPACTION STUDY/MSU-LAB SQUAW MEADOWS.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7915	TALLY LAKE	16-29N-25W		640	4600	9	SE	25		0	QUARTZITE

SOIL CLASSIFICATION: DYSTRIC EUTR OCHREPT MEDIAL OVER LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC							MEQ/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
B2IR	0-29	10YR3/4	2M SBK	CAMBIC	4.7	6.7	.0	.07	2.9	1.2	.09	.5	13.6	18.3	026	03.60	2.10	.000	
IIA21	29-40	05YR6/4	1F SBK		4.5	6.6	.0	.02	.6	.2	.05	.1	1.3	2.2	039	0.40	.20	.000	
IIA22	40-69	05YR6/4	1F SBK		4.5	6.9	.0	.02	.6	.1	.03	.1	1.3	2.2	040	0.40	.20	.000	
IIA&B	69-116	05YR5/3	2M SBK	ARGILLIC	5.5	6.6	.0	.03	2.0	.7	.05	.1	2.3	5.2	056	0.10	.10	.000	
IIC1	116-163	10YR5/2	2M SBK		7.0	6.8	.0	.02	1.7	.5	.08	.1	1.8	4.1	056	0.20	.10	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY COS. SAND		PERCENT MED. SAND		VERY FINE SAND		**** % TOTAL ****			USDA TEXTURE	UNIFIED CLASS	SOIL BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *				
							C. F.	S	SI						C	1/3	2	4	15	AWC	LL	PL	PI
B2IR	.0	.0	.0	.0	.0	.0	25.	19.	66.	15.	GSIL	ML	1.66	1.63	19	33	0	0	15	0	ND	NP	NP
IIA21	.0	.0	.0	.0	.0	.0	15.	30.	67.	3.	GSIL	ML	1.64	1.98	11	25	0	0	3	0	ND	NP	NP
IIA22	.0	.0	.0	.0	.0	.0	15.	28.	71.	1.	GSIL	ML	1.86	2.06	10	22	0	0	3	0	ND	NP	NP
IIA&B	.0	.0	.0	.0	.0	.0	15.	27.	67.	6.	GSIL	ML	1.65	1.96	11	21	0	0	6	0	ND	NP	NP
IIC1	.0	.0	.0	.0	.0	.0	15.	26.	70.	4.	GSIL	ML	1.87	2.04	9	19	0	0	7	0	ND	NP	NP

REMARKS: NOTE CHANGE OF CLASSIF DUE TO ARGILLIC  
 CLAYS: B2IR, AMORPHOUS-HIGH.  
 BULK DENSITY BY PED METHOD  
 CULLEN/COMPACTION STUDY/MSU-LAB SQUAW MEADOWS.  
 LACUSTRINE INFLUENCED TILL SIMILAR TO LANDTYPE 26C SOIL

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7912	SWAN LAKE	25-21N-17W	28-1	640	3660	1		30		0	MIXED

SOIL CLASSIFICATION: DYSTRIC EUTR OCHREPT SANDY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	D.M. %	D.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					CEC*
A2	0- 1				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
B2IR	1- 29	75YR4/4	1F SBK	OCHRIC	6.8	6.3	8.2	.32	8.2	2.0	.10	.3	7.2	22.0	060	03.11	1.81	.104
IIB2	29- 39	10YR5/4	2F SBK	CAMBIC	6.5	6.2	8.0	.24	5.0	1.4	.00	.2	3.5	12.2	065	0.99	.58	.050
IIB3	39- 57	10YR5/4	1F SBK	CAMBIC	6.5	6.3	7.9	.15	4.0	1.1	.00	.1	2.1	8.9	072	0.53	.31	.025
IIC	57-152	10YR5/4	0 SG		6.5	6.7	7.9	.13	3.2	1.0	.00	.1	1.7	6.4	072	0.20	.12	.015

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **							***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CAC03 %	
	C-N RATIO	AVAILABLE IN PARTS/MILLION					SD4	CA	MG	NA	K	CO3	HC03	CL	SD4	DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
A2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
B2IR	17	7.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	1.5	.0			.9	.0	.0
IIB2	12	3.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIB3	12	3.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIC	8	1.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	20.	0.	0.	0.	OSIL	ML	.00	.00	0	0	0	0	0	0			
B2IR	5.1	5.4	3.9	4.5	4.4	30.	24.	57.	19.	VGL	GM	.00	.00	0	31	20	17	14	17			
IIB2	8.0	8.6	7.4	7.4	4.3	45.	36.	49.	15.	VGL	GM	.00	.00	0	22	15	12	9	13			
IIB3	28.6	17.4	11.7	9.7	4.5	65.	72.	22.	6.	EGCSL	GW	.00	.00	0	12	8	7	6	5			
IIC	42.2	30.8	6.8	3.0	1.7	75.	84.	13.	3.	EGLCS	GW	.00	.00	0	8	5	5	4	4	ND	NP	NP

REMARKS: ASSUME FRIGID AND UDIC, ASSUME ASH SURFACE IS CONTAMINATED EVEN WITH COLOR  
COYNER/FNF-BN/IDAHO-LAB CONDON AIRPORT.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7810	TALLY LAKE	13	32N-24W	28-1	640	3240	2		30		0	

SOIL CLASSIFICATION: DYSTRIC EUTR OCHREPT SANDY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S.	O. M.	O. C.	TOTAL N
						PH	NAF	X1000*	*CA	MG	NA	K	H	CEC*	%	%	%	N
A2	0- 8	10YR3/2	1F GR	DCHRIC	5.5	5.9	9.5	.00	.0	.0	.00	.0	.0	.0	.00	.00	.00	.000
B2IR	8- 16	10YR4/4	1F SBK	CAMBIC	7.0	6.3	.0	.00	2.8	.5	.03	.6	.0	15.4	*26	*1.89	.00	.093
IIB22	48- 79	10YR6/3	1F SBK	CAMBIC	7.0	5.7	.0	.00	6.6	1.2	.04	.2	.0	11.7	*69	*.75	.00	.039
IIC	48-205	10YR6/3	0 SG		8.0	6.7	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	CAC03
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
A2	0	.0	100	4.15	6.0	66.0	0.	.40	.16	.20	.18	.00	.77	.46	.0	.0		.0	.0	.0
B2IR	0	3.5	40	.16	4.0	3.6	9.	.24	.06	.20	.07	.00	.56	.66	.0	.0		.0	.0	.0
IIB22	0	1.8	45	.46	10.0	18.0	0.	.24	.05	.10	.02	.00	.24	.25	.0	.0		.0	.0	.0
IIC	0	.0	0	.00	.0	.0	0.	.30	.04	.09	.01	.00	.43	.31	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA	UNIFIED	SOIL DENSITY		%	PERCENT WATER (WT)					ATTERBURG			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	OPTM. MOIST	***** BARS *****	1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0			
B2IR	7.5	6.5	2.3	4.3	7.9	10.	28.	65.	6.	SIL	ML	.00	.00	0	42	0	0	16	0				
IIB22	11.9	12.1	4.6	8.9	9.2	80.	47.	46.	7.	EGL	GW	.00	.00	0	20	0	0	9	0				
IIC	34.7	24.1	6.3	7.4	5.0	90.	77.	19.	3.	EGLCS	GW	.00	.00	0	0	0	0	0	0				

REMARKS: ASSUMED FRIGID AND UDIC  
SIRUCEK/STILLWATER S.F./IDAHO LAB/STILLWATER BENCH.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

L7-28

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7608	HUNGRY HORSE	2	-30N-19W	27-7	620	3650	30	W	40		0	MIXED

SOIL CLASSIFICATION: DYSTRIC EUTR OCHREPT LOAMY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N	
						PH	PH	X1000* MMQH	*CA	MG	NA	K	H					CEC*
B21	0-13	10YR4/3	2F CR	OCHRIC	6.5	.0	.0	.00	9.9	.0	.00	.6	3.2	18.7	077	02.10	.00	.098
B22	13-25	10YR5/6	1F CR		6.0	.0	.0	.00	6.4	.0	.00	.4	4.6	26.9	060	01.70	.00	.082
IIB2	25-102	10YR7/2	1F SBK	CAMBIC	6.3	.0	.0	.00	4.1	.0	.00	.4	.4	6.9	092	0.20	.00	.010
IIIC1	102-152	10YR7/4	0 MAS		7.0	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****					
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	CACD3	
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CD3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%	
B21	12	26.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0
B22	12	24.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0
IIB2	12	.9	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0
IIIC1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL ****				USDA	UNIFIED	SOIL DENSITY	%	PERCENT WATER (WT)				ATTERBURG				
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	OPTM. MOIST	1/3	2	4	15	AWC	LL	PL	PI
B21	.0	.0	.0	.0	.0	20.	47.	34.	18.	GL	ML	.00	.00	0	31	0	0	6	25			
B22	.0	.0	.0	.0	.0	20.	58.	35.	7.	GCSL	ML	.00	.00	0	27	0	0	7	20			
IIB2	.0	.0	.0	.0	.0	60.	79.	11.	10.	VGSL	GW	.00	.00	0	16	0	0	4	12			
IIIC1	.0	.0	.0	.0	.0	60.	0.	0.	0.			.00	.00	0	0	0	0	0	0			

REMARKS: MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7801	TALLY LAKE	34-32N-23W	14-2	470	3160	20	E	30		0	

SOIL CLASSIFICATION: TYPIC EUTR OCHREPT COARSE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	EXCHANGEABLE *CA	MG	NA	K	H				
A2	0- 10	10YR6/4	1FNPL	OCHRIC	7.0	6.8	.0	.00	7.3	1.4	.04	.3	.0	.0	*1.44	.00	.050
B2	10- 26	10YR5/4	2M ABK	CAMBIC	7.5	7.2	.0	.00	10.9	.7	.08	.9	.0	8.1	*97	*1.70	.040
C1CA	26- 66	10YR6/3	1VCPL	CALCIC	8.0	7.6	.0	.00	9.5	.5	.03	.0	.0	4.6	*97	*1.08	.025

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							***** SESQUIOXIDS (%) *****						
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DJ-DC	AL	AL	FE	FE	CACO3
A2	0	.0	36	.30	10.0	11.1	0.	.36	.09	.12	.03	.00	.50	.41	.0	.0			.0	.0	.0
B2	0	7.0	17	.24	10.0	6.6	4.	.66	.09	.24	.01	.12	.88	.45	.0	.0			.0	.0	.0
C1CA	0	6.0	10	.24	4.0	5.3	0.	.43	.08	.16	.01	.00	.84	.41	.0	.0			.0	.0	.0

HORIZON	VERY PERCENT					C.F.	***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	OPTM. MOIST	PERCENT WATER (WT)				***** BARS *****			***** ATTERBURG # LIMITS *****				
	COB. SAND	COB. SAND	MED. SAND	FINE SAND	FINE SAND		S	SI	C						1/3	2	4	15	AWC	LL	PL	PI				
A2	.7	.9	.3	.7	.7	0.	3.	74.	23.	SIL	ML	.00	.00	0	30	0	0	18	0							
B2	.1	.1	.0	.1	1.0	0.	1.	83.	16.	SIL	ML	.00	.00	0	36	0	0	14	0	32	26	06				
C1CA	.1	.1	.0	.2	3.6	0.	4.	89.	7.	SI	ML	.00	.00	0	33	0	0	7	0	26	24	02				

REMARKS: ASSUME FRIGID AND UDIC  
SIRUCEK/STILLWATER S.F./IDAHO LAB/STILLWATER BENCH.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7824	SWAN LAKE	28-25N-18W		523	3280	36	E	30		0	LIMESTONE

SOIL CLASSIFICATION: TYPIC EUTR OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B. S. %	O. M. %	O. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H						
B2IR	2- 20	75YR4/4	1F GR	CAMBIC	6.2	5.9	.0	.20	4.7	1.4	.10	.5	.0	22.1	*30	02.40	1.40	.086	
IIA2	20- 41	10YR6/3	2M SBK		7.0	6.8	.0	.22	11.6	2.3	.10	.3	.0	19.3	*74	0.68	.39	.037	
IIA&B	41- 53	10YR6/4	2M SBK		7.4	7.2	.0	.31	11.9	1.8	.10	.3	.0	20.4	*69	0.83	.48	.036	
IIB2	53- 91	25YR4/2	2M SBK	ARGILLIC	7.6	7.7	.0	.32	6.8	.9	.00	.2	.0	11.6	*68	0.53	.31	.024	
IICCA	91- 0	25YR5/4	0 MAS		8.0	7.8	.0	.36	4.8	.4	.00	.2	.0	9.0	*60	0.53	.31	.030	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION							***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****					CAC03 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH		
B2IR	6	2.1	0	.00	.0	.0	0.	.70	.30	.20	.10	.00	.60	.20	.5	.0		.0	.0	.0	
IIA2	11	.8	0	.00	.0	.0	0.	.70	.20	.10	.00	.00	.70	.10	.5	.0		.0	.0	.0	
IIA&B	13	2.9	0	.00	.0	.0	0.	1.10	.30	.10	.10	.00	1.10	.10	.5	.0		.0	.0	.0	
IIB2	13	4.4	0	.00	.0	.0	0.	1.10	.30	.10	.10	.00	1.20	.10	.5	.0		.0	.0	3.1	
IICCA	10	4.6	0	.00	.0	.0	0.	.90	.20	.10	.10	.00	1.20	.10	.5	.0		.0	.0	12.8	

HORIZON	VERY FINE SAND PERCENT					**** % TOTAL C.F.	S	SI	C	USDA TEXTURE	UNIFIED CLASS	SOIL BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	MED. SAND	FINE SAND	VERY FINE SAND	1/3										2	4	15	AWC	LL	PL	PI	
B2IR	7.0	8.6	4.7	6.2	11.1	15.	38.	58.	5.	GSIL	ML	.00	.00	0	36	0	0	10	26	ND	NP	NP
IIA2	3.1	2.8	1.9	6.0	7.0	15.	21.	58.	21.	GSIL	ML	.00	.00	0	27	0	0	9	17	26	NP	NP
IIA&B	4.3	3.7	1.9	3.2	5.2	20.	18.	60.	22.	GSIL	ML	.00	.00	0	30	0	0	10	20	33	NP	NP
IIB2	10.2	9.5	4.2	5.2	5.2	35.	34.	50.	16.	GSIL	GM	.00	.00	0	27	0	0	7	20	26	NP	NP
IICCA	6.9	7.9	4.4	5.9	5.6	40.	31.	49.	20.	VGL	GM	.00	.00	0	24	0	0	6	18	26	NP	NP

REMARKS: BATES/LIM/IDAHO-LAB/GOOD CREEK. SIMILAR TO LANDTYPE 26A.  
NOTE ASH SURFACE MEETS CRITERIA FOR ANDEPTIC ONLY NO SUBGROUP.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7911	SWAN LAKE	35-25N-17W	2B-1	640	3100	0		30		0	MIXED

SOIL CLASSIFICATION: TYPIC EUTR OCHREPT LOAMY SKELETAL CARBONITIC

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT PASTE		EC		EXCHANGEABLE CATIONS				MEQ/100 GM*	B.S.	O.M.	O.C.	TOTAL N
						PH	PH	NAF X1000*	MMOH	*CA	MG	NA	K	H	CEC*	%	%	%
A2	0- 2				6.2	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000
B2IR	2- 31	10YR5/4	1F SBK	CAMBIC	5.9	5.2	7.9	.20	3.2	1.0	.00	.1	5.0	9.5	046	01.80	1.05	.049
IIA2	31- 38	10YR5/5	1F SBK		6.5	6.2	7.9	.20	3.2	.8	.00	.0	2.6	8.2	061	0.70	.41	.028
IIB2	38- 49	10YR4/4	1F SBK	CAMBIC	7.0	7.5	.0	.30	3.3	.3	.00	.1	.0	8.8	*42	0.93	.54	.039
IICCA	49- 0	10YR4/4		CALCIC	8.0	8.1	.0	.20	1.9	.2	.10	.0	.0	3.9	*56	0.28	.16	.013

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) *****					CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH		
A2	.0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	
B2IR	21	4.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	
IIA2	15	1.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	
IIB2	14	3.3	0	.00	.0	.0	0.	1.40	.30	.00	.00	.00	1.20	.00	.1	.0		.0	.0	14.9	
IICCA	12	1.9	0	.00	.0	.0	0.	.90	.10	.00	.00	.00	.90	.40	.1	.0		.0	.0	44.8	

HORIZON	VERY COARSE PERCENT					VERY FINE				**** % TOTAL ****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI			
A2	.0	.0	.0	.0	.0	20.	0.	0.	0.			.00	.00	0	0	0	0	0	0						
B2IR	9.1	7.7	3.2	4.2	7.8	50.	32.	60.	8.	VGSIL	GM	.00	.00	0	16	12	9	10	7						
IIA2	17.9	14.1	4.9	4.2	6.7	75.	48.	46.	6.	EGCSL	GW	.00	.00	0	16	10	8	8	8						
IIB2	28.7	20.5	5.9	3.7	3.8	75.	63.	32.	5.	EGCSL	GW	.00	.00	0	9	9	8	8	1	ND	NP	NP			
IICCA	27.7	22.7	10.1	6.7	4.7	90.	72.	25.	3.	EGCSL	GW	.00	.00	0	23	7	5	5	18						

REMARKS: ASSUME FRIGID AND UDIC; ASSUME ASH SURFACE IS CONTAMINATED  
COYNER/FNF-BN/IDAHO LAB/PORCUPINE FLATS.

FOOTNOTE: Z B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: Z O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: Z COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7607	HUNGRY HORSE	36-31N-19W		620	6450	60	S	40		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
B2	1- 28	10YR5/3	1F CR	CAMBIC	6.5	6.5	.0	.00	12.1	.0	.00	1.8	2.9	24.4	083	02.50	.00	.104
IIB&A	28- 68	10YR5/3	1F CR	CAMBIC	6.0	6.5	.0	.00	8.5	.0	.00	.4	1.1	11.3	087	01.00	.00	.032
IIBCA	68-119	10YR6/3	2M SBK		8.0	8.0	.0	.00	.0	.0	.00	.1	.0	6.9		0.50	.00	.039

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2	14	43.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB&A	13	12.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIBCA	7	9.8	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MDIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						***** BARS *****	1/3	2	4	15	AWC	LL	PL
B2	.0	.0	.0	.0	.0	30.	51.	40.	9.	CL	ML	.00	.00	0	31	0	0	11	20			
IIB&A	.0	.0	.0	.0	.0	60.	52.	35.	13.	VGL	GM	.00	.00	0	21	0	0	14	7			
IIBCA	.0	.0	.0	.0	.0	30.	51.	38.	11.	GSICL	ML	.00	.00	0	21	0	0	4	17			

REMARKS: THIS SITE SIMILAR TO LANDTYPE 73M.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-73

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7606	HUNGRY HORSE	36-31N-19W		620	4500	60	S	40		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYO DCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S.	D. M.	D. C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N
B2	1- 30	10YR6/2	1F CR	CAMBIC	7.0	6.5	.0	.00	8.1	.0	.00	.6	1.4	13.3	086	01.30	.00	.056
IIA&B	30- 66	10YR5/4	1F SBK		8.0	7.2	.0	.00	.0	.0	.00	.4	.0	20.6		01.40	.00	.064
IIBCA	66- 86	10YR6/2	1F SBK	CAMBIC	8.0	7.7	.0	7.00	.0	.0	.00	.1	.0	11.4		01.00	.00	.073

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
B2	13	17.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	13	8.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIBCA	13	5.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY ... PERCENT ... VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL BULK	DENSITY MAX.	OPTM. MOIST	***** PERCENT WATER (WT) *****				***** ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL
B2	.0	.0	.0	.0	.0	20.	34.	48.	17.	GL	ML	.00	.00	0	27	0	0	12	15		
IIA&B	.0	.0	.0	.0	.0	20.	32.	50.	16.	GSIL	ML	.00	1.11	0	31	0	0	13	18		
IIBCA	.0	.0	.0	.0	.0	40.	26.	61.	13.	VGSIL	GM	.00	.00	0	31	0	0	8	23		

REMARKS: THIS SITE IS SIMILAR TO LANDTYPE 73M.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

- FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7403	SWAN LAKE	18	18N-15W		692	4210	12	E	25-35		0	ARGILLITE

SOIL CLASSIFICATION: ANDIC                      CRYO      OCHREPT      LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*				
B2	3- 25	75YR6/4	1F GR	CAMBIC	5.8	5.6	.0	.00	1.8	.3	.01	.2	8.5	8.3	022	.00	1.06	.066
IIA2B	25- 66	05YR7/3	0 MAS		6.4	6.2	.0	.00	1.3	.3	.01	.1	.3	3.9	085	.00	.13	.014
IIA&BB	66-122	05YR6/3	0 MAS	CAMBIC	6.8	6.9	.0	.00	3.2	1.9	.10	.1	.3	6.1	095	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	CACO3 %
B2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.2			.6	.1	.0
IIA2B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1			.3	.0	.0
IIA&BB	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1			.3	.0	.0

HORIZON	VERY COARSE SAND		PERCENT MED. SAND		VERY FINE SAND		**** % TOTAL ****			USDA TEXTURE	UNIFIED CLASS	SOIL BULK DENSITY	DENSITY MAX.	OPTM. MOIST	***** PERCENT WATER (WT) *****					***** ATTERBURG * LIMITS * *****		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C					1/3	2	4	15	AWC	LL	PL	PI	
B2	12.4	10.5	4.0	24.3	6.4	25.	58.	37.	4.	GL	ML	1.19	.00	0	24	0	0	5	19			
IIA2B	11.3	9.5	8.8	17.3	20.7	55.	68.	28.	4.	VGFSL	GM	.00	.00	0	0	0	0	1	0			
IIA&BB	9.6	5.5	5.8	15.9	22.0	60.	59.	31.	10.	VGFSL	GM	.00	.00	0	0	0	0	3	0			

REMARKS: SECOND B DENOTES BURIED HORIZON; LOCATION-LAKE ALVA AREA  
ANDERSON-HARRISON-MURRY / MISSOULA CO./CAL LAB/HOLLOWAY SERIES.  
SIMILAR TO LANDTYPE 57.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7406	SWAN LAKE	3 -12N-17W		692	5400	35	N	25-35		0	ARGILLITE-CAC03

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S.	D. M.	D. C.	TOTAL
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N
B2	0- 20	10YR6/4	1F GR	CAMBIC	6.2	5.7	.0	.00	2.6	.8	.10	.5	14.3	15.1	022	.00	1.81	.092
IIA2B	20- 41	10YR6/4	0 MAS		6.4	5.9	.0	.00	2.1	.7	.01	.2	1.2	3.9	072	.00	.37	.018
IIA&BB	41-152	25YR6/2	0 MAS		6.4	5.7	.0	.00	1.4	.3	.01	.1	.3	2.8	088	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.3		.8	.1	.0
IIA2B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1		.4	.0	.0
IIA&BB	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.4	.0	.0

HORIZON	VERY PERCENT					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C. F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2	9.7	4.3	4.9	19.0	15.9	30.	54.	42.	4.	GL	ML	.80	.00	0	24	0	0	8	16			
IIA2B	14.1	7.2	8.9	24.7	17.4	60.	72.	23.	4.	VGSL	GM	.00	.00	0	0	0	0	2	0			
IIA&BB	12.2	7.7	10.1	30.4	16.4	70.	77.	19.	4.	EGSL	GW	.00	.00	0	0	0	0	1	0			

REMARKS: LOCATION - DONOVAN CREEK, CLEARWATER SURVEY AREA.  
 SECOND B DENOTES BURIED HORIZON  
 SIMILAR TO LANDTYPE 57-8.  
 ANDERSON-HARRISON/MISSOULA CO. SCS/CAL LAB/HOLLOWAY SERIES.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % D. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7812	TALLY LAKE	25-35N-25W		57-8	850	6580	38	S	70		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT MEDIAL SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC							D.M. %	O.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMDH	EXCHANGEABLE *CA MG	NA	K	H	MEG/100 GM* CEC*	B.S. %				
A2	0- 5	10YR5/3	1F GR	OCHRIC	5.0	4.5	7.9	.00	.0	.0	.00	.0	.0	.0		4.78	.00	.000
B2IR	5- 25	75YR4/4	1F GR	CAMBIC	5.5	5.8	.0	.00	1.7	.3	.04	.2	.0	17.5	*10	.00	.00	.000
B3	25- 46	10YR6/4	1F SBK	CAMBIC	8.0	5.8	.0	.00	1.5	.5	.05	.1	.0	8.8	*24	.00	.00	.000
C	46- 56	10YR6/4	0 SG		8.0	5.5	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****					
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	CaCO3 %
A2	0	.0	0	.00	.0	.0	0.	.18	.15	.06	.05	.00	.42	.42	.0	.0		.0	.0	.0
B2IR	0	.0	0	.00	.0	.0	23.	.07	.04	.07	.01	.00	.53	.35	.0	.0		.0	.0	.0
B3	0	.0	0	.00	.0	.0	11.	.04	.02	.04	.00	.00	.33	.19	.0	.0		.0	.0	.0
C	0	.0	0	.00	.0	.0	0.	.13	.05	.07	.01	.00	.22	.42	.0	.0		.0	.0	.0

HORIZON	VERY COS. SAND		PERCENT SAND			VERY FINE SAND		***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	0.05	0.075	MED. SAND	FINE SAND	VERY FINE SAND	C.F.	S	SI	C	BULK			MAX.	1/3		2	4	15	AWC	LL	PL	PI	
A2	0	.0	.0	.0	.0	30.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0			
B2IR	4.3	4.0	2.0	5.2	9.7	50.	25.	64.	11.	VGSIL	GM	.00	.00	0	29	0	0	10	0	0			
B3	2.4	4.3	2.4	7.4	11.3	70.	28.	62.	10.	EGSIL	GW	.00	.00	0	0	0	0	5	0	0			
C	1.8	3.3	2.0	6.9	11.6	80.	26.	63.	11.	EGSIL	GW	.00	.00	0	0	0	0	0	0	0			

REMARKS: ASSUMED CRYIC AND UDIC AND SURFACE MEETS ANDIC REQUIRE. EVEN WITH LOW NAPPH SIRUCEK/STILLWATER S.F./IDAHO LAB/MT. MARSTON.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7809	TALLY LAKE	B -34N-23W	2B-1	620	4760	4		30		0	MIXED

SOIL CLASSIFICATION: ANDIC CRYO DCHREPT SANDY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEQ/100 GM*		B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%				
A2	0- 3	10YR4/3	1F GR	DCHRIC	6.5	5.3	8.0	.00	.0	.0	.00	.0	.0	.0	.0	.00	.00	.00	.000	
B2IR	3- 33	10YR5/6	1M SBK	CAMBIC	6.0	5.5	.0	.00	1.6	2.02	.1	.0	39.8	*05	*6.80	.00	.275			
IIB2	48- 74	10YR6/1	0 SG	CAMBIC	5.5	5.2	.0	.00	.2	.3	.03	.0	.0	3.7	*15	*.50	.00	.030		
IIC	97- 0	5YR6/1	0 SG		6.5	5.1	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.00	.000		

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION						*****								*****				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
A2	0	.0	100	1.68	4.0	88.0	0.	.23	.07	.09	.02	.00	.71	.68	.0	.0	.0	.0	.0	.0
B2IR	0	6.9	45	1.58	12.0	4.2	21.	.28	.07	.11	.03	.00	.72	.38	.0	.0	.0	.0	.0	.0
IIB2	0	4.4	12	.26	15.0	3.6	11.	.03	.02	.04	.01	.00	.20	.16	.0	.0	.0	.0	.0	.0
IIC	0	.0	0	.00	.0	.0	0.	.06	.02	.04	.01	.00	.17	.19	.0	.0	.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	12.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0	0	
B2IR	7.8	10.7	5.2	6.1	7.9	20.	38.	56.	6.	GSIL	ML	.00	.00	0	42	0	0	24	0			
IIB2	29.8	31.8	12.1	9.6	2.7	85.	86.	13.	1.	EGLCS	GP	.00	.00	0	7	0	0	3	0			
IIC	33.0	38.9	12.1	6.6	1.0	98.	92.	7.	1.	EGCS	GP	.00	.00	0	0	0	0	0	0			

REMARKS: ASSUMED CRYIC AND UDIC, NAFPH IS LOW BUT FIELD PROPERTIES INDICATE ANDIC SIRUCEK/STILLWATER S.F./IDAHO LAB/SWIFT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8101	SWAN LAKE	25-28N-19W		57-7	B20	6200	10	W	70		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S.	D. M.	D. C.	TOTAL
						PH	NAF	X1000*	*CA	MG	NA	K	H	CEC*	%	%	%	N
O1	3- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.00	.000
A2	0- 10	75YR5/2	1VFSBK	OCHRIC	4.3	4.3	8.0	.18	1.9	1.0	.10	.2	13.8	17.9	019	05.14	2.99	.129
B2IR	10- 30	75YR4/4	2F SBK	CAMBIC	5.0	4.9	9.6	.13	.9	.3	.10	.1	19.7	20.5	006	04.50	2.62	.121
B3	30- 55	10YR5/4	1F SBK		5.5	5.3	8.9	.09	.6	.2	.09	.1	7.0	9.4	010	01.23	.71	.039
R	55- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							***** SESQUIOXIDS (%) *****				CAC03 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC		PY-PH
O1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
A2	23	4.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
B2IR	22	2.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
B3	18	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
R	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0

HORIZON	VERY FINE SAND					PERCENT FINE SAND				VERY FINE SAND				***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COARSE	MED.	FINE	FINE	FINE	C. F.	S	SI	C	GSIL	SM	VGSIL	GM	EGSIL	GP	1/3	2						4	15	AWC	LL	PL	PI		
O1	.0	.0	.0	.0	.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	.00	.00	0	0	0	0	0	0	0	0	0	0	0	0	0
A2	3.8	4.9	2.7	3.4	8.4	15.	23.	66.	11.	GSIL	SM	.00	.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B2IR	4.8	6.1	3.5	9.2	10.3	45.	34.	55.	11.	VGSIL	GM	.00	.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B3	2.9	5.2	3.7	6.5	12.8	80.	31.	60.	9.	EGSIL	GP	.00	.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R	.0	.0	.0	.0	.0	0.	0.	0.	0.	0.	0.	.00	.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

REMARKS: SIRUCEK/FNF/IDAHO LAB; RADIO TOWER SITE NOISY CREEK.  
ASSUMED CRYIC & UDIC ALSO THAT NAFPH <10 INDICATE NOT AN ANDEPT.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-57

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7821	HUNGRY HORSE	11	28N-17W	57-9	624	5400	45	S	50-60		0	ARGILLITE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	D.M. %	D.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
B2	20-42	75YR4/4	1F GR	OCHRIC	6.0	5.1	9.8	.16	5.7	.5	.10	.3	15.8	15.8	029	04.67	2.72	.115
IIB2	42-68	75YR5/2	1F GR	CAMBIC	5.0	5.1	7.9	.10	2.7	.5	.10	.1	2.5	2.5	058	0.40	.23	.016
IIC	68-94	75YR5/2	0 MAS		5.3	5.1	7.8	.09	7.7	.5	.10	.1	1.3	1.8	082	0.29	.17	.009

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2	24	1.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2	14	1.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC	19	.9	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					***** BARS *****			* LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI			
B2	9.8	13.2	8.7	11.2	9.9	10.	53.	45.	2.	SL	SM	.00	.00	0	26	0	0	10	16	ND	NP	NP			
IIB2	18.1	19.7	12.8	10.8	5.9	40.	67.	25.	8.	VGCOSL	GW	.00	.00	0	12	0	0	4	8	ND	NP	NP			
IIC	18.0	20.3	11.0	8.9	4.3	55.	63.	30.	8.	VGCOSL	GW	.00	.00	0	13	0	0	4	9	ND	NP	NP			

REMARKS: BATES/LIM/IDAHO-LAB/HARRIS CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % D.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7604	HUNGRY HORSE	6 -30N-18W		620	4850	45	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S.	O. M.	O. C.	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N
A2	0- 1	10YR5/2	1F CR		.0	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000
B2	1- 18	10YR5/5	1F CR	CAMBIC	6.0	5.6	.0	.00	3.7	.0	.00	.4	5.4	22.0	043	03.10	.00	.092
IIA&B	18- 68	10YR6/4	1F SBK		6.0	5.9	.0	.00	2.4	.0	.00	.1	1.2	7.6	068	0.60	.00	.022

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **										**** SESQUIOXIDS (%) ****								
	C-N RATIO	AVAILABLE IN PARTS/MILLION					***** SOLUBLE IONS MEG/LITER *****					AL	AL	FE	FE	CAC03			
	P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%
A2	0	.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2	19	14.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	16	.7	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL ****				USDA	UNIFIED	SOIL DENSITY	OPTM.	% PERCENT WATER (WT)					ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0			
B2	.0	.0	.0	.0	.0	10.	61.	33.	6.	SL	SM	.00	.00	0	18	0	0	3	15			
IIA&B	.0	.0	.0	.0	.0	60.	61.	29.	10.	VGSL	GM	.00	.00	0	18	0	0	4	14			

REMARKS: THIS SOIL IS SIMILAR TO A LANDTYPE 26L SOIL. MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

- FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC
- FOOTNOTE: % O. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD
- FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE
- FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD
- FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
7819	GLACIER VIEW	26-34N-22W		7B	690	4600	53	SE	50-60	JUNE	10	ARGILLITE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM*	B.S. %	D.M. %	D.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMQH	*CA	MG	NA	K	H	CEC*					
B2IR	0- 48	10YR4/3	1M GR	CAMBIC	6.3	5.7	9.5	.16	6.7	1.0	.10	.4	14.0	17.5	037	03.26	1.89	.110	
IIB2	48- 70	10YR5/2	1M GR	CAMBIC	6.0	6.0	8.0	.11	5.0	1.1	.10	.2	4.5	9.2	059	0.78	.45	.030	
IIC	70-108	10YR5/3	1M GR		6.5	5.9	7.8	.14	6.0	1.0	.10	.1	2.7	8.1	072	0.51	.27	.012	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	CA:O3 %
B2IR	17	1.4	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIB2	15	1.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0
IIC	24	1.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0

HORIZON	VERY COS. SAND		PERCENT SAND			VERY FINE SAND		**** % TOTAL ****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *		
	13.6	14.5	7.6	8.2	8.3	15.	52.	43.	5.	GCOSL			SM	.00		.00	0	42	0	0	12	30
B2IR	13.6	14.5	7.6	8.2	8.3	15.	52.	43.	5.	GCOSL	SM	.00	.00	0	42	0	0	12	30	ND	NP	NP
IIB2	21.9	23.7	11.5	9.7	5.7	40.	72.	23.	4.	VGCOSL	GW	.00	.00	0	14	0	0	7	7	ND	NP	NP
IIC	23.7	23.2	14.7	14.4	6.1	60.	82.	14.	4.	VGLCOS	GP	.00	.00	0	10	0	0	6	4	ND	NP	NP

REMARKS: BATES/LIM/IDAHO-LAB/COAL CREEK, PURCELL LAVA BEDROCK

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
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SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7820	SWAN LAKE	31-26N-22W		670	5360	8	W	20-30	JUNE	10	QUARTZITE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	O.M. %	O.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					CEC*
B2IR	0- 27	75YR4/4	1F GR	CAMBIC	6.5	5.8	9.8	.13	11.4	.7	.10	.4	16.5	17.9	043	03.01	1.75	.096
IIC1	27- 54	10YR6/2	0 MAS		6.0	6.4	7.8	.07	4.5	1.0	.10	.1	1.6	5.3	078	0.15	.07	.005
IIC2	54- 85	10YR6/2	0 MAS		6.0	6.2	7.8	.11	12.8	.9	.10	.1	1.6	4.3	070	0.26	.15	.006

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) *****				CAC03 %
		AVAILABLE IN PARTS/MILLION																		
	P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH		
B2IR	18	1.1	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	
IIC1	18	.7	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	
IIC2	25	.7	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0	

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COB. SAND	COB. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B2IR	3.6	4.8	2.2	4.4	14.8	5.	30.	68.	2.	SIL	ML	.00	.00	0	42	0	0	12	30	ND	NP	NP
IIC1	10.9	7.3	3.5	5.3	9.2	45.	3.	61.	3.	VGSIL	GM	.00	.00	0	21	0	0	3	18	ND	NP	NP
IIC2	9.8	10.9	3.9	6.4	10.8	45.	42.	55.	3.	VGSIL	GM	.00	.00	0	20	0	0	3	17	ND	NP	NP

REMARKS: CLAYS: IIC2, ILLITE&KAOLINITE&VERMICULITE&CHLORITE--PRESENT  
SIMILAR TO LANDTYPE 26D  
BATES/LIM/IDAHO-LAB/BLACKTAIL MTN.  
TEXTURE ON VERY FINE SAND AND COARSE SILT SIZE LINE

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7407	SWAN LAKE	28-21N-17W		930	3720	20	SE	30-40		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* B.S. %	D.M. %	D.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMOH	EXCHANGEABLE *CA	MG NA	K	H	CEC*					
B2IR	3- 18	10YR7/4	1F CR	CAMBIC	6.0	5.7	.0	.00	4.0	.7	.10	1.0	21.4	22.8	021	.00	1.66	.116
IIA2B	18- 36	10YR8/2	1F SBK		6.2	6.6	.0	.00	6.1	.8	.01	.1	1.8	8.9	080	.00	.21	.022
IIA&BB	36- 51	25YR8/2	1M SBK		6.6	6.8	.0	.00	7.2	1.0	.01	.1	2.4	10.1	078	.00	.23	.022
IIB&AB	51- 91	25YR8/4	1M SBK	CAMBIC	6.6	6.9	.0	.00	11.8	1.6	.01	.1	1.4	15.3	091	.00	.00	.000
IIB2B	91-152	25YR8/5	1M SBK	CAMBIC	6.8	7.0	.0	.00	8.0	.8	.01	.1	.7	9.3	093	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****			
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.6		1.3	.2	.0
IIA2B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1		.7	.0	.0
IIA&BB	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1		.9	.0	.0
IIB&AB	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1		.9	.0	.0
IIB2B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1		.8	.0	.0

HORIZON	VERY PERCENT FINE					**** % TOTAL ****	USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	PERCENT WATER (WT) OPTM. MOIST	***** BARS *****	ATTERBURG * LIMITS *							
	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F. S							SI	C	1/3	2	4	15	AWC	LL
B2IR	8.0	5.7	2.4	3.7	7.6	15.	27.	65.	7.	GSIL	ML	.80	.00	0	48	0	0	11	36
IIA2B	13.1	6.7	3.0	4.7	6.9	25.	34.	57.	8.	GSIL	ML	.00	.00	0	0	0	0	4	0
IIA&BB	9.6	6.1	3.1	4.9	7.9	40.	32.	59.	10.	VGSIL	GM	.00	.00	0	0	0	0	5	0
IIB&AB	7.6	5.6	3.1	5.7	7.8	35.	30.	59.	11.	GSIL	GM	.00	.00	0	0	0	0	6	0
IIB2B	13.4	5.3	2.0	3.5	4.9	15.	29.	57.	13.	GSIL	ML	.00	.00	0	0	0	0	5	0

REMARKS: SECOND B DENOTES BURIED HORIZON  
SIMILIAR TO LANDTYPE 26C.  
ANDERSON - HARRISON & MURRAY/SCS-MISSOULA/CAL LAB/FELAN SERIES.  
LOCATION SWAN VALLEY-COLD CREEK. SIMILAR TO LANDTYPE 26C.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8109	GLACIER VIEW	24-32N-21W		21-7	830	5600	10	NE	30		0	QUARTZITE

SOIL CLASSIFICATION: ANDEPTIC CRYD OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H						
O2	0- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000	
B21IR	0- 18	10YR4/4	1VFG	CAMBIC	6.0	5.6	9.1	.13	2.4	.5	.10	.1	13.8	14.6	018	03.00	1.75	.150	
B22IR	18- 36	10YR6/3	1M SBK	CAMBIC	5.5	5.6	8.4	.16	2.4	.5	.09	.1	10.2	13.4	023	02.07	1.20	.101	
IIA&B	36- 53	10YR5/3	1M SBK	CAMBIC	5.5	5.5	8.1	.14	1.8	.4	.09	.1	6.1	7.5	028	01.08	.63	.051	
IIC	53- 0		0 MAS		5.5	5.5	8.0	.13	2.0	.6	.09	.1	3.8	7.3	041	0.52	.30	.030	

\*\* EXCHANGEABLE MICRONUTRIENTS \*\*

HORIZON	C-N RATIO	AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
O2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B21IR	12	1.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B22IR	12	.9	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	12	.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC	10	.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY FINE PERCENT					VERY FINE				***** % TOTAL *****			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	PERCENT WATER (WT) ***** BARS *****	***** BARS *****					***** BARS *****				
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	OPTM. MOIST	1/3	2					4	15	AWC	LL	PL	PI				
O2	.0	.0	.0	.0	.0	0.	0.	0.	0.	0.					.00	.00	0	0	0	0	0	0	0	0	0	0
B21IR	5.8	7.7	4.1	4.0	10.0	35.	31.	51.	18.	VGSIL	GM			.00	.00	0	0	0	0	0	0	0	0	0	0	0
B22IR	5.7	8.2	4.9	7.1	8.3	35.	34.	47.	19.	VGL	GM			.00	.00	0	0	0	0	0	0	0	0	0	0	0
IIA&B	5.6	9.0	5.1	6.1	10.1	45.	36.	50.	14.	VGL	GM			.00	.00	0	0	0	0	0	0	0	0	0	0	0
IIC	12.6	10.4	4.8	6.3	6.7	50.	41.	44.	15.	VGL	GM			.00	.00	0	0	0	0	0	0	0	0	0	0	0

REMARKS: BASKO, SIRUCEK/FNF/IDAHO LAB; KIMMERLY CK. ASSUMED CRYIC & UDIC. NOTE LOW NAFPH INDICATES MIXED ASH LAYER NOT ANDEPT.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEC. C	LITHOLOGY
7811	TALLY LAKE	11-34N-24W	21-B	670	6200	20	E	60		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYD OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF X1000*	MG	NA	K	H	CEC*	Z	Z	Z	N		
A2	0- 8	10YR5/3	1F GR	DCHRIC	6.0	4.3	8.0	.00	.5	.5	.04	.2	.0	.0		7.47	.00	.000
B2IR	8- 23	5YR4/6	1M SBK	CAMBIC	5.5	5.3	.0	.00	.2	.1	.02	.1	.0	33.7	*03	.00	.00	.000
IIB2	23- 41	10YR5/6	1F SBK	CAMBIC	6.5	5.4	.0	.00	.2	.1	.04	.1	.0	7.4	*05	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION														AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
A2	0	.0	380	5.50	6.0	9.6	0.	.21	.19	.13	.08	.00	.63	.85	.0	.0		.0	.0	.0
B2IR	0	6.0	0	.00	.0	.0	28.	.14	.05	.10	.01	.00	.63	.48	.0	.0		.0	.0	.0
IIB2	0	1.9	0	.00	.0	.0	23.	.04	.03	.06	.01	.00	.30	.30	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT					VERY					USDA		SOIL DENSITY BULK	DENSITY MAX.	OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	**** C. F.	% TOTAL S	**** SI	**** C	TEXTURE	CLASS	**** BARS ****				1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	10.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0	0		
B2IR	2.4	2.6	1.0	2.4	10.7	10.	19.	71.	10.	SIL	ML	.00	.00	0	0	0	0	0	0	0	0		
IIB2	10.6	11.4	5.3	9.6	7.3	20.	44.	47.	9.	GL	ML	.00	.00	0	0	0	0	0	0	0	0		

REMARKS: ASSUMED CRYIC AND UDIC; ALSO ANDIC SURFACE DUE TO COLORS, %SILT SIRUCEK/STILLWATER S.F./IDAHO LAB/HERRIG BASIN.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7803	TALLY LAKE	11-34N-24W	21-8	670	6100	20	SW	60		0	LIMESTONE

SOIL CLASSIFICATION: ANDIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEQ/100 GM*	B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N	
B211R	0- 5	75YR4/4	1F SBK	CAMBIC	7.0	5.7	11.0	.00	1.3	.4	.03	.4	.0	28.0	*15	6.90	.00	.159	
IIA2	18- 56	25YR6/4	1F SBK	OCHRIC	7.0	5.3	.0	.00	4.4	1.0	.18	.8	.0	23.6	*27	7.30	.00	.240	
IIB2	56- 91	25YR6/4	1M SBK	CAMBIC	7.5	6.1	.0	.00	2.8	.4	.09	.1	.0	7.0	*47	*1.38	.00	.043	
IIC	91-152	10YR6/4	0 SG		8.0	5.9	9.8	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEQ/LITER *****						**** SESQUIOXIDS (%) *****						
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	CACO3 %
B211R	0	2.9	100	1.45	6.0	12.0	18.	.16	.07	.16	.09	.00	.69	.61	.0	.0	.0	.0	.0	.0
IIA2	0	6.5	184	9.30	8.0	116.0	31.	.60	.18	.24	.27	.00	.91	.82	.0	.0	.0	.0	.0	.0
IIB2	0	.9	23	.34	4.0	6.4	7.	.15	.05	.12	.01	.00	.50	.38	.0	.0	.0	.0	.0	.0
IIC	0	.0	.0	.00	.0	.0	0.	.20	.07	.14	.03	.00	.36	.38	.0	.0	.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	Z OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
B211R	3.3	5.4	2.1	4.2	9.0	20.	24.	68.	8.	GSIL	ML	.00	.00	0	48	0	0	24	0			
IIA2	2.0	2.5	1.2	3.1	7.7	50.	17.	72.	11.	VGSIL	GM	.00	.00	0	0	0	0	0	0			
IIB2	10.3	13.9	5.8	8.9	6.6	60.	45.	47.	8.	VGL	GM	.00	.00	0	22	0	0	12	0	ND	NP	NP
IIC	13.8	14.1	5.9	10.3	6.8	80.	51.	41.	8.	EGRL	GM	.00	.00	0	0	0	0	0	0	ND	NP	NP

REMARKS: ASSUME CRYIC AND UDIC; CLAY: 15BAR 1:3, CEC: 15BAR 1: .81  
SIRUCEK/STILLWATER S. F. /IDAHO LAB/HERRIG BASIN.

- FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC
- FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD
- FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE
- FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD
- FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

LT-21

@ASG,A PGM.  
 READY  
 @ASG,A SHORT.  
 READY  
 @USE 10.,SHORT.  
 READY  
 @XRT PGM.RPT-2

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH.	DEG. C	LITHOLOGY
8201	SWAN LAKE	29-26N-21W	26D-8	691	4800	23	W	20-30		0	QUARTZITE

SOIL CLASSIFICATION: DYSTRIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT					EC					B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	EXCHANGEABLE *CA	MG	NA	K	H	CEC*	GM*				
O2	5- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000	
A2	0- 3	10YR4/2	1F GR	OCHRIC	5.5	.0	.0	.00	.0	.0	.00	.0	.0	.0		.00	.00	.000	
B2IR	3- 15	10YR4/4	1F GR		6.0	6.0	10.7	.12	5.1	1.4	.09	.7	15.7	20.2	031	03.64	2.12	.117	
IIA2	15- 36	10YR5/2	1F GR		5.5	5.4	7.8	.08	1.4	.6	.09	.2	3.7	4.9	037	0.46	.27	.021	
IIB2	36- 68	10YR6/2	1VFBSK	CAMBIC	5.0	5.1	7.7	.06	1.1	.6	.09	.1	3.5	4.0	034	0.45	.26	.020	
IIC	68-152	10YR6/2	0 SG		5.0	5.2	7.7	.06	.8	.5	.09	.1	2.4	3.5	037	0.25	.14	.016	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **							**** SESQUIOXIDS (%) ****							CACO3 %				
		AVAILABLE IN PARTS/MILLION							***** SOLUBLE IONS MEQ/LITER *****											
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
O2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
A2	.0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2IR	0	3.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.4	.0		.0	.0	.0
IIA2	0	2.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.1	.0		.0	.0	.0
IIB2	0	.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.4	.0		.0	.0	.0
IIC	0	.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY .... PERCENT .....					**** % TOTAL ****	USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	PERCENT WATER (WT) OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					***** ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND						C.F.	S	SI	C	1/3		2	4	15
O2	.0	.0	.0	.0	.0	0.	0.	0.	0.	.00	.00	0	0	0	0	0	0	0	
A2	.0	.0	.0	.0	.0	35.	0.	0.	0.	VGSIL	GM	.00	.00	0	0	0	0	0	
B2IR	5.8	4.3	1.7	4.0	8.6	35.	24.	66.	10.	VGSIL	GM	.00	.00	0	37	19	18	19	0
IIA2	14.9	8.9	3.3	4.8	10.6	70.	43.	52.	5.	EGSIL	GM	.00	.00	0	18	7	7	7	0
IIB2	6.4	6.5	5.6	8.0	17.7	60.	42.	50.	8.	EGVFSL	GM	.00	.00	0	0	0	0	0	0
IIC	7.9	7.9	3.5	5.7	21.4	70.	46.	50.	4.	EGVFSL	GM	.00	.00	0	0	0	0	0	0

REMARKS: NOTE:DECREASE SO4 VALUE BY FACTOR OF 10.  
 SIRUCEK/FLATHEAD N.F./IDAHO LAB/BLACKTAIL MTN.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
B110	GLACIER VIEW	16-32N-20W	21-7	830	6000	12	E	60		0	ARGILLITE-CAC03

SOIL CLASSIFICATION: DYSTRIC CRYO DCHREPT COARSE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* CEC*	B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
O2	3- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
B2IR	0- 10	10YR4/4	1F GR	CAMBIC	6.0	4.8	10.5	.14	.3	.1	.10	.3	27.3	25.6	003	05.69	3.31	.145
IIA&B	10- 41	10YR6/6	2F ABK		5.5	5.0	8.4	.10	.3	.1	.09	.1	8.3	7.8	005	0.76	.44	.038
IIB2T	41- 86	10YR6/8	2M ABK	CAMBIC	5.5	5.0	8.3	.11	.4	.1	.09	.2	8.0	9.4	008	0.51	.30	.032
IIC	86- 0	10YR7/8	2M ABK		5.0	4.9	8.1	.11	.7	.3	.10	.2	6.8	6.8	014	0.32	.19	.026

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
O2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
B2IR	23	.9	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIA&B	12	.6	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIB2T	9	.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0
IIC	7	.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0	.0	.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****					USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND	C.F.	S	SI	C	BULK			MAX.	1/3		2	4	15	AWC	LL	PL	PI	
O2	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0			
B2IR	6.0	5.7	2.4	3.3	6.3	10.	24.	66.	10.	SIL	ML	.00	.00	0	0	0	0	0	0				
IIA&B	.9	2.9	2.2	3.1	2.9	10.	12.	68.	20.	SIL	ML	.00	.00	0	0	0	0	0	0				
IIB2T	1.7	2.6	1.6	1.5	3.4	10.	11.	67.	22.	SIL	ML	.00	.00	0	0	0	0	0	0				
IIC	2.9	4.0	2.0	2.9	3.0	40.	15.	67.	18.	VGSIL	GM	.00	.00	0	0	0	0	0	0				

REMARKS: BASKO, SIRUCEK/FNF/IDAHO LAB; WERNER DIVIDE; ASSUMED CRYIC & UDIC.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE		LITHOLOGY
		S	T -R							MONTH	DEG. C	
7401	SWAN LAKE	27	17N-15W		750	4280	20	SW	25-35		0	QUARTZITE

SOIL CLASSIFICATION: TYPIC CRYD OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEQ/100 GM# CEC*	B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
A21	0- 25	05YR6/3	1F CR	OCHRIC	6.0	5.6	.0	.00	4.0	.9	.01	.3	4.3	10.2	055	.00	.91	.048
A22	25- 61	05YR7/3	1F CR		5.6	5.2	.0	.00	2.0	.7	.01	.1	1.8	5.5	061	.00	.22	.019
A&B	61-122	05YR7/4	1F SBK		5.4	5.0	.0	.00	2.4	1.2	.10	.1	3.2	7.5	054	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEQ/LITER *****							**** SESQUIOXIDS (%) ****				CACO3 %	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC		FE PY-PH
A21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1			.8	.1	.0
A22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1			.7	.0	.0
A&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.1			.8	.1	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
A21	9.0	4.4	3.6	9.5	18.3	40.	45.	46.	9.	VGL	GM	1.25	.00	0	15	0	0	4	11			
A22	8.0	5.5	4.3	12.2	22.0	55.	52.	38.	10.	VGSL	GM	.00	.00	0	0	0	0	3	0			
A&B	8.9	3.6	3.1	11.3	21.8	45.	47.	37.	17.	VGL	GM	.00	.00	0	0	0	0	5	0			

REMARKS: ANDERSON-HARRISON/SCS-MISSOULA CO. /CAL LAB/GARLET SERIES.  
SEELEY LAKE AREA. PROFILE SIMILAR TO 26D.

- FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC
- FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD
- FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE
- FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD
- FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION		LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE		LITHOLOGY
		S -T	-R							MONTH	DEG. C	
8014	GLACIER VIEW	27-37N-22W		27-7	660	4160	1	E			0	

SOIL CLASSIFICATION: TYPIC CRYO OCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S.	D. M.	D. C.	TOTAL N
						PH	NAF X1000*	MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N
B2IR	0- 47		1M SBK		.0	.0	.00	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
IIB2	47- 89		2M SBK		.0	6.2	.0	.10	2.3	.4	.10	.0	.0	2.7	0.20	.00	.009	
IIC	89-137		0 SG		.0	.0	.00	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		AVAILABLE IN PARTS/MILLION						*****								AL	AL	FE	FE	
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	
B2IR	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2	0	4.0	27	.10	6.0	2.5	14.	1.00	.40	.20	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY FINE PERCENT					VERY FINE				***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI				
B2IR	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0							
IIB2	.0	.0	.0	.0	.0	35.	52.	37.	11.	VGSL		.00	.00	0	13	0	0	2	11							
IIC	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0							

REMARKS: SIRUCEK/LARCH PLANTATION/MSU LAB; 23PPM K; 3PPM NO3

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC

FOOTNOTE: % O. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD

FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE

FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD

FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	SOIL TEMPERATURE DEG. C	LITHOLOGY
7813	TALLY LAKE	21-34N-23W	57-9	692	4800	50	W	45		0	ARGILLITE

SOIL CLASSIFICATION: LITHIC CRYO OCHREPT COARSE LOAMY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 CM* B.S. %	O.M. %	O.C. %	TOTAL N	
						PASTE PH	NAF PH	X1000* MMQH	*CA	MG	NA	K	H					CEC*
A1	0- 8	10YR3/3	2F GR	OCHRIC	6.5	5.4	.0	.00	.9	.3	.04	.3	.0	20.3	#03	.00	.00	.000
B2IR	8- 23	10YR5/6	1M SBK	CAMBIC	6.5	5.5	.0	.00	.1	.1	.05	.1	.0	10.5	#03	.00	.00	.000
B3	23- 30	10YR5/4	0 SG	CAMBIC	6.5	5.4	.0	.00	.2	.1	.10	.1	.0	8.6	#06	.00	.00	.000

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****										**** SESQUIOXIDS (%) ****				
		AVAILABLE IN PARTS/MILLION						*****										AL	AL	FE	FE	CACO3
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH	%		
A1	0	.0	0	.00	.0	.0	16.	.12	.04	.08	.01	.00	.69	.61	.0	.0				.0	.0	.0
B2IR	0	.0	0	.00	.0	.0	23.	.05	.02	.02	.00	.00	.34	.34	.0	.0				.0	.0	.0
B3	0	.0	0	.00	.0	.0	14.	.02	.01	.02	.00	.00	.30	.20	.0	.0				.0	.0	.0

HORIZON	VERY COB. PERCENT					VERY FINE SAND	***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	SAND	SAND	SAND		C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A1	.0	.0	.0	.0	.0	5.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0			
B2IR	12.6	17.7	7.9	9.8	4.2	10.	52.	36.	11.	CSL	SM	.00	.00	0	25	0	0	6	0				
B3	14.1	18.5	8.6	11.6	5.1	15.	58.	29.	13.	GCSL	SM	.00	.00	0	20	0	0	6	0				

REMARKS: ASSUMED CRYIC AND UDIC  
SIRUCEK/STILLWATER S. F. /IDAHO LAB/UPPER WHITEFISH LAKE.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7822	TALLY LAKE	10-30N-23W	57-7	312	4080	12	SW	20-30	JUNE	9	LIMESTONE

SOIL CLASSIFICATION: ANDIC                      UST            OCHREPT    LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* B.S. %	D.M. %	D.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*				
A1	0- 15	10YR4/3	1M GR	OCHRIC	7.0	6.1	8.1	.30	14.7	2.2	.10	.5	9.4	23.6	065	03.98	2.31	.087
B2IR	15- 32	75YR4/4	1M GR	CAMBIC	6.8	6.2	8.7	.21	14.5	2.5	.10	.4	8.9	19.5	066	02.24	1.30	.064
IIA2	32- 56	10YR5/3	1M GR		6.3	6.1	7.8	.18	7.5	1.7	.10	.2	3.1	12.6	075	0.82	.48	.031
IIB2	56- 73	10YR6/3	1M GR	CAMBIC	6.7	6.1	7.8	.22	10.0	2.5	.10	.2	2.9	13.7	082	0.82	.48	.025

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
A1	27	5.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
B2IR	20	2.7	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA2	15	1.2	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIB2	19	1.1	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY ..... PERCENT ..... VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****				ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
A1	5.9	4.5	2.7	5.8	10.6	10.	29.	59.	11.	SIL	ML	.00	.00	0	40	0	0	14	26	ND	NP	NP
B2IR	4.3	4.8	2.9	6.2	13.2	10.	31.	60.	8.	SIL	ML	.00	.00	0	0	0	0	0	0	ND	NP	NP
IIA2	8.8	7.8	4.8	9.7	10.1	40.	41.	44.	15.	VGL	GM	.00	.00	0	21	0	0	5	16	ND	NP	NP
IIB2	8.1	8.0	5.1	10.5	9.5	55.	41.	45.	14.	VGL	GM	.00	.00	0	21	0	0	6	15	ND	NP	NP

REMARKS: BATES/LIM/IDAHO-LAB/TLRD LOST CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D.M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7612	HUNGRY HORSE	1 -30N-19W		620	3600	30	N	40		0	ARGILLITE

SOIL CLASSIFICATION: ANDEPTIC UST OCHREPT LOAMY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS					MEG/100 GM* CEC*	B. S. %	D. M. %	D. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H						
B21	2- 25	10YR4/3	1F CR	CAMBIC	5.5	6.1	.0	.00	8.9	.0	.00	.9	2.2	13.4	0B2	02.50	.00	.0B2	
IIA&B	25- 61	10YR5/4	1F SBK	CAMBIC	6.0	6.2	.0	.00	2.7	.0	.00	.2	.4	4.6	0B8	0.19	.00	.000	
IIC1	61-112	10YR6/4	1F SBK		6.0	6.0	.0	.00	2.9	.0	.00	.1	.6	4.9	0B3	0.20	.00	.006	
IIC2	112-152	10YR6/4	0 MAS		6.0	6.5	.0	.00	.0	.0	.00	.0	.0	.0		0.40	.00	.000	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SD4	AL DI-DC	AL PY-PH	FE DI-DC	FE PY-PH	
B21	18	28.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIA&B	0	2.3	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC1	19	2.5	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
IIC2	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY COARSE PERCENT					VERY FINE SAND	**** % TOTAL ****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND		C. F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
B21	.0	.0	.0	.0	.0	10.	45.	43.	12.	SL	SM	.00	.00	0	26	0	0	9	17				
IIA&B	.0	.0	.0	.0	.0	30.	64.	26.	10.	GSL	SM	.00	.00	0	8	0	0	4	4				
IIC1	.0	.0	.0	.0	.0	40.	68.	23.	9.	VGSL	GM	.00	.00	0	9	0	0	4	5				
IIC2	.0	.0	.0	.0	.0	80.	0.	0.	0.			.00	.00	0	0	0	0	0	0				

REMARKS: CLAYS: B21, AMORP-VERY HIGH; IIC1, ILL-HIGH, KAOL&VERM&SMECT&AMORP-LOW  
SIMILAR TO LANDTYPE 27-7.  
MCCONNELL/CORAM EXP. FOREST/MSU-LAB/ABBOTT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZERDS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7626	HUNGRY HORSE	11-30N-19W		620	3450	0		40		0	

SOIL CLASSIFICATION: UDIC UST DCHREPT CLAYEY FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B. S. %	D. M. %	D. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	
A2	0- 15	10YR4/4	1F CR	DCHRIC	7.0	6.6	.0	.00	17.0	.0	.00	.3	2.5	.0	088	04.60	.00	.148
IIA&B	15- 30	10YR4/3	1M SBK	CAMBIC	6.0	6.8	.0	.00	15.6	.0	.00	.2	.7	.0	095	01.80	.00	.088
IIC1	30- 58	10YR5/3	1M SBK		6.0	7.0	.0	.00	9.9	.0	.00	.0	.2	.0	099	0.57	.00	.041
IIC2	58-119	10YR5/3	1M SBK		6.0	7.2	.0	.00	7.6	.0	.00	.0	.0	.0	100	0.33	.00	.031
IIC3	119-183	10YR5/3	1M SBK		.0	7.0	.0	.00	8.6	.0	.00	.1	.0	.0	100	0.48	.00	.038

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****							**** SESQUIOXIDS (%) ****					CACO3 %				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE		FE	AL	PY-PH	PY-PH
A2	18	60.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0				.0
IIA&B	12	54.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0				.0
IIC1	8	14.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0				.0
IIC2	6	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0				.0
IIC3	7	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0				.0

HORIZON	VERY PERCENT					C.F.	% TOTAL			USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND		S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	5.	8.	56.	36.	SICL	CL	1.65	.00	0	34	0	0	15	19			
IIA&B	.0	.0	.0	.0	.0	5.	4.	55.	41.	SIC	CH	1.65	.00	0	31	0	0	16	15			
IIC1	.0	.0	.0	.0	.0	5.	9.	54.	37.	SICL	CL	1.74	.00	0	26	0	0	12	14			
IIC2	.0	.0	.0	.0	.0	5.	14.	58.	28.	SICL	CL	1.66	.00	0	24	0	0	10	14			
IIC3	.0	.0	.0	.0	.0	5.	6.	58.	37.	SICL	CL	1.67	.00	0	28	0	0	13	15			

REMARKS: CLAYS: A2, ILL. -HIGH, KAOL. &VERMIC. -LOW, AMORP-LOW, IIC, ILL. -HIGH, KAOL&VERM. -LOW  
SIMILAR TO LANDTYPE 14-2.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D. M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7622	HUNGRY HORSE	27-31N-19W		620	3500	0		40		0	ARGILLITE

SOIL CLASSIFICATION: UDIC                    UST            OCHREPT    LOAMY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* CEC*	B.S. %	O.M. %	O.C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
A2	0- 13	10YR5/2	1F CR	OCHRIC	5.3	5.3	.0	.00	3.9	.0	.00	.3	6.2	.0	040	04.70	.00	.076
IIA&B	13- 30	10YR6/4	1F SBK	OCHRIC	5.2	5.2	.0	.00	3.5	.0	.00	.2	3.4	.0	052	01.40	.00	.045
IIB21T	30- 76	10YR5/4	1F SBK	ARGILLIC	7.1	7.1	.0	.00	11.5	.0	.00	.2	.5	.0	076	01.60	.00	.051
IIB22T	76-109	10YR5/4	1F SBK	ARGILLIC	7.4	7.4	.0	.00	12.7	.0	.00	.1	.0	.0	100	01.10	.00	.044
IIB23T	109-152	10YR5/4	1F SBK	ARGILLIC	7.6	7.6	.0	.00	17.1	.0	.00	.0	.0	.0	100	0.48	.00	.023

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **								***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CAC03 %
	C-N RATIO	AVAILABLE IN PARTS/MILLION			*****				*****				AL	AL	FE	FE	CA03				
	P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HC03	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH			
A2	28	60.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	
IIA&B	18	36.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	
IIB21T	16	16.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	
IIB22T	14	.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	
IIB23T	12	.0	0	.00	.0	.0	.00	.00	.00	.00	.00	.00	.00	.0	.0			.0	.0	.0	

HORIZON	VERY COARSE PERCENT					VERY FINE ***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY		% OPTM. MOIST	PERCENT WATER (WT) ***** BARS *****					ATTERBURG * LIMITS *		
	SAND	SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C			BULK	MAX.		1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	20.	31.	60.	9.	GSIL	ML	.00	.00	0	24	0	0	9	15			
IIA&B	.0	.0	.0	.0	.0	25.	35.	52.	13.	GSIL	ML	1.78	.00	0	21	0	0	6	15			
IIB21T	.0	.0	.0	.0	.0	50.	30.	44.	26.	VGL	GM	1.55	.00	0	20	0	0	11	9			
IIB22T	.0	.0	.0	.0	.0	60.	34.	47.	19.	VGL	GM	1.66	.00	0	21	0	0	10	11			
IIB23T	.0	.0	.0	.0	.0	60.	33.	48.	18.	VGL	GM	.00	.00	0	20	0	0	8	12			

REMARKS: SIMILAR TO LANDTYPE 26C.  
 CLAYS: A2, AMORP&ILL-MEDIUM, VERM&KAOL-LOW; IIB23T, ILL-HIGH, KAOL&VERM&SMECT-LOW  
 MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INCHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7619	HUNGRY HORSE	35-31N-19W		620	3500	0	NW	40		0	ARGILLITE

SOIL CLASSIFICATION: UDIC UST OCHREPT LOAMY SKELETAL FRIGID

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM* CEC*	B. S. %	D. M. %	D. C. %	TOTAL N
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H					
A2	0- 7	10YR5/2	1F CR	OCHRIC	5.5	4.9	.0	.00	3.2	.0	.00	.2	4.8	.0	041	02.30	.00	.064
I1A&B	7- 43	10YR5/3	1F SBK	OCHRIC	6.0	5.0	.0	.00	4.6	.0	.00	.2	2.2	.0	069	0.69	.00	.036
I1B&A	43- 62	10YR5/3	1F SBK	CAMBIC	6.0	5.8	.0	.00	6.3	.0	.00	.1	1.2	.0	097	0.65	.00	.031
I1B21	62- 79	10YR5/4	1F SBK	CAMBIC	7.0	5.6	.0	.00	5.6	.0	.00	.0	1.4	.0	080	0.61	.00	.031
I1B22	79-122	10YR5/4	1F SBK	CAMBIC	8.0	7.6	.0	.00	.0	.0	.00	.1	.0	.0		0.21	.00	.019

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS ** AVAILABLE IN PARTS/MILLION						***** SOLUBLE IONS MEG/LITER *****						**** SESQUIOXIDS (%) ****				CACO3 %		
		P	FE	ZN	CU	MN	SD4	CA	MG	NA	K	CO3	HCO3	CL	SO4	AL DI-DC	AL PY-PH		FE DI-DC	FE PY-PH
A2	21	60.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
I1A&B	11	51.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
I1B&A	12	14.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
I1B21	11	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0
I1B22	6	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.0		.0	.0	.0

HORIZON	VERY PERCENT VERY					**** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	SOIL DENSITY MAX.	% OPTM. MOIST	% PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	CDS. SAND	CDS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI
A2	.0	.0	.0	.0	.0	20.	33.	59.	8.	GSIL	ML	1.54	.00	0	19	0	0	6	13			
I1A&B	.0	.0	.0	.0	.0	30.	47.	40.	13.	GL	ML	1.67	.00	0	16	0	0	5	11			
I1B&A	.0	.0	.0	.0	.0	30.	39.	48.	13.	GL	ML	1.74	.00	0	16	0	0	6	10			
I1B21	.0	.0	.0	.0	.0	50.	41.	45.	13.	VGL	GM	1.81	.00	0	16	0	0	5	11			
I1B22	.0	.0	.0	.0	.0	50.	43.	43.	13.	VGL	GM	1.78	.00	0	17	0	0	6	11			

REMARKS: CLAYS: A2, VERM&KAOL-LOW, ILL-HIGH; I1B22, ILL-HIGH, VERM&KAOL&SMELT-LOW  
SIMILAR TO LANDTYPE 27.  
MCCONNELL/CORAM EXP. FOREST/MSU LAB/ABBOTT CREEK.

FOOTNOTE: % B. S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % D. M. WITH \* DENOTES A COLORIMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS

SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
7402	SWAN LAKE	10-12N-17W		260	4720	50	SW	18-25		0	ARGILLITE

SOIL CLASSIFICATION: UDIC UST DCHREPT LOAMY SKELETAL

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100 GM*	B.S.	O.M.	D.C.	TOTAL
						PASTE PH	NAF PH	X1000* MMDH	*CA	MG	NA	K	H	CEC*	%	%	%	N
A21	0- 18	10YR6/2	1F GR	DCHRIC	6.0	6.0	.0	.00	3.9	.6	.01	.4	3.6	7.3	058	.00	.67	.043
A22	18- 76	75YR6/4	1F GR		6.4	6.4	.0	.00	1.8	.3	.01	.1	.7	2.8	078	.00	.10	.014
A&B	76-152	75YR6/2	2M SBK	CAMBIC	6.0	6.3	.0	.00	2.3	.3	.01	.2	1.4	3.3	067	.00	.00	.000

HORIZON	** EXCHANGEABLE MICRONUTRIENTS **								***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****				CACO3 %
	C-N RATIO	AVAILABLE IN PARTS/MILLION			*****				*****				AL	AL	FE	FE	*****				
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	PY-PH	DI-DC	PY-PH		
A21	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1		.6	.0	.0	.0
A22	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1		.5	.0	.0	.0
A&B	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.00	.0	.1		.5	.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA UNIFIED		SOIL DENSITY		% OPTM.		PERCENT WATER (WT)					ATTERBURG * LIMITS *		
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C. F.	S	SI	C	TEXTURE	CLASS	BULK	MAX.	MOIST	1/3	2	4	15	AWC	LL	PL	PI	
A21	10.9	9.3	9.0	18.3	19.9	30.	56.	65.	8.	GL	ML	.00	.00	0	0	0	4	0	0				
A22	8.2	8.1	9.9	20.2	13.0	70.	59.	34.	7.	EGFSL	GW	.00	.00	0	0	0	0	2	0				
A&B	9.3	10.0	12.1	19.7	11.7	65.	63.	31.	6.	EGFSL	GW	.00	.00	0	0	0	0	2	0				

REMARKS: ANDERSON-DOUGHERTY/MISSOULA CO./CAL LAB/WINKLER SERIES.  
LOCATION IN CLEARWATER SURVEY AREA. DIRTY IKE CREEK.  
SIMILAR TO LANDTYPE 57.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS



SAMPLE NUMBER	RANGER DISTRICT	LOCATION S -T -R	LAND TYPE	HABITAT TYPE	ELEVATION (FEET)	SLOPE (%)	ASPECT	AN. PRECIP. (INHES)	SOIL TEMPERATURE MONTH	DEG. C	LITHOLOGY
8113	TALLY LAKE	01-31N-25W	14-3	410	4120	1		20-30		0	

SOIL CLASSIFICATION: TYPIC HAPL AQUOLL FINE SILTY

HORIZON	DEPTH (CM.)	SOIL COLOR	SOIL STRUCT	DIAGNOSTIC HORIZON	FIELD PH	SAT		EC		EXCHANGEABLE CATIONS				MEG/100	GM* B.S.	O.M.	O.C.	TOTAL
						PASTE PH	NAF PH	X1000* MMOH	*CA	MG	NA	K	H	CEC*	%	%	%	N
O1	4- 0				.0	.0	.0	.00	.0	.0	.00	.0	.0	.0	.00	.00	.000	
A1	0- 12	2.5Y3/0	2C GR	MOLLIC	8.0	6.6	.0	.50	33.6	6.8	.10	.4	.0	54.2	14.55	8.46	.434	
C1G	12- 32	2.5Y5/2	0 MAS		8.0	7.3	.0	.26	12.6	2.6	.10	.3	.0	26.6	02.73	1.59	.119	
C2G	32- 0	2.5Y5/2	0 MAS		8.0	7.0	.0	.23	13.1	2.5	.10	.3	.0	29.3	02.48	1.44	.093	

HORIZON	C-N RATIO	** EXCHANGEABLE MICRONUTRIENTS **						***** SOLUBLE IONS MEG/LITER *****								**** SESQUIOXIDS (%) ****					
		P	FE	ZN	CU	MN	SO4	CA	MG	NA	K	CO3	HCO3	CL	SO4	DI-DC	AL	AL	FE	FE	CACO3
O1	0	.0	0	.00	.0	.0	0.	.00	.00	.00	.00	.00	.00	.0	.0				.0	.0	.0
A1	19	5.8	0	.00	.0	.0	0.	4.10	1.30	.50	.10	.00	3.80	.30	.1	.0			.0	.0	.0
C1G	13	3.4	0	.00	.0	.0	0.	1.10	.20	.30	.09	.00	1.20	.10	.1	.0			.0	.0	.0
C2G	15	1.7	0	.00	.0	.0	0.	.80	.20	.20	.09	.00	.90	.10	.1	.0			.0	.0	.0

HORIZON	VERY PERCENT VERY					***** % TOTAL *****				USDA TEXTURE	UNIFIED CLASS	SOIL DENSITY BULK	DENSITY MAX.	% OPTM. MOIST	PERCENT WATER (WT)					ATTERBURG * LIMITS *			
	COS. SAND	COS. SAND	MED. SAND	FINE SAND	FINE SAND	C.F.	S	SI	C						1/3	2	4	15	AWC	LL	PL	PI	
O1	.0	.0	.0	.0	.0	0.	0.	0.	0.			.00	.00	0	0	0	0	0	0	0			
A1	.3	.6	.4	1.0	2.6	0.	5.	74.	21.	SIL	ML	.00	.00	0	0	0	0	0	0	0			
C1G	.0	.1	.1	.2	11.8	0.	12.	72.	16.	SIL	CL	.00	.00	0	0	0	0	0	0	0			
C2G	.0	.1	.1	.8	5.5	0.	6.	74.	20.	SIL	CL	.00	.00	0	0	0	0	0	0	0			

REMARKS: SIRUCEK/FNF/IDAHO LAB; GOOD CREEK; ASSUMED FRIGID & UDIC.

FOOTNOTE: % B.S. WITH \* DENOTES A VALUE BY DIVIDING THE SUM BY THE CEC  
 FOOTNOTE: % O.M. WITH \* DENOTES A COLORMETRIC MEASUREMENT NOT WALKLEY-BLACK METHOD  
 FOOTNOTE: ZEROS ARE PRINTED WHETHER OR NOT TEST WERE DONE  
 FOOTNOTE: % COARSE FRAGMENTS BY VOLUME IN THE FIELD  
 FOOTNOTE: AVAILABLE WATER CAPACITY(AWC) NOT CORRECTED FOR % COARSE FRAGMENTS