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Title of article Sedimentology and paleohydrology of glacial-lake out-
burst deposits in southeastern Saskatchewan and northwestern North Dakota

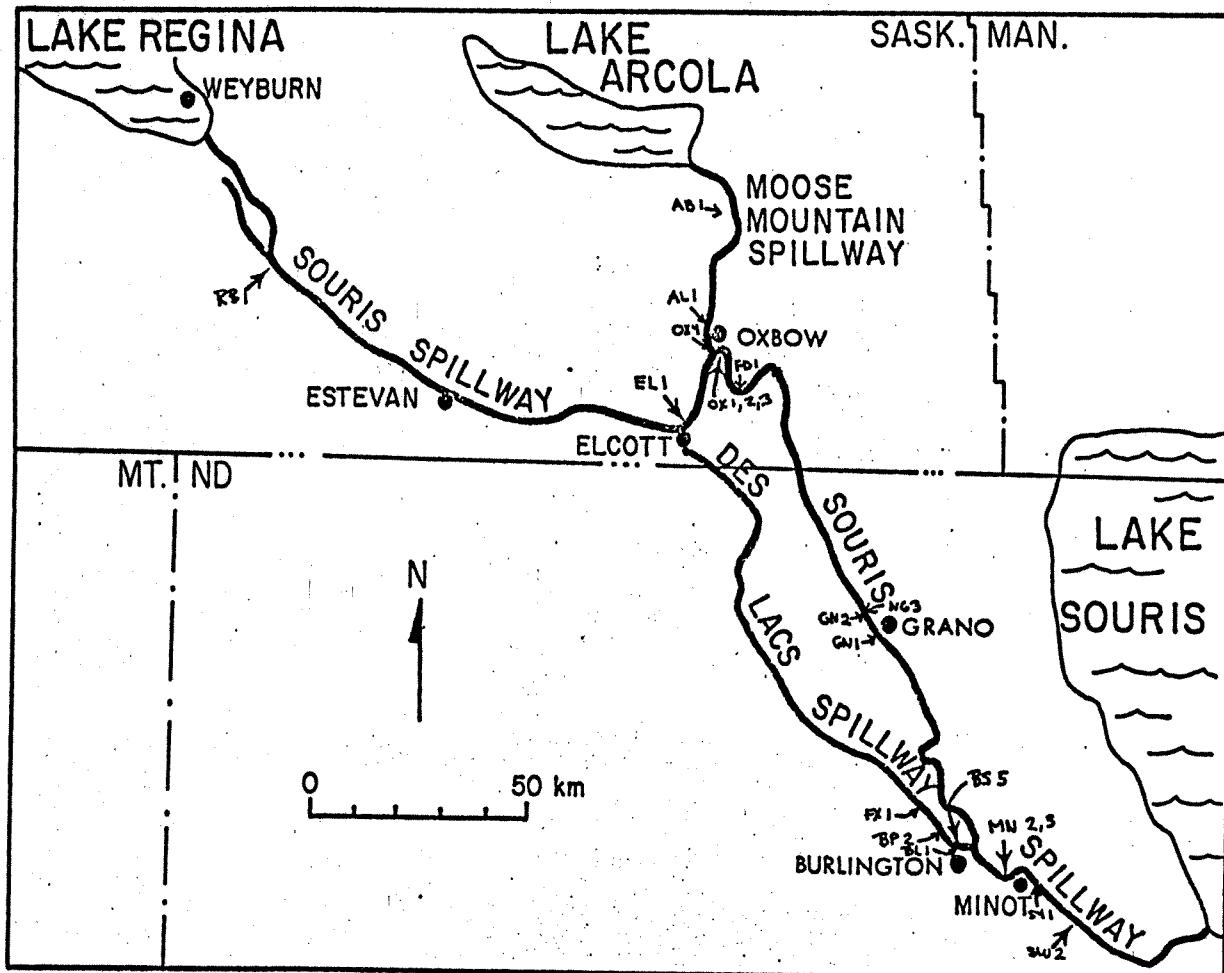
Author(s) Mark L. Lord and Alan E. Kehew

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Sample locations, textural and lithologic data

SAMPLE LOCATION MAP



SAMPLE LOCATIONS

Outburst Deposits From Unknown Glacial Lake

BP 2	T.156N., R.84W., sec. 29, SW	Burlington, ND 7.5'x7.5'
BL 1	T.155N., R.84W., sec. 2, NE	Burlington, ND 7.5'x7.5'
FX 1	T.157N., R.85W., sec. 36, SE	Des Lacs, ND 7.5'x7.5'
MN 3	T.155N., R.83W., sec. 21	Minot, ND 7.5'x7.5'

Outwash Deposits

AB 1	T.6N., R.2W., sec. 13	Alameda, Sask. 15'x30'
AL 1	T.4N., R.2W., sec. 16	Alameda, Sask. 15'x30'
FD 1	T.2N., R.1W., sec. 31, SW	Oxbow, Sask. 15'x30'
OX 3	T.3N., R.2W., sec. 15	Oxbow, Sask. 15'x30'

Outburst Deposits From Glacial Lake Arcola

GN 1	T.160N., R.85W., sec. 19, SW	Grano, ND 15'x15'
GN 2	T.160N., R.85W., sec. 2, SE	Grano, ND 15'x15'
NG 3	T.161N., R.85W., sec. 31, NE	Grano, ND 15'x15'
OX 2	T.3N., R.2W., sec. 15	Oxbow, Sask. 15'x30'
OX 4	T.3N., R.2W., sec. 21, NE	Oxbow, Sask. 15'x30'
SY 1	T.155N., R.82W., sec. 32	Surrey, 7.5'x7.5'

Outbursts Deposits From Glacial Lake Regina

BS 5	T.156N., R.84W., sec. 22	Burlington, ND 7.5'x7.5'
EL 1	T.1N., R.3W., sec. 1	Oxbow, Sask. 15'x30'
MN 2	T.155N., R.83W., sec. 21	Minot, ND 7.5'x7.5'
OX 1	T.3N., R.2W., sec. 15	Oxbow, Sask. 15'x30'
RB 1	T.5N., R.12W., sec. 18, SE	Goodwater, Sask. 15'x30'
SW 1	T.153N., R.81W., sec. 4, NE	Sawyer, ND 7.5'x7.5'

Textural Data

Percentages of sediments on the sieve screen of the stated phi size.

PHI SIZE	Outburst from Glacial Lake ?				SAMPLE	Glacial Outwash			
	FX 1	BP 2	BL 1	MN 3		AB 1	AL 1	OX 3	FD 1
-7.5	-	-	13.4	-	-	-	-	-	-
-7.0	-	0.0	5.8	-	-	-	-	-	-
-6.5	11.0	2.9	14.4	11.1	-	-	-	-	-
-6.0	6.9	8.7	13.3	4.7	-	-	-	-	-
-5.5	13.6	8.0	6.9	0.0	-	-	-	-	-
-5.0	7.8	11.9	8.8	4.5	-	-	-	-	-
-4.5	5.2	11.4	9.2	6.7	-	-	-	1.3	-
-4.0	3.5	21.3	8.6	3.4	4.9	6.2	2.5	6.4	
-3.5	5.3	3.6	3.1	5.2	5.9	11.3	4.5	18.1	
-3.0	4.0	3.3	3.1	4.3	6.2	10.6	5.9	16.6	
-2.5	2.7	2.3	2.1	3.8	6.6	11.6	5.2	13.9	
-2.0	2.5	2.0	1.7	5.1	6.3	8.2	6.5	8.1	
-1.5	2.7	1.6	1.4	5.5	8.6	8.5	6.7	6.1	
-1.0	4.1	2.0	1.7	9.1	7.8	6.2	10.5	3.3	
-0.5	4.6	2.2	1.7	9.4	7.7	6.4	11.9	2.8	
0.0	6.4	3.1	2.0	7.3	5.7	4.6	14.4	2.9	
0.5	5.1	2.6	1.6	3.3	7.0	3.7	10.8	5.0	
1.0	3.9	3.3	1.5	2.9	11.2	6.9	9.4	6.4	
1.5	2.7	3.5	1.4	2.4	9.7	7.0	5.8	4.0	
2.0	1.6	2.5	1.1	1.6	8.1	5.7	2.2	1.9	
2.5	1.0	1.7	0.8	1.3	2.5	1.9	1.0	1.1	
3.0	1.8	0.8	0.6	0.7	0.8	0.9	0.5	0.9	
3.5	0.7	0.5	0.4	0.5	0.3	0.2	0.4	0.6	
4.0	0.5	0.2	0.2	0.3	0.8	0.1	0.2	2.0	
4.5	2.8	0.8	0.9	1.0	0.0	0.0	0.4	0.0	

Textural Data

Percentages of sediments on the sieve screen of the stated phi size.

Outburst from Glacial Arcola

PHI SIZE	SAMPLE				
	OX 4	OX 2	NG 3	GN 2	GN 1
-7.5	18.0	13.3	-	0.1	-
-7.0	14.6	7.3	-	0.0	13.0
-6.5	6.4	21.6	-	16.9	10.1
-6.0	4.2	8.6	8.0	4.5	8.4
-5.5	9.8	4.0	7.1	8.8	4.9
-5.0	7.8	5.1	15.4	7.6	5.7
-4.5	6.4	5.0	10.7	7.5	8.4
-4.0	3.4	4.4	8.0	9.4	8.4
-3.5	4.3	3.4	7.3	6.0	6.9
-3.0	3.5	2.5	9.0	4.8	4.8
-2.5	2.9	2.2	4.2	3.4	3.1
-2.0	1.9	2.1	3.8	3.0	3.0
-1.5	1.1	2.1	2.6	2.9	2.4
-1.0	0.9	3.3	2.9	5.2	2.8
-0.5	0.9	3.8	2.9	4.9	2.4
0.0	1.9	4.5	4.2	4.2	2.5
0.5	2.6	2.7	4.1	2.5	2.0
1.0	3.0	1.7	3.8	1.9	2.1
1.5	2.8	1.1	2.8	1.5	2.2
2.0	1.7	0.9	1.4	1.0	1.9
2.5	0.9	0.8	0.6	0.8	1.3
3.0	0.3	0.6	0.3	0.6	0.8
3.5	0.2	0.5	0.2	0.5	0.6
4.0	0.1	0.3	0.1	0.4	0.4
4.5	0.3	1.4	0.6	1.6	1.6

Textural Data

Percentages of sediments on the sieve screen of the stated phi size.
 Outburst from Glacial Lake Regina

PHI SIZE	SAMPLE					
	RB 1	EL 1	OX 1	BS 5	MN 2	SW 2
-7.5	-	4.9	18.4	-	12.0	-
-7.0	-	5.7	8.1	-	5.6	-
-6.5	16.8	22.7	19.0	3.8	8.7	4.5
-6.0	1.7	7.4	4.0	0.0	3.0	14.5
-5.5	8.7	4.6	1.8	7.0	5.9	5.7
-5.0	6.5	6.4	5.1	6.6	5.3	11.5
-4.5	10.5	7.5	2.4	7.3	8.2	11.5
-4.0	9.0	6.5	1.6	9.5	7.7	9.8
-3.5	4.1	4.5	1.3	6.1	7.5	6.3
-3.0	6.4	4.8	2.1	10.1	8.1	6.3
-2.5	4.7	2.7	1.8	9.2	4.9	5.0
-2.0	4.6	2.7	2.1	9.5	4.0	5.3
-1.5	3.2	2.8	2.1	6.1	2.1	3.3
-1.0	3.3	2.7	3.4	5.2	2.6	3.2
-0.5	2.4	2.1	4.8	3.1	2.1	2.3
0.0	3.0	2.0	7.7	2.7	2.5	2.1
0.5	3.7	1.3	4.6	2.2	2.4	1.5
1.0	4.3	1.1	2.3	2.5	1.6	1.4
1.5	2.8	1.0	1.2	2.1	1.3	1.4
2.0	1.4	1.1	0.8	1.3	0.8	1.1
2.5	0.9	1.3	0.7	1.1	0.6	0.9
3.0	0.5	0.9	0.7	1.1	0.6	0.6
3.5	0.4	0.8	0.8	0.7	0.5	0.5
4.0	0.3	0.6	0.6	0.5	0.4	0.3
4.5	0.8	2.3	2.7	2.3	1.6	1.3

Table 3. Very coarse sand lithology averages for glacial-lake outburst, outwash, and till deposits (In percent: based on 200 grain counts per sample).

ORIGIN*	CRYSTALLINE		SEDIMENTARY		OTHER	
	ROCK		SHALE	ROCK		
	FRAGMENTS	CARBONATES				
a. OUTBURST (n=4)	60.7	26.3	8.1	4.9		
b. OUTWASH (n=4)	62.5	26.7	5.9	4.9		
c. OUTBURST (n=6)	61.8	26.4	6.4	5.4		
d. OUTBURST (n=6)	59.0	23.2	8.7	9.1		
e. TILLS [#] (n=166)	60.9	25.2	12.6	1.3		

* a. Glacial Lake ?; b. Glacial outwash; c. Glacial Lake Arcola; d. Glacial Lake Regina; e. Minot, North Dakota region.

[#] Figures represent the average of three tills identified by Kehew (1983); other data from Lord (1984).