

MVTL LABORATORIES INC.  
P.O. BOX 1873, Bismarck, ND 58104-1873  
PHONE (701) 258-9720 FAX (701) 258-9724

TO: Robert A. Gjere  
Kiewit Mining Group, Inc.  
Kiewit Plaza  
Omaha, NE 68131

Date Reported: 3/28/02  
PurchaseOrder #: 54204  
Date Received: 3/21/02

PEDON:  
LOCATION: SH02-04C

Work Order Number: 200280-12

Laboratory Number	Sample Number	Horizon	Soil Name	Depth	E.C. 25	Cat/E.C.	Ca	Mg	Na	S.A.R	C.C.E.	pH	% D.M.	TXTR	% Sand	% Silt	% Clay	% Very Fine Sand	Sat. Percent
02-S127				0-5	7.83	19.7	25.9	99.0	29.0	3.67		8.0		cl	43.2	27.6	29.2		62.1
02-S128				5-10	5.07	18.4	29.1	48.0	16.2	2.61		7.7		sic	6.0	45.0	49.0		85.7
02-S129				10-15	2.12	12.9	11.6	11.2	4.6	1.36		7.9		c	7.3	24.9	67.8		97.5
02-S130				15-20	1.54	12.7	8.5	5.8	5.2	1.94		7.9		sil	25.5	52.5	22.0		59.2
02-S131				20-25	1.01	10.6	3.3	2.4	5.0	2.96		8.3		sicl	13.5	47.5	39.0		76.1
02-S132				25-30	1.44	10.5	4.2	3.7	7.2	3.62		8.6		c	11.8	22.4	65.8		124.
02-S133				30-35	2.12	11.5	3.5	4.3	16.6	8.41		7.4		c	27.5	17.5	55.0		107.
02-S134				35-40	1.73	10.3	1.2	1.3	15.4	13.8		8.1		c	11.8	35.0	53.2		166.
02-S135				40-45	2.11	9.72	0.6	0.5	19.4	26.2		8.4		c	9.2	30.0	60.8		138.
02-S136				45-50	4.38	13.1	1.7	1.6	54.0	42.0		7.0		scl	58.8	17.4	23.8		97.2
02-S137				50-55	2.48	10.2	1.2	0.8	23.4	23.4		7.9		c	11.8	32.4	55.8		163.
02-S138				55-60	1.88	10.2	0.3	0.1	18.8	42.0		8.8		c	6.5	25.0	68.5		171.
02-S139				60-65	1.82	10.2	0.3	0.1	18.1	40.5		8.7		c	1.0	35.0	64.0		168.
02-S140				65-70	1.74	9.94	0.7	0.2	16.4	24.4		8.9		c	0.0	27.5	72.5		178.
02-S141				75-80	2.60	10.7	0.7	0.6	26.5	32.9		7.4		cl	43.8	20.0	36.2		121.
02-S142				80-85	1.63	9.82	0.5	0.5	15.0	21.2		8.5		c	8.2	25.0	66.8		155.
02-S143				85-90	1.55	10.0	0.4	0.2	14.9	27.2		8.8		c	15.8	32.4	51.8		151.
02-S144				90-95	1.58	10.7	0.8	0.4	15.7	20.3		9.0		c	6.0	35.0	59.0		165.
02-S145				95-100	2.23	10.4	0.6	0.3	22.4	33.4		8.8		c	11.8	40.0	48.2		136.
02-S146				100-105	2.15	10.2	0.7	0.3	20.9	29.6		8.7		c	6.8	22.4	70.8		162.
02-S147				105-110	3.69	13.1	0.8	0.6	47.0	56.2		7.9		c	24.5	35.0	40.5		117.

Approved by D. Zander

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

MVTL Laboratories Inc.

P.O. BOX 1873, Bismarck, ND 58101-1873

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TO: Robert A. Gjere  
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 Omaha, NE 68131

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Laboratory Number	Sample Number	Horizon	Soil Name	Depth	E.C. 25	Cat/E.C.	Ca	Mg	Na	S.A.R	C.C.E.	pH	% O.M.	TEXT	% Sand	% Silt	% Clay	% Very Fine Sand	Sat. Percent
02-S148				110-115	2.79	10.1	0.5	0.3	27.3	43.2		8.4		sic1	14.3	49.9	35.8		91.0
02-S149				115-120	2.40	9.92	0.3	0.2	23.3	46.6		9.0		cl	38.2	30.0	31.8		112.
02-S150				120-125	2.03	10.0	0.5	0.2	19.6	33.1		9.2		sic1	18.5	47.5	34.0		137.
02-S151				125-130	2.23	10.2	1.0	0.6	21.2	23.7		9.0		sic	14.8	42.4	42.8		124.
02-S152				130-135	1.85	10.8	0.9	0.5	18.6	22.2		8.9		c	13.0	40.0	47.0		147.
02-S153				135-140	1.69	10.2	0.3	0.1	16.9	37.8		9.0		c	11.0	27.5	61.5		166.

Approved by *D. Zandy*

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MVTL LABORATORIES, INC.

P.O. BOX 1873, Bismarck, ND 58504-1873

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 Kiewit Mining Group, Inc.  
 Kiewit Plaza  
 Omaha, NE 68131

Date Reported: 3/28/02  
 PurchaseOrder #: 54204  
 Date Received: 3/21/02

PEDON:  
 LOCATION: SH02-10C

Work Order Number: 200280-13

Laboratory Number	Sample Number	Horizon	Soil Name	Depth	E.C. 25	Cat/E.C.	Ca	Mg	Na	S.A.R	C.C.E.	pH	% O.M.	TEXTR	% Sand	% Silt	% Clay	% Very Fine Sand	Sat. Percent
02-S154				0-5	0.63	10.0	1.3	1.3	3.7	3.25		6.6		c	29.2	27.6	43.2		64.2
02-S155				5-10	4.96	16.9	29.0	33.7	21.0	3.75		7.8		c	15.0	30.0	55.0		84.9
02-S156				10-15	2.77	12.6	8.5	9.6	16.8	5.58		8.3		s1	56.8	32.4	10.8		46.2
02-S157				15-20	1.96	12.1	6.0	6.5	11.3	4.52		8.4		s1	73.8	20.0	6.2		38.5
02-S158				20-25	2.03	12.8	7.0	6.6	12.3	4.72		8.4		ls	76.5	17.5	6.0		36.8
02-S159				25-30	1.26	11.3	3.9	3.1	7.2	3.85		8.5		s1	74.2	17.6	8.2		36.4
02-S160				30-35	1.29	12.1	4.5	3.5	7.6	3.80		8.4		s1	71.5	20.0	8.5		35.6
02-S161				35-40	0.89	11.8	2.4	1.8	6.3	4.35		8.4		s1	68.5	20.0	11.5		37.4
02-S162				40-45	1.06	11.5	3.4	2.1	6.7	4.04		8.3		s1	67.0	22.5	10.5		39.2
02-S163				45-50	0.65	10.6	1.3	0.7	4.9	4.90		8.4		s1	56.2	27.6	16.2		41.8
02-S164				50-55	0.61	10.5	0.7	0.4	5.3	7.15		8.6		s1	60.8	27.4	11.8		41.7
02-S165				55-60	0.75	11.1	0.7	0.6	7.0	8.68		8.9		l	33.2	40.0	26.8		61.0
02-S166				60-65	0.88	11.0	0.4	0.3	9.0	15.2		9.3		scl	66.0	12.5	21.5		54.8
02-S167				65-67	1.11	11.3	0.6	0.5	11.4	15.4		9.2		scl	61.8	17.4	20.8		48.9

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 1411 S. 12th St.  
 Bismarck, ND 58504

**Explanation of Overburden Terminology**

bbreviation	Long Name	Units
.C.25	Electrical Conductivity	mmhos/cm
at/E.C.	Cation/E.C. Ratio	(checks data validity)
a	Calcium	milli-equilivants/liter
g	Magnesium	milli-equilivants/liter
a	Sodium	milli-equilivants/liter
.A.R.	Sodium Absorption Ratio	milli-equilivants/liter
.C.E.	Calcium Carbonate Equilivant	weight percent
H	pH	units
O.M.	Percent Organic Matter	weight percent
XTR	Texture	comment
Sand	Percent Sand	weight percent
Silt	Percent Silt	weight percent
Clay	Percent Clay	weight percent
Very Fine Sand		weight percent
at. Percent	Saturation Percent	weight percent

**Texture Abbreviations**

ic - silty clay	c - clay
c - sandy clay	sil - silty clay loam
l - clay loam	scl - sandy clay loam
- loam	si - silt
il - silty loam	s - sand
s - loamy sand	sl - sandy loam