

DRILLER'S SUBSURFACE LOG

Project ID: <u>S-085-2018</u>		Hardin - <u>US-62 MP 0.0-29.0</u> <u>ROLLING FORK</u>			Project Type: <u>Structure</u> Project Manager: <u> </u>				
Item Number: <u>04-1093.00</u>									
Hole Number <u>1001</u>		Immediate Water Depth <u>52.0 (03/26/19)</u>		Start Date <u>03/23/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>457.3'</u>		Static Water Depth <u>NA</u>		End Date <u>03/23/2019</u>		Rig_Number <u>365794</u>			
Total Depth <u>74.8'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766788</u>					
Location <u>37+66.63 8.0' Lt.</u>				Longitude(83) <u>-85.704298</u>					

Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
456.3	1.0	Blacktop.							
453.2	4.1	DGA.							
		Overburden.							

Drilling Firm: Kentucky Transportation Cabinet
For: Division of Structural Design
Geotechnical Branch

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>				
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>				
Hole Number <u>1001</u>		Immediate Water Depth <u>52.0 (03/26/19)</u>		Start Date <u>03/23/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>457.3'</u>		Static Water Depth <u>NA</u>		End Date <u>03/23/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>74.8'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766788</u>					
Location <u>37+66.63 8.0' Lt.</u>				Longitude(83) <u>-85.704298</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Rock Core		Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
55		Overburden.							55
60									60
65									65
70									70
75	382.5	74.8	(Refusal)						75
80		(Bottom of Hole 74.8') (Refusal @ 74.8)							80
85		Embankment fill to 25.0'.							85
90									90
95									95
100									100

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>		Project Type: <u>Structure</u>	
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>		Project Manager: <u> </u>	
Hole Number <u>1002</u>		Immediate Water Depth <u>NA</u>		Start Date <u>03/26/2019</u>	
Surface Elevation <u>457.2'</u>		Static Water Depth <u>NA</u>		End Date <u>03/27/2019</u>	
Total Depth <u>84.5'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766751</u>	
Location <u>37+66.63 8.0' Rt.</u>				Longitude(83) <u>-85.704268</u>	
Lithology		Overburden		Sample No.	Depth (ft)
Description		Rock Core		Std/Ky RQD	Run (ft)
Elevation	Depth			Rec. (ft)	SPT Blows
				Rec (%)	Sample Type
					SDI (JS)
					Remarks
456.0	1.2	Blacktop.			
454.4	2.8	DGA.			
5				ST-1	3.0-5.0
10				ST-2	8.0-10.0
15				ST-3	13.0-15.0
20				ST-4	18.0-20.0
25				ST-5	23.0-25.0
30				ST-6	28.0-30.0
35				ST-7	33.0-35.0
40				ST-8	38.0-40.0
45				ST-9	43.0-45.0
50				ST-10	48.0-50.0

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>				
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>				
Hole Number <u>1002</u>		Immediate Water Depth <u>NA</u>		Start Date <u>03/26/2019</u>		Hole Type <u>core and sample</u>			
Surface Elevation <u>457.2'</u>		Static Water Depth <u>NA</u>		End Date <u>03/27/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>84.5'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766751</u>					
Location <u>37+66.63 8.0' Rt.</u>				Longitude(83) <u>-85.704268</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
55 400.7	56.5	Soft to medium stiff, gray and brown, lean clay.		ST-11	53.0-55.0	2.0		ST	55
60 395.9	61.3	Medium dense, gray, gravelly sand.		SS-1	58.0-59.5	0.9	7-9-11	SPT	60
65 390.9	66.3	Medium dense, gray, sandy gravel.		SS-2	63.0-64.5	0.7	5-10-10	SPT	65
70 383.7 382.7	73.5 74.5	Very soft, gray, sandy silt.		SS-3	68.0-69.5	1.1	8-3-1	SPT	70
75 372.7	84.5	Very dense, gray, shale with silt and gravel. (Begin Core)		SS-4	73.0-74.5	1.0	7-18-50/0.50'	SPT	75
80		Black and gray shale grading to limestone, (with horizontal fractures).		40 / 45	1.0	1.0	100		75.5
				96 / 96	5.0	4.9	98		80.5
				95 / 98	4.0	4.0	100		84.5
85 90 95 100		(Bottom of Hole 84.5') Embankment fill to 24.7'.							85 90 95 100

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Project ID: <u>S-085-2018</u> Item Number: <u>04-1093.00</u>		<u>Hardin - US-62 MP 0.0-29.0</u> <u>ROLLING FORK</u>			Project Type: <u>Structure</u> Project Manager: <u> </u>				
Hole Number <u>1003</u> Surface Elevation <u>435.9'</u> Total Depth <u>65.6'</u> Location <u>38+27.64 16.5' Lt.</u>		Immediate Water Depth <u>42.3 (03/26/19)</u> Static Water Depth <u>39.7 (03/27/19)</u> Driller <u>Bowling, Dewayne</u>		Start Date <u>03/25/2019</u> End Date <u>03/26/2019</u> Latitude(83) <u>37.766897</u> Longitude(83) <u>-85.704136</u>		Hole Type <u>core and sample</u> Rig_Number <u>365794</u>			
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
5 10 15 20 25 30 35 40 45 50	400.4 395.8	Soft to stiff, brown and gray, clay.							
				ST-1	2.0-4.0	1.1			ST
				ST-2	7.0-9.0	2.0			ST
				ST-3	12.0-14.0	2.0			ST
				ST-4	17.0-19.0	2.0			ST
				ST-5	22.0-24.0	2.0			ST
				ST-6	27.0-29.0	2.0			ST
				ST-7	32.0-34.0	2.0			ST
		Medium stiff, gray, clay with gravel.		ST-8	37.0-38.2	1.2		ST	
		Dense, sandy gravel.		SS-1	42.0-43.5	1.0	4-19-28	SPT	
				SS-2	47.0-48.5	1.5	12-16-25	SPT	

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Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>				
Hole Number <u>1003</u>		Immediate Water Depth <u>42.3 (03/26/19)</u>		Start Date <u>03/25/2019</u>		Hole Type <u>core and sample</u>			
Surface Elevation <u>435.9'</u>		Static Water Depth <u>39.7 (03/27/19)</u>		End Date <u>03/26/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>65.6'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766897</u>					
Location <u>38+27.64 16.5' Lt.</u>				Longitude(83) <u>-85.704136</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
55 380.3	55.6	Dense, sandy gravel.							
		(Begin Core)		SS-3	52.0-53.5	1.5	8-13-21	SPT	
				SS-4	55.5-55.6	0.0	50/0.10'	SPT	
60 370.3	65.6	Gray limestone, (with horizontal fractures).		64 / 56	5.0	5.0	100		60.6
				96 / 96	5.0	5.0	100		65.6
70 370.3	65.6	(Bottom of Hole 65.6')							
		Lost circulation at 57.7'.							
75 370.3	65.6								
80 370.3	65.6								
85 370.3	65.6								
90 370.3	65.6								
95 370.3	65.6								
100 370.3	65.6								

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>				Project Type: <u>Structure</u>			
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>				Project Manager: <u> </u>			
Hole Number <u>1004</u>		Immediate Water Depth <u>32.8 (03/22/19)</u>		Start Date <u>03/22/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>436.7'</u>		Static Water Depth <u>11.6 (04/05/19)</u>		End Date <u>03/22/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>54.1'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766821</u>					
Location <u>38+27.64 16.5' Rt.</u>				Longitude(83) <u>-85.704074</u>					
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
5		Medium stiff, brown, clay with shale.							5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45									45
50									50

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>			
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>			
Hole Number <u>1004</u>		Immediate Water Depth <u>32.8 (03/22/19)</u>		Start Date <u>03/22/2019</u>		Hole Type <u>sounding</u>		
Surface Elevation <u>436.7'</u>		Static Water Depth <u>11.6 (04/05/19)</u>		End Date <u>03/22/2019</u>		Rig Number <u>365794</u>		
Total Depth <u>54.1'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.766821</u>				
Location <u>38+27.64 16.5' Rt.</u>				Longitude(83) <u>-85.704074</u>				
Lithology		Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
382.6	54.1	Medium stiff, brown, clay with shale. (Refusal)						
55								55
60		(Bottom of Hole 54.1') (Refusal @ 54.1)						60
65								65
70								70
75								75
80								80
85								85
90								90
95								95
100								100

Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>			
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>			
Hole Number <u>1005</u>		Immediate Water Depth <u>8.6 (03/22/19)</u>		Start Date <u>03/22/2019</u>		Hole Type <u>sounding</u>		
Surface Elevation <u>427.4'</u>		Static Water Depth <u>4.2 (03/23/19)</u>		End Date <u>03/22/2019</u>		Rig Number <u>365794</u>		
Total Depth <u>48.0'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767252</u>				
Location <u>40+68.63 16.5' Lt.</u>				Longitude(83) <u>-85.703432</u>				
Lithology		Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description	Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
5		Brown and light gray, moist, clay.						
10								
15								
20								
25								
30								
35								
40								
45								
379.4	48.0							
50								

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Item Number: <u>04-1093.00</u>									
Hole Number <u>1006A</u>		Immediate Water Depth <u>0.0 (04/05/19)</u>			Start Date <u>04/05/2019</u>			Hole Type <u>core and sample</u>	
Surface Elevation <u>427.8'</u>		Static Water Depth <u>NA</u>			End Date <u>04/05/2019</u>			Rig Number <u>365794</u>	
Total Depth <u>58.0'</u>		Driller <u>Bowling, Dewayne</u>			Latitude(83) <u>37.767189</u>				
Location <u>40+77.14 16.2' Rt.</u>					Longitude(83) <u>-85.703347</u>				

Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
		Brown, sandy clay.		ST-1	2.0-4.0	1.4		ST	
5	422.3		5.5						
		Stiff, brown and gray, clay.		ST-2	7.0-9.0	1.8		ST	
10	417.3		10.5						
		Stiff, brown and gray, silty clay.		ST-3	12.0-14.0	1.7		ST	
15									
				ST-4	17.0-19.0	1.6		ST	
20									
				ST-5	22.0-24.0	2.0		ST	
25	402.3	25.5							
		Stiff, gray, silt.		ST-6	27.0-29.0	1.9		ST	
30	397.3		30.5						
		Very dense, sandy gravel.		SS-1	32.0-33.5	1.4	10-21-25	SPT	
35									
				SS-2	37.0-38.5	0.9	8-20-25	SPT	
40	387.5	40.3							
		Very dense, sandy gravel with silt.		SS-3	42.0-43.5	1.2	12-19-10	SPT	
45									
	379.8	48.0	(Begin Core)	SS-4	47.0-48.0	1.0	26-50/0.50'	SPT	
50			Gray limestone, (horizontal fractures).	17 / 0	2.4	2.3	96		

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Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>				

Hole Number <u>1006A</u>		Immediate Water Depth <u>0.0 (04/05/19)</u>		Start Date <u>04/05/2019</u>		Hole Type <u>core and sample</u>	
Surface Elevation <u>427.8'</u>		Static Water Depth <u>NA</u>		End Date <u>04/05/2019</u>		Rig Number <u>365794</u>	
Total Depth <u>58.0'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767189</u>			
Location <u>40+77.14 16.2' Rt.</u>				Longitude(83) <u>-85.703347</u>			

Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
		Gray limestone, (horizontal fractures).		84 / 84	5.0	5.0	100		50.4
									55.4
369.8	58.0			100 / 96	2.6	2.6	100		58.0
60		(Bottom of Hole 58.0')							60
65		Boring relocated due to underground utilities and bridge pier.							65
70									70
75									75
80									80
85									85
90									90
95									95
100									100

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Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>					
Hole Number <u>1007A</u>		Immediate Water Depth <u>0.0 (03/23/19)</u>		Start Date <u>03/22/2019</u>		Hole Type <u>core and sample</u>				
Surface Elevation <u>434.0'</u>		Static Water Depth <u>6.1 (03/24/19)</u>		End Date <u>03/23/2019</u>		Rig_Number <u>365794</u>				
Total Depth <u>64.2'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767377</u>						
Location <u>41+51.04 18.0' Lt.</u>				Longitude(83) <u>-85.703194</u>						
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks	
Elevation	Depth	Description Rock Core		Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)		
5 10 15 20 25 30 35 396.5	37.5	Medium stiff, brown and gray, lean clay.								
				ST-1	2.0-4.0	1.6				ST
				ST-2	7.0-9.0	2.0				ST
				ST-3	12.0-14.0	2.0				ST
				ST-4	17.0-19.0	2.0				ST
				ST-5	22.0-24.0	2.0				ST
				ST-6	27.0-29.0	2.0				ST
				ST-7	32.0-34.0	2.0				ST
40 45 389.2	44.8	Medium dense to very dense, gray, sandy gravel.		ST-8	37.0-37.5	0.0		ST		
				SS-1	37.5-39.0	0.6	3-8-7	SPT		
				SS-2	42.0-42.5	0.5	50/0.50'	SPT		
50		Medium dense, gray, sand with gravel.								
				SS-3	47.0-48.5	0.6	10-6-10	SPT		

Project ID: <u>S-085-2018</u> Item Number: <u>04-1093.00</u>		<u>Hardin - US-62 MP 0.0-29.0</u> <u>ROLLING FORK</u>			Project Type: <u>Structure</u> Project Manager: <u> </u>				
Hole Number <u>1007A</u> Surface Elevation <u>434.0'</u> Total Depth <u>64.2'</u> Location <u>41+51.04 18.0' Lt.</u>		Immediate Water Depth <u>0.0 (03/23/19)</u> Static Water Depth <u>6.1 (03/24/19)</u> Driller <u>Bowling, Dewayne</u>		Start Date <u>03/22/2019</u> End Date <u>03/23/2019</u> Latitude(83) <u>37.767377</u> Longitude(83) <u>-85.703194</u>		Hole Type <u>core and sample</u> Rig_Number <u>365794</u>			
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
383.7	50.3	Medium dense, gray, sandy, silty gravel. (Begin Core)							
380.0	54.0			SS-4	52.0-53.5	0.7	5-8-3	SPT	
55		Gray limestone, (with horizontal fractures).		SS-5 0 / 0	54.0-54.0 1.7	0.0 1.6	50/0.00' 94	SPT	55.7
60				58 / 60	5.0	5.0	100		60.7
369.8	64.2			97 / 80	3.5	3.5	100		64.2
65		(Bottom of Hole 64.2')							65
70		Boring relocated due to underground utilities.							70
75									75
80									80
85									85
90									90
95									95
100									100

Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>				Project Type: <u>Structure</u>			
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>				Project Manager: <u> </u>			
Hole Number <u>1008</u>		Immediate Water Depth <u>9.3 (04/05/19)</u>		Start Date <u>04/05/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>433.3'</u>		Static Water Depth <u>NA</u>		End Date <u>04/05/2019</u>		Rig_Number <u>365794</u>			
Total Depth <u>53.8'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767301</u>					
Location <u>41+53.53 16.5' Rt.</u>				Longitude(83) <u>-85.703123</u>					
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
5		Brown to gray, silty clay.							5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45									45
50									50

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>				Project Type: <u>Structure</u>			
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>				Project Manager: <u> </u>			
Hole Number <u>1008</u>		Immediate Water Depth <u>9.3 (04/05/19)</u>		Start Date <u>04/05/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>433.3'</u>		Static Water Depth <u>NA</u>		End Date <u>04/05/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>53.8'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767301</u>					
Location <u>41+53.53 16.5' Rt.</u>				Longitude(83) <u>-85.703123</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
379.5	53.8	Brown to gray, silty clay.							
		(Refusal)							
55		(Bottom of Hole 53.8')							55
		(Refusal @ 53.8)							
60		Wet return at 15.0'.							60
65									65
70									70
75									75
80									80
85									85
90									90
95									95
100									100

Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>				
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>				
Hole Number <u>1009</u>		Immediate Water Depth <u>6.9 (04/04/19)</u>		Start Date <u>04/04/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>436.9'</u>		Static Water Depth <u>NA</u>		End Date <u>04/04/2019</u>		Rig_Number <u>365794</u>			
Total Depth <u>58.1'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767503</u>					
Location <u>42+38.43 16.5' Lt.</u>				Longitude(83) <u>-85.702937</u>					
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
5		Brown to gray, silty clay.							5
10									10
15									15
20									20
25									25
30									30
35									35
40									40
45									45
50									50

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Project ID: <u>S-085-2018</u>		Hardin - <u>US-62 MP 0.0-29.0</u> <u>ROLLING FORK</u>			Project Type: <u>Structure</u> Project Manager: <u> </u>				
Item Number: <u>04-1093.00</u>									
Hole Number <u>1009</u>		Immediate Water Depth <u>6.9 (04/04/19)</u>		Start Date <u>04/04/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>436.9'</u>		Static Water Depth <u>NA</u>		End Date <u>04/04/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>58.1'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767503</u>					
Location <u>42+38.43 16.5' Lt.</u>				Longitude(83) <u>-85.702937</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
55		Brown to gray, silty clay.							55
378.8	58.1	(Refusal)							
60		(Bottom of Hole 58.1') (Refusal @ 58.1)							60
65		Wet return at 20.0'.							65
70									70
75									75
80									80
85									85
90									90
95									95
100									100

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>		Project Type: <u>Structure</u>					
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>		Project Manager: <u> </u>					
Hole Number <u>1010</u>		Immediate Water Depth <u>17.3 (04/03/19)</u>		Start Date <u>04/03/2019</u>					
Surface Elevation <u>437.5'</u>		Static Water Depth <u>19.5 (04/04/19)</u>		End Date <u>04/03/2019</u>					
Total Depth <u>68.0'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767426</u>					
Location <u>42+38.43 16.5' Rt.</u>				Longitude(83) <u>-85.702875</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description Rock Core		Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
5 10 15 422.0	15.5	Stiff to very stiff, brown, clay.							
				ST-1	2.0-4.0	1.6		ST	
				ST-2	7.0-9.0	2.0		ST	
				ST-3	12.0-14.0	2.0		ST	
20 25 30 407.0	30.5	Stiff, gray, silty clay.							
				ST-4	17.0-19.0	2.0		ST	
				ST-5	22.0-24.0	2.0		ST	
				ST-6	27.0-29.0	1.9		ST	
35 40 397.0	40.5	Stiff, gray, silt with clay.							
				ST-7	32.0-34.0	1.3		ST	
				ST-8	37.0-39.0	2.0		ST	
45 50		Medium dense to very dense, gray, sandy gravel.							
				SS-1	42.0-43.5	1.1	4-8-11	SPT	
				SS-2	47.0-48.5	0.8	9-11-10	SPT	

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>						
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>						
Hole Number <u>1010</u>		Immediate Water Depth <u>17.3 (04/03/19)</u>		Start Date <u>04/03/2019</u>		Hole Type <u>core and sample</u>					
Surface Elevation <u>437.5'</u>		Static Water Depth <u>19.5 (04/04/19)</u>		End Date <u>04/03/2019</u>		Rig Number <u>365794</u>					
Total Depth <u>68.0'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767426</u>							
Location <u>42+38.43 16.5' Rt.</u>				Longitude(83) <u>-85.702875</u>							
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks		
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)		SDI (JS)	
		Medium dense to very dense, gray, sandy gravel.									
				SS-3	52.0-53.5	0.6	9-14-16	SPT			
55 382.2	55.3	Very dense, gray, silty gravel. (Begin Core)							55		
379.5	58.0			SS-4	57.0-58.0	0.7	12-50/0.50'	SPT			
60		Gray limestone, (horizontal fractures).		22 / 19	2.7	2.2	81		60.7		
65				84 / 74	5.0	4.6	92			65.7	
369.5	68.0			87 / 70	2.3	2.3	100				68.0
70		(Bottom of Hole 68.0')							70		
75											75
80											
85											
90											
95											
100									100		

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>				
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>				
Hole Number <u>1011A</u>		Immediate Water Depth <u>36.5 (03/28/19)</u>		Start Date <u>03/28/2019</u>		Hole Type <u>sample</u>			
Surface Elevation <u>436.9'</u>		Static Water Depth <u>3.2 (04/05/19)</u>		End Date <u>03/28/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>57.5'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767533</u>					
Location <u>42+90.11 3.3' Rt.</u>				Longitude(83) <u>-85.702749</u>					
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
5 431.4	5.5	Medium stiff, brown, sandy clay.		ST-1	2.0-4.0	1.2		ST	
10 15 20 25 30	35.5	Medium stiff to stiff, brown and gray, clay.		ST-2	7.0-9.0	1.8		ST	
				ST-3	12.0-14.0	2.0		ST	
				ST-4	17.0-19.0	1.4		ST	
				ST-5	22.0-24.0	1.7		ST	
35 401.4	35.5			ST-6	27.0-29.0	2.0		ST	
				ST-7	32.0-34.0	2.0		ST	
40 45 391.5	45.4	Medium stiff to stiff, gray, silty clay with rock fragments.		ST-8	37.0-39.0	2.0		ST	
				ST-9	42.0-43.8	1.6		ST	
50		Medium dense, gray, gravel.		SS-1	47.0-48.5	0.7	11-9-7	SPT	

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>			Project Type: <u>Structure</u>					
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>			Project Manager: <u> </u>					
Hole Number <u>1012</u>		Immediate Water Depth <u>4.6 (04/04/19)</u>		Start Date <u>04/04/2019</u>		Hole Type <u>core and sample</u>				
Surface Elevation <u>436.3'</u>		Static Water Depth <u>NA</u>		End Date <u>04/04/2019</u>		Rig Number <u>365794</u>				
Total Depth <u>67.0'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767631</u>						
Location <u>43+25.29 16.5' Lt.</u>				Longitude(83) <u>-85.702683</u>						
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks	
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)		SDI (JS)
5	430.8	5.5	Stiff, brown, sandy clay.		ST-1	2.0-4.0	1.2		ST	
10	425.8	10.5	Stiff, brown, clay.		ST-2	7.0-9.0	2.0		ST	
15	420.8	15.5	Brown, wet, sandy clay.		ST-3	12.0-14.0	1.3		ST	
20			Stiff, brown and gray, clay.		ST-4	17.0-19.0	2.0		ST	
25										
30	405.8	30.5			ST-5	22.0-24.0	2.0		ST	
					ST-6	27.0-29.0	1.8		ST	
35			Stiff, gray, silty clay.		ST-7	32.0-34.0	2.0		ST	
40	395.8	40.5			ST-8	37.0-39.0	2.0		ST	
45	390.8	45.5	Soft, gray and brown, silt with organics.		ST-9	42.0-44.0	1.2		ST	
50			Dense to medium dense, sandy gravel.							
					SS-1	47.0-48.5	1.3	10-12-18	SPT	

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>		Project Type: <u>Structure</u>					
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>		Project Manager: <u> </u>					
Hole Number <u>1012</u>		Immediate Water Depth <u>4.6 (04/04/19)</u>		Start Date <u>04/04/2019</u>					
Surface Elevation <u>436.3'</u>		Static Water Depth <u>NA</u>		End Date <u>04/04/2019</u>					
Total Depth <u>67.0'</u>		Driller <u>Bowling, Dewayne</u>		Latitude(83) <u>37.767631</u>					
Location <u>43+25.29 16.5' Lt.</u>				Longitude(83) <u>-85.702683</u>					
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description Rock Core		Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
55 379.3	57.0	Dense to medium dense, sandy gravel. (Begin Core)		SS-2	52.0-53.5	0.6	8-12-15	SPT	55
60 369.3	67.0	Gray limestone, (horizontal fractures).		SS-3 35 / 50	57.0-57.0 2.6	0.0 2.6	50/0.00' 100	SPT	59.6 60
65 369.3	67.0			90 / 90	5.0	5.0	100		64.6 65
70 369.3	67.0			71 / 67	2.4	2.4	100		67.0 70
75 369.3	67.0	(Bottom of Hole 67.0')							75
80 369.3	67.0								80
85 369.3	67.0								85
90 369.3	67.0								90
95 369.3	67.0								95
100 369.3	67.0								100

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Project ID: <u>S-085-2018</u>		<u>Hardin - US-62 MP 0.0-29.0</u>		Project Type: <u>Structure</u>				
Item Number: <u>04-1093.00</u>		<u>ROLLING FORK</u>		Project Manager: <u> </u>				
Hole Number <u>1013</u>		Immediate Water Depth <u>36.8 (04/03/19)</u>	Start Date <u>04/03/2019</u>		Hole Type <u>sounding</u>			
Surface Elevation <u>436.9'</u>		Static Water Depth <u>3.4 (04/14/19)</u>	End Date <u>04/03/2019</u>		Rig Number <u>365794</u>			
Total Depth <u>56.9'</u>		Driller <u>Bowling, Dewayne</u>	Latitude(83) <u>37.767554</u>					
Location <u>43+25.29 16.5' Rt.</u>			Longitude(83) <u>-85.702622</u>					
Lithology		Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description	Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
5		Brown to gray, silty clay.						
10								
15								
20								
25								
30								
35								
40								
45								
50								

