			HTW	DRILL	ING	LO	G				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	W-01D
1. COMPA	NY NAME	march 1		2.	DRILLING :	SUBCONTE					SHEE	T 1
		Millonne	11 /Avatar			4. LOCAT	ent Dri	Then	1		OF `	9 SHEETS
3. PROJEC	Factors	5-5 A+	11			4. LUCAT		E	of Counc	:1 000	رد . اد	
5 NAME O	F DRILLER	3 2 47	143			6. MANUF			ATION OF DRILL			
o. 741 and 5		e Stebbias					Versa So	nic	V-100			
7. SIZES A	ND TYPES OF		OD B.+		7 1	8. HOLE I						
AND SA	MPLING EQUIP	TOTAL CONT.	cubic wall so	umpler w			MW-0	D				
			4" inner be	111 9 6	μ.	9. SURFA	CE ELEVATION	1				
			outer casing			10 5175	OTLOTED			A DATE COM	DI ETED	
					-	10. DATE	13-15			11. DATE COM 5 - 13		
12 OVERE	BURDEN THICK	NESS I					H GROUNDWA	TER EN	ICOUNTERED			
(Z. OVEIL	JOHN THIO	4					See					
13. DEPTH	DRILLED INTO	ROCK				16. DEPT			APSED TIME AFTE	R DRILLING CO	MPLETED	
		66'						14	A			
14. TOTAL	DEPTH OF H	OLF.							ASUREMENTS (SPE			No.
12 1111111	250 x 267 235	70'							1.3 1 63 , 5	-15 E 180	0:22.	r' bys
18. GEOTE	CHNICAL SAN	IPLES	DISTURBED		STURBED	19			CORE BOXES			
20 SAMPI	ES FOR CHEM	MICAL ANALYSIS	VOC VOC	T METAL	-	OTHER	(SPECIFY)		HER (SPECIFY)	OTHER (S	PECIFY)	21. TOTAL COR
Lo. Orwin	LO I OII OIILI			MILIAL				-				RECOVERY
	٨١٨		AlA	N/A		AIA			NIA	11	A	100 %
2. DISPOSITION OF HOLE BACKFILLED		MONITORING	MONITORING WELL		(SPECIFY)	23. 5	SIGNATURE OF INS	SPECTOR .				
				X				١,	felies			
				1	FIELD SC	REENING	GEOTECH SA	MPLE	ANALYTICAL	BLOW		
ELEV.	DEPTH b	DESC	CRIPTION OF MATERIALS	3	RESI	ULTS	OR CORE BO		SAMPLE NO.	COUNTS	1	REMARKS h
	2	CLAY, fraction (104R, 4/1), conspanies /	sit, limestone s/z) trace el	hijh plash							Sonic	w   7"
		sit (Ryoli	TÚ		0.0							

MHK JUN 89

HTW DRILLING LOG									
Forbes	5-5	INSPECTOR  J. Br	rant			SHEET 2 OF 9 SHEETS			
DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h			
5 -	LIMESTONE, with chert, mod	lerate							
7	Telbuish brown (10 YR, 5/4), and	um							
	light gray (all) chert, wear	1.7							
1 =	high by me athere. beddeed a fi								
/_=	high by me othered. bedded in the sheets small shall fragaments crinoid Craymate	1.0							
6 -									
=		.1							
	- becoming blocky and hard	•							
	J.	0.0							
7 -	CLANSTONS								
	brown (104K, 5/4), very weak								
_	highly meathered, were the								
1	laminations, modium gray las	1							
9 =		0.0							
=									
1	CIMESTONE, with mehan	1.44							
	5-ay churt (NG), moderate								
1	7 + 1 lowish brown (10 yR, 5/4), v								
9 -	strong, sixtly mathered								
1	SHALE, dusky Yallow(54, 4/4)	0-0							
	limestone inclusions	a sionel							
	, and the same of								
10 -									
=									
	1								
	1	1							
. =									
// -	1	1							
7	1	1							
-	}								
3									
12 -									
1	1								
	3								
	1								
13 -	- interbodded of Limestone.								
	- intertudded of Limestone, chart fragments present 13	-15							
-									
	3								
14 -	PROJECT		j.		HOLE NO.				

СТ		- C 1)	INSPECTOR	4			SHEET 3 OF 9 SHEETS
1.	DEPTH	5-5 A+\as	RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
//.	14	SHALE, dusky yellow (54,6/4), were slightly weathered, introduced we limestone, whent fragments through small, dusky yellow (54,6/4), were made. stilly weathered.  SHALE, medium gray (NS), were made. stilly weathered.  SHALE, medium gray (NS), were made. stilly weathered.  SHALE, medium gray (NS), were weak, slightly weathered.	u d ith	OR CORE BOX NO.	f f	g	REMARKS  1  E 14 bgs Swite  to double wall  Sample barral  4" inside OD,  G" outer OD
	18	SAALE, dark gray (N3), weak, fresh					
	12	PROJECT				HOLE NO.	

24		HTW DRIL	INSPECTOR	· G			SHEET 4
CT	Fort	pas 5-5 Atlas	J. 3.	rant	F	- a. a.u.	OF 9 SHEETS
V.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	2\$	SHALE, darugray (43), and k Strong, fresh					
	١٠	LIMESTONE, with chest, dar gray (N3), strong, fresh, fossi	ic Vibrous				
	=	CIMESTONE, pole yallowish brown (104K, 6/2), strong, slightly meathered, fossilitaro.	45				
	21 —	(JE)					
	=	CIMESTONE, light olive gray (54,411), with chart, dark grain (N3), strong, fresh to slight	7/4				
	21	mathered, fossiliforous					
	30 -						1033 Home 1034-50 1034-50 Jal wate Begin using Borie Quick-Gel
	31						

ECT	61.	C- 5 All .	INSPECTOR	3-7-			SHEET 5 OF 9 SHEETS
v.	DEPTH	5-5 Allas  DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW	REMARKS
	32 -LIM	DESCRIPTION OF MATERIALS  C Stend E, with chest, a loss, strong, stightly  ather  LC, medium dang you  ), weak, weathered	duru	OR CORE BOX NO.	sample no.	g	HEMARKS  h  Color change  w 32' bys
	38						<i>1</i> 141
	-	STORE, grayish green livey, by fresh  E, grayish red (IOR, 4/L  My, fresh, variable  solidation  PROJECT				HOLE NO	1406 : Resume

		HTW DRILL	ISPECTOR				SHEET & OF 9 SHEETS
Т	Forhes	5-5 Atlas	FIELD SCREENING	GEOTECH SAMPLE	ANALYTICAL	BLOW	
	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS	OR CORE BOX NO.	SAMPLE NO. f	COUNTS g	REMARKS h
t	111 -54	HALL, grayish red (10x, 1/2), irong, fresh, variable consolidation					
	75+	rang, fresh, variable consolidati	**				
1	-3						
1	3			0.0			
	42						
ľ	, 4						V.
١	3						
١	=						
	‡						
ľ	13						
	3						
	=						
	=						
	44						
	=						
	=						
	3						
1	45		1				
	" =						
1	=						
١	3						
١	- =						
ı	46						
	3						
١	-						
١	4						
1	47	mothed grapish green ( 100%	( <del>4</del> )				
1	=	to grayish red (IPR, 42)					
1	=		1				
1	Ε .				N 1		
1	48						
1	" =						
	_=						
	$\exists$						
	Ξ.						
	19-						
	7			N .			
	3/	(CEMESTONE, grayish green 1004,5/2), weak, 5/1/4 thy weather	-				
	50 -	POPULATION CONTRACTOR TO A STATE OF THE STAT					

HTW DRILLING LOG  WECT Forbes 5-5 Atlas  INSPECTOR J.B-7+									
Uľ	Forbes	5-5 Atlas	I.	GEOTECH SAMPLE	ANALYTICAL	BLOW	SHEET 7 OF 9 SHEETS		
1.	DEPTH b	DESCRIPTION OF MATERIALS  C  MESTONE, grayish green	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS g	REMARKS h		
		color change to light oli							
	<u>*</u>	1-1 (57,41,)	7						
	1 43	MESTONE, medium light go Nb), strong, fresh. Vands of burt & small nodules							
	52	with a small resource							
	2								
	)4 								
	,								
	5								
	1	Y.							
	54-=-	Medium gray (NS)							
	57—								
	58-								
	59								

СТ	2.07	HTW DRII	MODERTOR				MW-01D SHEET 8 OF 9 SHEETS
_	Fo-bes	5-5 Atlas		GEOTECH SAMPLE	ANALYTICAL	BLOW	OF 9 SHEETS
v.	DEPTH	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	59 - LIME	STONE, midium gray	11 2 2 2 1			,	
	=(N5)	, strong, fresh, thin ha mall modules of chest	ds				
	and s	mall rodules of chert					
	1						
	=						
	60						
	3						
							\ \
	=						
	61						
	=						
	3						
	62-						
	- =						
	1, 1						
	63		1				¥
	3						
	1 1						
	64						
	-					1	
	]						
	15		9				
	1 1						
			_				
	1544	LE, pudium dara pro	7				
	],, ]	1 strong, trush					
	64						
	1 3		1				
	1 1			1			
	67-						
	=				1		
	1						
							1
	1. 4						
	68	PROJECT		1)		HOLE NO.	

T	HTW DRIL	Toka Levi Levi Zeronia	rant			SHEET 9 OF 9 SHEETS
DEPTH DEPTH	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
68	space, medium dara grag LN4), strong, firsh	d	е	f	g	h
70	TN=70'bgs					1605: Trant stops @ 70'b
						- Trant flushes boring wil fresh water  - 16 50: Trant bagins installing nw-01 to 65' bys
minimin						- No additions fluid loss after 30 by Total lost: 50 191 Groundwater was not observe during drilling
	PROJECT				HOLE NO.	

	HIW	DRILL	ing Lo	G			HOLE NO.  MW-01D
ROJECT FILL	es Atlas 5-5	INS	PECTOR J.3.	rant			SHEET / OF / SHEETS
ELEV. DEPTH	DESCRIPTION OF MATERIAL	s	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS
a b	Locking Cour  Stick up:  2.15!  Top of great  Top of bentunite  Seal: 47' bys  Top of Serven:  55.21 bys  Top of Serven:  75.21 bys  Top of Serven:  Top of Joseph Court  And the Seale.  Taskall dake:  Grout dake:	Protective Cover  A Protective Cover  A Cement well pad  High solids  bentanite  ground  Filter  Pack  Seal  Sound  Scal  Sound  Seal  Sound  Sound		6		HOLE NO.	Monitoring call Details  BH TD: 70' bys  MW TD: 65' bys  Material: 2" dia  Sch 40 puc  Cap: Flat  Screen: 0.010"  Factory Slothed  Riser: Blance  Puc  Manufacturer:  Tohnson  Lengths:  Cap: 0.35  Screen: 10.04  Riser: 10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  Total: 70.39'  Cut off: 2.64'  Stickup: 2.15'  Backfill: Halibarda  3/8" bentonite chips  70-66': 1-50thy  - Premier silica  20/40 silica sand  CC-CS' bys, 1-50thy  Filter Pack:  Premier Silica  20/40 silica sand  CG-CS' bys, 1-50thy  Filter Pack:  Premier Silica  20/40 silica sand  CG-CS' bys, 1-50thy  Filter Pack:  Premier Silica  20/40 silica sand  CG-CS' bys, 1-50thy  Filter Pack:  Premier Silica  20/40 silica sand  CG-CS' bys, 1-50thy  G-50thy  G-50thy  G-50thy  G-50thy  G-50thy  G-50thy  G-70thy  Guillets  Total: 1-50thy  Total:

MRK JUN 89 55-2 Fortes Atlas 5-5

NW-010

			HTW	DRILL	ING	LO	G				A. E.O.	ENO. W-02D			
1. COMPA	NY NAME	1.40	,1	2.	DRILLING S			. 1711			SHE	ET 1 S SHEETS			
0. 000 154		as & MiDo	an e []		- 1.	4. LOCATIO	aut O	11/1	<del>"</del>		Tora	SHEETS			
3. PROJE	Fa-1.	res Atlas	5-5		ľ			.6	Council C	rrove le	1				
E NAME (	OF DRILLER	K2 14 1 -2	, ,		- 1				TION OF DRILL		-				
J. IVAIVIE		ata Stable	int						C U100						
7 SIZES A	ND TYPES OF		4" dia bit			8. HOLE L									
	MPLING EQUIP	PMENT	4" dia sam	her barrel	(10,)										
			6" dia our	drill casin	-1	9. SURFAC	E ELEVATION	١							
			4" dia dont	le wall sa	mplar	10')									
			" die bit			10. DATE			-	11. DATE COM	DATE COMPLETED				
							17-15			5-17-	5				
12. OVER	BURDEN THICK					15. DEPTH			ICOUNTERED						
	020000000000000000000000000000000000000	4.5'			-		See 6			D DDII 11810 00	MDI ETED				
13. DEPTI	H DRILLED INT								APSED TIME AFTE		MPLETED				
	DEDTH OF !!	55.5'			-				SUREMENTS (SPE						
14. TOTA	DEPTH OF H	OLE .			- 1		A. C. S. C.		- 6 days			L			
18 CENT	ECHNICAL SAN		DISTURBED	LINDI	STURBED				CORE BOXES	arres d.	- LLIOPA	MAI			
io. GEUI	COTINIONE SAN		L/A	15.000	1/A	13.	2/1		JOILE BONEO						
20. SAMP	. SAMPLES FOR CHEMICAL ANALYSIS VOC METALS			OTHER	(SPECIFY)	_	HER (SPECIFY)	OTHER (S	PECIFY)	21. TOTAL COR					
							10.					RECOVERY			
			NIA	21	A		UlA	_	AlA	NI.		100 %			
22. DISPO	ISITION OF HO	LE	BACKFILLED	BACKFILLED MONITORING WEI		OTHER	(SPECIFY)	23. 8	SIGNATURE OF INS	PEGTOR					
				X					Miller	180	_				
					FIELD SCI	REENING I	GEOTECH SA	MPIE	ANALYTICAL	BLOW					
ELEV.	DEPTH	DESC	CRIPTION OF MATERIALS	S	RESU		OR CORE BO		SAMPLE NO.	COUNTS		REMARKS			
а	D _		sill, trace fine		d	d	е		f	g		h 15@ 1207			
	2 —	- becoming		~ (104R,5/2)	0.0						4"d.	Legins ling w/ ling w/ lia bit and lia sampler rel.			
	4	Frown (104R	NE, moderate 4,5/4), strong ling present	_	0.0						/211				

MHK JUN 89

CT			DESTAR	3-7ant			SHEET 2
	For	bes Atlas 5-5	FIELD SCREENING	GEOTECH SAMPLE	ANALYTICAL	BLOW	OF SHEETS
	DEPTH	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	5 -	clay, with coarse sand and fine	u			9	1218
П	=	gravel, light brownish gray	Lance of the				
	- <u> </u>	(2.54, 6/2), damp, soft, moins	0.0	1			
		plasticity, sand and gravelis					
	7	angulor					
	6	CIMESTONE, with thin shale interly	0.0				Hard drilling
	Ξ.	Yellowish gray (57,7/2), strong, slightle mathemat	1				
	=						
		- becoming medium dark gray (144) we small calcite erychals throughout					1.0
	=	we small calcite crystals throughout					1 1
	7 —	The small of	0.0			ý i	
	1	SHALC, with the linestone including dusky yallow (54,64),				P I	
	=	unak, slightly matheral, oxidation					
	-	present		(c)			
	1						
	8 _	1.1	0-0				1225
	= = =		0.0	ř.			1228
	= =		1				
	-		8				
	9 _		0.0				
	, =	A					N 4 11
	110						
	7						55)
	10	- less oxidation present	0-0				1232
	=						7231
							-Driller begins
	-						using double un
	=		0.0				امام
	11 -		0.0				- Drillar using
	=		1 - 0 1				Quien Gal
	=						
	-						
					1		
	12-		0.0				
	_						
	-	- traces of gray mottling present					
	2	Jack transfer of the state of t					
						ľ	
	/3 —	- bacoming liney	0.0				
	-			1	i.		
	-						
	14 =	- thin lime stom layer, olive gray (54,411), fossiliferous	0.0				
		PROJECT		-		HOLE NO.	

		HTW DRILL	ING LO	G			HOLE NO.	
PROJECT	-	INS	SPECTOR フ. ろ、				SHEET 3 OF 8 SHEETS	
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS	
а	Ι, , Ξ	SHALE, motted medium dark groy (a4) to light olive brown (FY.5%), moderately strong, slightly weathered, truces of exidation		0.0		9	change @ 14	
	15	present		8-0			1250 lunch 1423 bread - brillar changes o-ring on double wall	
	14-			0.0			Resume @ 1422 Nriller advances L" overdrill casing	لسسلسا
	17 —			0.0				
	18			0.0				
	19 -	T B		0.0				
	]	LIMES TONE, with pudium bluish gray (58,5%) chart, yellowish gray to medium light gray (AG), strong, slightly musthers		0.0			1459 508 -illa-reports -300 gal fluid loss from 0.201	the state of the s
	2 /			0-0				
	22—			1.0				Limb
	23	PROJECT		0.0		HOLE NO.		E

MRK JUN 89 55-2 Fortes Atlas 5-5

MW-020

		HTW DRILL	ING LO	G			HOLE NO.
DJECT	C . lo.	s Atlas 5-5	ISPECTOR T Z	yent			SHEET 4 OF & SHEETS
LEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
a	23 - 4	Intertable, with medium sluish gray (50, 3%) check, Yellow rapito andium light gray (Nb) 1 rong, Slightly weathered, vaces of oxidation				3	
	24	races of oxidation	0.0				
	25-		v.º				
	24-		0.0				
	27		0.0				
	28		0.0				
	21		0.0				1526 - Drillar
	1	HALE, dork granish gray 56,41,1, moderately strong, Fresh	0.0				Ditaid to so after 20 bys.
	31-		v.0				fluid 102 20-30 h
	32	PROJECT	V-0			HOLE NO.	

DEET FOR ALLOS S-5  REFECTIOR  FOR THE DESCRIPTION OF MATERIALS  RESULTS  OF CHILD SCREENING GEORGE SAMPLE ANALYTICAL BLOW COUNTS  FRANKS  OF CHILD SCREENING GEORGE SAMPLE ANALYTICAL BLOW COUNTS  REMANS  OF CHILD SCREENING GEORGE SAMPLE ANALYTICAL BLOW COUNTS  FRANKS  OF CORP FOR NO. O. SAMPLE NO. COUNTS  OF CORP FOR NO. SAMPLE NO. COUNTS  OF CORP FOR NO. O. SAMPLE NO. COUNTS  OF CORP FOR NO. O. SAMPLE NO. COUNTS  OF CORP FOR NO. NO. CO		HTW DRI	LLING LO	G			HOLE NO.	
BED SCREENING GETTER SAME END COUNTS  RELIANCE COLOR PROCESS AND COUNTS  SAME IN COUNTS  RELIANCE COLOR PROCESS AND COUNT	C 1.		INSPECTOR				SHEET S	
37 SHALE, grayith red (5R, 4k) 1  38 SHALE, grayith red (5R, 4k) 1  40 O O O O O O O O O O O O O O O O O O O	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS	
	32 - 5 H 	DESCRIPTION OF MATERIALS  C  ALE, dark granish gray  G. 4h), moderately strong,  rests	RESULTS d 0.0 0.0 0.0 0.0 0.0	OR CORE BOX NO.	SAMPLE NO.	COUNTS		
	40-300	ocherately strong, fresh	0.0				1547	himil
		32 - SH 32 - SH 33	DEPTH DESCRIPTION OF MATERIALS  32 SHALE, dorn principle yeary  (56, 41), moderately strong,  fresh  34  36  37  38  38  39  30  31  31  31  31  31  31  31  31  31	DEPTH DESCRIPTION OF MATERIALS  DEPTH DESCRIPTION OF MATERIALS  SHALE, dark promish yary  (56, 4h), moderabely strong;  fresh  0.0  0.0  34  0.0  35  0.0  36  0.0  37  0.0  38  39  0.0  36  37  0.0  38  0.0  0.0	DEPTH DESCRIPTION OF MATERIALS  STALE, grayith red (SR, 412)  SHALE, grayith red (SR, 412)  SHALE, grayith red (SR, 412)  October SHALE, grayith red (SR, 412)  SHALE, grayith red (SR, 412)  October SHALE, grayith red (SR, 412)	DEPTH DESCRIPTION OF MATERIALS  DEPTH DESCRIPTION OF MATERIALS  SHALE, dear provide red (SR, 4lx) 1  accelerately strong, fresh  DESCRIPTION OF MATERIALS  FIELD SCREENING  GEOTECH SAMPLE MALLYTICAL  RESULTS  OR CORE BOX NO.  BOX NO.  O. O.  O. O.  SHALE, grayish red (SR, 4lx) 1  accelerately strong, fresh  O. O.  O.	DESCRIPTION OF MATERIALS  DESCRIPTION OF MATERIALS  STANDARD AND A COUNTS  CTG. 41.), maderale(1 strong).  CTG. 41.), maderale	DRPH DESCRIPTION OF MATERIALS  DEPTH DESCRIPTION OF MATERIALS  PREDICTION OF CORRESPOND OF COUNTY OF A

MRK JUN 89 55-2 PROJECT Factor Atlas 5-5

MW-02D

			ILLING LC	G			MW-020
JECT	Forbe	s Atlas 5.5	INSPECTOR	Broant			OF & SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
a	41 - 54	ALE, grayish red BR, 4/2 durately strong, fresh	),				
	- no	durately strong, fresh					
	- 3						l i
	=	10	6				
	42 -						
	=_						
	- 5 H	ALE, medium gray (NS)					
	43-	au, fresh		4			
	'						
	1			1			
	E						
	44-						
	E		1				
	=						
	45-						
	]						
	=						
	=						
	46						
	]						
	1 =						
	47		_				
	- 5 14	ALE, graenish gray 1504, odrabely strong, fresh	64,),				-=
		wand it. a.l.					
	1 1						
	48-						
	=						
	=						
	49-						
	E						
	15+	rong, slightly weathered,	(47), 4				
	50 = 50	nall nodules of chiert	ds and				1630
	Se	PROJECT			L	HOLE NO.	1,6,2

	1 411	HTW DRII	INSPECTOR	- 1			SHEET 7
	TH DESCRIP		FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	OF & SHEETS REMARKS
DEPT 6 50 51 52 53 54	- LIMESTONE.	PTION OF MATERIALS  C  I ight gray (NT)  Hy weathered, from  Lies, thin bands  of chief	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	g	REMARKS h
55-		ium gray (NS), si	(ros)				
59	PROJE	ect .				HOLE NO.	

02.00		HTW DRIL					SHEET 8
ECT	For	hes Atlas 5-5	INSPECTOR J.3.	7 mat			OF & SHEETS
EV.	DEPTH	DESCRIPTION OF MATERIALS	RESULTS	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	59 -	SHALLY MUDSTONE, dark gray ( moderately strong, fresh	u s),	*			change e
	40						1458
		TD = 40' 693					1700: Stope 40'65.
							Trans sets and to 55' bys
							- No additional fluid less after 30' by s.
						-	- Groundwater not observed during drilling
						d	
	=						
ᆗ	FORM 55	-2 PROJECT Forkes At				HOLE NO.	

CT _	bes Atlas 5-5	INSPECTOR	> L			SHEET / OF / SHEETS
. DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS
	Top of bentanite A Pullingham Solids  Top of Filher Poets: 42' bys  Top of Filher Poets: 46' bys  Top of secreta:  50' bys  Top of becafill:  58' bys  Early  Chi	chine  chine  mite  mite				Mall Dehails  Makerial:  2° dia, Sek 40  pue  Cap: Flat  Servers 0.010"  Fectory slotted  Rister: Blank pur  Manufacturer:  Tohnson  Lengths:  Cap: 0.23  Servers: 5.00  Rister: 10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.01  10.00  10.00  10.01  10.00  10.00  10.00  10.00  10.00  10.00  10.00

	HTW	DRILLI	NG LC	OG			HOLE 5B	NO.
1. COMPANY NAME		2. D	RILLING SUBCOM	Tractor	Thin		SHEE	T 1 SHEETS
Burns & M. Don.  3. PROJECT  Forbis Atlas	16/1		4. LOC	ATION			7	UNELTO
Forbes Atlas	5-5				et Council		15	
5. NAME OF DRILLER Lake she be			6. MAN		ESIGNATION OF DRIL			
	" dia bit		8. HOL	E LOCATION	Soni (	//00		
AND SAMPLING EQUIPMENT	dia sigle wall	lampler						
4	die double wo	11 sampler	9. SUR	FACE ELEVATION	V.			
	" dia bit		10 DA	TE STARTED		11. DATE COM	PLETED	
-	" die cosicy			5-19-15		5.27		
12. OVERBURDEN THICKNESS			1000		TER ENCOUNTERED			
4.5			16 DE	DTH TO WATER	AND ELAPSED TIME A	ETER DRILLING CO	MPI FTFD	
13. DEPTH DRILLED INTO ROCK	,		13	35 611	, 9 days	after dri	11:11	
A TOTAL DEPTH OF HOLE			17. OT	HER WATER LEV	EL MEASUREMENTS	(SPECIFY)		
14. TOTAL DEPTH OF HOLE 40	DISTURBED	LIMPIC	TURBED		BER OF CORE BOXES			
18. GEOTECHNICAL SAMPLES	USTURBED W/A	NOIS	C2.45.67	N/A	DETI OF COME BOXES			
20. SAMPLES FOR CHEMICAL ANALYSIS	voc	METALS	ОТН	ER (SPECIFY)	OTHER (SPECIFY	OTHER (S	SPECIFY)	21. TOTAL COR
	7	مالم	1	TOL	N/4	41.		RECOVERY
22. DISPOSITION OF HOLE	BACKFILLED	MONITORING		ER (SPECIFY)	23. SIGNATURE OF	INSPECTOR	,	
		×		- 12 27	1 ///	1166		
			FIELD SCREENIN	G GEOTECH S	AMPLE ANALYTICAL	BLOW		
ELEV. DEPTH DES	SCRIPTION OF MATERIALS		RESULTS d	OR CORE BO		The state of the s		REMARKS
Jand, Social	sit, trace on grayish brown damps andiversity	disma in a shillness.	0.0		50-01/58- Nup-3	5B	w/so	ing 58-01 wie - 4"dia wall sample dia bit

Tobes Atlas 5-5  NSPECTOR  T. Broad  T. Broad			HTW DRI		G			HOLE NO. 5B-01/MW-025
DEPTH DESCRIPTION OF MATERIALS  FIELD SCREENING GEOTECH SAMPLE ANALYTICAL OR COUNTS  SIFALE, moderate prilowith brown (1904, 174) for 174 for alive brown (1904, 174) for 174 for alive brown (1904, 174) for 174 for alive brown (1904, 174) for alive brown	СТ	Fail	les Atlas 5-5	INSPECTOR T.	Bozant			SHEET & OF 5 SHEETS
SHALE, moderate gallowith brown (101/1.54) to light above  Hyperin (54, 16), moderately  Strong, slightly weatherd, occasion  CALECAE adulas progrant  0.0		DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
Je coming week, weathered 0.0  Style Hy weathered  Oco  Style Hy weathered  Oco  Oco  Oco  Oco  Oco  Oco  Oco  Oc			brown (1041. 5/4) to light oliver brown (54, 5/4), moderately those with the weathered, or	cornel				
9 - Vacouring moderately strong, 0.0  Slightly method  0.0  - Sacouring man, mathered  0.0		7 -	- CALTEHE nodulas present	0.0				
Shiph Hy weathered  10  - Jacoming was mathered  0.0		8	be coming weak, weather	J 0-0		0100 58-01/58-	01-8-18-9	
- Jacoming unau, mathered		9 =	- Vaccouring moderately strong shipletly meathered	0.0				
0.0		10						0032
		,, =	- Jacoming unau, mathere					
- becoming medicately strong, 0.0		\[\lambda_{\infty}\]	- becoming mederately strong weathers	0.0			1-11-12	
0.0		13 —		0.0				
(51,7/2), weak, anothered, could friable 0.0			101.761 max mathered, c					

Forbas Atlas 5-5

SB-01/MW-025

11.5		HTW DRIL	LING LO	G			HOLE NO. 58-01/mv-025	
PROJECT	Fa. 61		INCDUCTOR	Brant			SHEET 3 OF 5 SHEETS	
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
a	14 -	LIMEY SHALE, yellowish gray (51,7/2), mak, mathered, frieble			0935 5B-01/5B-	01-14-15		
	15 —		0.0					
	16-	SHALE, woderate of we how	0.0					
		(51,4/4), wear. shightly	0.0					
	17	- becoming moderate olive brown 154,44) to medium 9 ~1 (NF) and meathered			0945 5B-01/5B-	ol -  )- <u> 8</u>		
	18 —	SHALE, light olive gray (54, 64), strong, frush	- 0.0					
	14 —	DE MESTONE, MOTHER grayish	0.0					
	20	IN3), strong, fresh	0.0					
	-	LIMISTORIE, with the + nodule. Yellowish gran (57,7/2) to media light gran (Nb), strong, slightly meathered					0845 - Driller 0850 - Driller installs 6" dia casing.	
	21						4 switches to 4" dia double was Sampler a logins ksing auice	-
	27_		0.0				- orlar estimates - orillar estimates - orillar estimates - orillar estimates	Ē
	23	PROJECT	0.0			HOLE NO.	an additional 1-zon gal fluid loss o-zo' during 8" cosing placement	

Fo-bes Atlas 5-5

513-01/MW-025

СТ	= ,	111	INSPECTOR	Bryant			SHEET 4 OF 5 SHEETS
<i>)</i> .	DEPTH	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	b	CSMLSTONE, with clay, grayith	d	е	f	g	Change @ 23'
	23 -	110 va. 7/4), wet, weaks			0955		
	=	weathered, freakle, exidation press	rat		5B-01+5B-0	1-23-24	- Saturated Sample,
	-						possible grand
	24-	cimestand, with chirt modules,					
	3	Yellowish gray (54,7/2) to mudio			11		
	-	light gray (Nb), strong, slightly					
	= =	weathered					
	25			1			
	-	LIMESTONE , with clay , Yullo	الأس			( ),	
	=	gray (5-1,7/2), man, mathree friable	,				
	-	friable					
	1 - 2	Parameter Comments	<u>.</u>	1			
	26-	LIMESTONE, with chart nothing	las				
	-	Yullowish s roy (5/17/2), strong,					
	-	slightly weathered, some forsils					
	21-						
	=		_				
	-	LIME STONE, with clay, midin	7				
		durk gruy ( N4), weak, weather					
	28-	I EMESTALE, grayish orange					
	3	1104R, 7/4 1, strong, 5/19679					
	-	weathered, oxidation present					
	1	bluish gray chert rodales					
	21	Present					
	-				li li		1
	3						
	_ =						0940 installs
	30-						osro 8" casing
	- 3						shalise to 2016
	-						stops 8" @ 18'
	-						695.
	31-						-c" ise
	-	moderately strong, slightly west	herry,				27' 59 3
		some shell fragment impression.	1,	1			Driller resumes
		slight exidation present					Soilling w/ L' dia
	32						carries to so' by

IECT		HTW DRI	INSPEC	TOP				SHEET 5
	Forb.	os Atlas 5-5	FIE		GEOTECH SAMPLE	ANALYTICAL	BLOW	OF 5 SHEETS
EV.	DEPTH b	DESCRIPTION OF MATERIALS	,,,,	RESULTS d	OR CORE BOX NO.	SAMPLE NO. f	COUNTS	REMARKS h
a	32 -SHA	iderately strong, slightly were me shell fragment inpressions ight exidation present						
	J~.	devalety strong, slightly we	athere,					
		me shill fragment impressions						
					N 1			
	]	MESTONE, medium gray (NS	* ·					
	33	rong, slightly mathered			1			
	3				11			
	3							1
	7		_					
	34 -541	ALE, granish gray 150,6	1.1.					
		denotely strong, fresh						1 9
	7~'	2 7 TO 1 TO 1						14
	1 7							
	7							
	35							
	-							
	=					1.1		
	36-							
					1			
	- S H	ALC, grayich red 110R, 4/2	),					
		oderately strong, fresh						
	37	3. (3.4.						
	-							
	=							
	38							
	=							
	7							
	1 7							
	37							- Drillar estimate.
	7							a total of ~300
	1							Jal fluidless for the hole.
	7							to me hove.
	3	7						
	40							
	1	TD=40' 6,5						5/27/15@1107: briller stops @
	1	10-70 893						40' bgs. Install
								well to 31' by 1.
	1 1							schails on diagram
		PROJECT					HOLE NO	

MRK JUN 89 55-2 Fo-425 Atlas 5-5

58-01/mw-025

CT	A. T.		INSPECTOR				SHEET 1
	Forbes	Atlas 5-5	FIELD SCREENING	S-701+  IGEOTECH SAMPLE	ANALYTICAL	BLOW	OF 1 SHEETS
ev.	DEPTH	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Com  Com  Com  Com  Com  Com  Com  Com	my how with the said of the sa			HOLE NO.	MW-025 Moniforing Well Defails.  BHTO: 100 19  MW TO: 31' by s  Molerial:  2'dia Sek 40 PU  Screen: 0.010"  Factory Slotted  Car: = lat  Kiser: 2''dia  blank  Lengths:  Cap: 0.23  Screen: 5.05  Riser: 10.00  10.00  Total: 35.28  Cutoff: 0.93  Stick up: 3.35  Backfill: - Holiphin Spentonial Chips 32.40' by s  Used 2.0-50*bay  Filter Pack: - Premier Silica  20/40 grade  Silica Sand  31-32' by s  Used 1-50*bay  Filter Pack: - Premier Silica  20/40 grade  Silica Sand  31-32' by s  Used 1-50*bay  Filter Pack: - Premier Silica  20/40 grade  Silica Sand  31-32' by s  Used 1-50*bay  Filter Pack: - 22-31' by s  Used 5-50*bay  Scal: PDS-Pel  Clay Bentonile  Pellets  18-22' by s  18-22' by s  18-3' by s  Crout: Halibert  Ex Sand: 1.5-50*  Anize Grout: 0.2  50*50*3  Anize Grout: 0.2

			HTW I	DRILLI	NG L	_OG				HOLE	-09/mw-
1. COMPA	NY NAME		916	2. D	RILLING SUB	CONTRACTOR	N .11			SHEE	ET 1 8 SHEETS
	Burns	& Millon	44	100	I <sub>A</sub>	LOCATION	Drill	·~)		UF 3	O STILL TO
. PROJEC	Forbas	ALL	5-5		4.		of	Council	brom.	KS	
NAMEO	F DRILLER	77 145	-		6.	MANUFACTURER'S D	ESIGNAT	TON OF DRILL		15	
. HANE O		Stabbi	~5			Vers	a - 5	onic VI	00		-
. SIZES A	ND TYPES OF DRIL	JNG 4	" dia bit		8.	HOLE LOCATION					
AND SA	MPLING EQUIPMEN		' dia Singla u							_	
			dia double	wall comp	9.	SURFACE ELEVATION	N				
			" dia bit " dia casing		10.	DATE STARTED		1.	11. DATE COM	PLETED	W
			dia vit 4			6-2-15			6-2-	15	
2. OVERE	BURDEN THICKNESS			,	15.	DEPTH GROUNDWA					
		2.7						marks		MOI STED	
3. DEPTH	DRILLED INTO RO		- 11		16.	DEPTH TO WATER	AND ELA	PSED TIME AFTE	R DRILLING CO	MPLETED	
4 TOTAL	DEPTH OF HOLE	57.3			17	OTHER WATER LEV	_				
4. IUTAL	DEFIN OF HOLE	60						Stoc -		ulopa	nent
8. GEOTE	CHNICAL SAMPLES		DISTURBED		TURBED	19. TOTAL NUM	MBER OF			7	
			NA		AIA		1/4	and reserve	1 22000		10
20. SAMPI	LES FOR CHEMICAL	ANALYSIS	VOC	METALS	5	OTHER (SPECIFY)	OTH	HER (SPECIFY)	OTHER (S	SPECIFY)	21. TOTAL O
			6	116	4	6 - TOC		NIA	NIA		100
22. DISPO	SITION OF HOLE	-	BACKFILLED	MONITORING	WELL	OTHER (SPECIFY)	23. SI	GNATURE OF INS	SPECTUR	и	
				V			1/	Melle	014		
			_	×	FIEL D 0005	SAUNO OFOTEOUS	11/2/5	ANALYTICAL	DI OW		-
	DEPTH	DECO			FIELD SCREE			ANALYTICAL SAMPLE NO.	BLOW	1	REMARKS
ELEV. a	b = 5.1	t, dark	comese grammer of the frame of the frame plants	1, trace 10/Ritle),	RESULT d	e		0915	9	Traus drilli	t begins
	2 - SHI	AVEC. vi AVEC. vi WA (104R, AVEC, vi WA (104R, AY, Shale AY, Shale AY, Shale AY, Wary di HIK, high ALC. dus Lak, cut	c comse gram	it, trace 1 offite), 2.4, organis it, gale loose, whir, 1 chart (54,64), dog, 1, damps 4,64),	d	e		f.	9	Traus drillis bit q	

PROJECT		HTW DRI	INSPECTOR				HOLE NO. 5B-09/AW-03E SHEET 2
I NOJEGI	Forbes	Atlas 5-5	J.	Bryant	I	T 61 61:	OF 8 SHEETS
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREEN RESULTS d	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS h
u	5 - 3H	ale, dusky yallow (54,614 ale, weathered, oxidation of yaray mottling present	1,				0835
	ulm	becoming moderately stro			0935 58-49/58	o9-6-7	
	8						
	9 —						
	10 -						0839
	" —						osyo:  Brillar advance  B" dia bit e cos  to 10' to stop  theid escaping un  mud tub.
	n —						-50 jal flui loss
	/3 —				0845 58-09/58 4 MS/MUC	-09-12-13 )	
	M =	lonover-				luar = v=	
MRK 5	FORM 55-2	PROJECT Fortes A	+ las 5-5			5 3 - 0 °	1 mw-osp

		HTW DRILL		G			HOLE NO. 50-09/MW-030
OJECT	For	bes Atlas 5-5	NSPECTOR J. B.	yant			SHEET 3 OF & SHEETS
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	ر ا	SAALE, dusky yellow (54,64) wig gray mothling, undurately stron uncothered, oxidation present	il	e	1005 53.09/5B-	g 09-15-16	10 B
	18	LIMESTONE, with unglight  gray (NT) churt, yellowish  gray (StiTlz), strong, fresh  LIMESTONE WITH LIGHT  BLUISH GRAY (SIS 7/1) CHERT  YELLOWISH GRAY (SY 7/2)  HODERATELY STRONG, SLIGHT, I  WESTHERED. DENDATION RESERV			1015 513-01   58 1015 (2 54-09   55	(B)	<u>0845</u> 084 7
	21	LIMESTONE YELLOWISH GRAY					advances 6" dia bit 4 casing to f8' bys and Switch to 4" dia double wall sample.  - Using Helishan avice and in drilling fluid.
		(SN 712) MODERATRIY STRONG, SLIGHTLY WESTHERED					-

MRK JUN 89 55-2 Forbes Atlas 5-5

58-08/mw-030

ECT		RILLING LO				SHEET 4
7 7 7 7	DESCRIPTION OF MATERIALS	FIELD SCREENING		ANALYTICAL SAMPLE NO.	BLOW COUNTS	OF & SHEETS  REMARKS
2.4 - 2.5 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 - 2.6 -	c Ale	CRONG,  ISH  LOWISH  HICKED.  GHT  SH  PISH	OR CORE BOX NO.	SAMPLE NO.	g	0922 0928
28-	SHALE GREENISH GREE (SGY 6/1) HIGHLY WEAR	THRRED				0938

T.		HTW DRILI	INSPECTOR				SHEET 5
'	Forbes	Atlas 5-5	3 .	3-7-1+		DI OW	OF & SHEETS
	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
1	32 -	SHALK GRKENISH GRAY SGY (1) HIGHLY WRATHRAK					
	] = 1	CCY (1) HIGHLY LIGHTHRAK	y				
	7	Say of I many wi		R			11
	= 1	WRAK					
	73—						
	=						
	=						
	= س						-
	1773	SHALL (TREENISH GRAY					
	](	564 6/1) HIGHLY WEATHERING					
	= /	SHALE GREENISH GRAY (564 6/1) HIGHLY WEATHERING TOSSERATION STRONG					
	35						1
	1						
	=						
	3						
	36-						
	3						
	-3	TODERATRY STRONG, WRATHEREN	7				
	=	TODERATRY STRONG, WEATHERED					
	37 -5	HALL GREENITH GRAY (564 6/1)	-				
		SEAK, HIGHLY WEATHERED					
	=						
	Ξ,	MALK CHAYISH RED, (DR. 4)	2)				
	38	nodurately strong, meather	1				
	3						
	=						
Ц	39—		1				
	<u> </u>						
	- =						
	=						
	40-		1				1039
							15577
	-			1			
	u, =						
	1 1	PROJECT				HOLE NO.	

UE OF		HTW DRI	INCRECTOR				SHEET 6
IECT	Forbes	Atlas 5-5	1.	3-2-nt		20.200	OF & SHEETS
.EV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	41 - SHA	LE. grayish red (102,4) durately strong, weather					
	on E	durately strong, weather	لمه				
	-						
	= =						
	42-						
	]						
	-						
	]						
	43						
	]						
	44-						
	=						0.0
	-						
	]						
	45						1
	l 3						ľ.
	===						
	=						
	46-						
	]						
	-						3 5
	]						
	41-						
	]		1				-
	-						
	1. 4		1				
	48		1				
	=						
	] =						
	=						
	49-1-43	TMESTONE, audium lis	4+				
	1 20	of (NG), strong, slightly athural, thin bands and si	11				
	100	lules of gray to blace the	<i>-</i> +				
	50 =						1114
		PROJECT		•		HOLE NO.	

CT	(-1	nes Atlas 5-5	INSPECTOR	3. 1			53-09 mw-03 SHEET 7 OF 8 SHEETS
v.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW	REMARKS
	57	LIMESTONE, midium light gray (N6), strong, slightly weathered thin bands and small modules of gray to black chart	d J	e	ţ.	g	1172
	54	SHALE. medrum clark gray (N4), strong, frash					
	57	LIMESTONE, medium light gra (Nb), strong, slightly mathematical SHALZ, medium dark gray (N4), strong, fresh.	7				
	58-	PROJECT				HOLE NO.	

T E	orbes Atlas 5-5	ILLING LO	Bryant			SHEET &
		FIELD SCREENING	GEOTECH SAMPLE	ANALYTICAL SAMPLE NO.	BLOW	OF & SHEETS  REMARKS
DEPTH 59		FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS  1150 TRAUT  ADVANUES 6"  SAMPLIA TO 60'  1156 RECOVER SAMPL  1156: Traut  Stops e 60' b  Traut install  MILL to 54' b  Details on well  diagram,  Total fluid  lost: ~50 gal  Total FOW  Cliquid) general  ~1300 gal.
65-	PROJECT	Has S-5			HOLE NO	

IECT		HTW DRILI	INSPECTOR				SHEET 1
	For be	15 Atlas 5-5	1.	B-7aut			OF SHEETS
EV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
		Locking					Monitoring well Datails
	1	Cover					BH TD: 60' 6,1
		5- plug					MWTD: 54' 611
	=						Material: 2" die
		- Start protection	ive				Sch to puc Man: Johnson
	3	65					Cap : Flat
		T. A Lane	7				Sersen' 0.010"
	3	Tor of great: The road					Factory slotted
	=						Riser: Blank PUL
	3						100
		D PUC Rises					,
	=						Lengths cap: 0.23
	0-1	A High A solids					Serven : 5.00
	=	Beatoni Grow	le L				Riser: 10.00
	-	Top of Seal: V					10.00
	=	41' 43					10.00
	1	Tor of Fither Seal	le				10.00
		Pack: 45' by .					10.00
	-	Top of Server : 49' \$3 : = - SAND					Total: 65.23
	=	Filter					Cutoff: 8.05
	-						
	- 4	TO: 54' by, Slotted					Stickup: 2.75
10	=	TO: 54' by,	^				Backfill: Dyo- Ben 3/8" Bonbail
	=						Chips Don Kant
		Bottom Bottom					80-54 bss
	- ,2	BH TO: Bentonit					used 1.25-50# b
	=	60' bys					Filter Pack:
	- 2						Premier Silica 20/40 Grade Silica
		Not to scale.					Sand
		Well install date: 6-2-15					56-45 33
	-			4.	( L .	1111	used 5-50+ has seal: pos
	= =	Grout date: 6-2-15					Pel Plug benton
	-						pellets
	Ξ				41-3'	50th bag	45-41' bg 1 und 1.5-59al
	-				7, 5	D's	buenets
	=						
	-						

			HTW [	DRILLI	NG L	.OG				7.00	NO. -035
1. COMPAN			2. DRILLING SUBCONTRACTOR  2. DRILLING SUBCONTRACTOR  4. LOCATION  5-5  6. MANUFACTURER'S DESIGNATION OF DRILL  VICTA SONIC VIDO  8. HOLE LOCATION  6. MANUFACTURER'S DESIGNATION OF DRILL  VICTA SONIC VIDO  8. HOLE LOCATION  6. MANUFACTURER'S DESIGNATION OF DRILL  VICTA SONIC VIDO  8. HOLE LOCATION  10. DATE STARTED  11. DATE COMPLETED  12. "Vida bit  13. DEPTH GROUNDWATER ENCOUNTERED  14. DEPTH TO WATER AND ELAPSED TIME AFTER PRILLING COMPLETED  15. DEPTH GROUNDWATER RENCOUNTERED  16. DEPTH TO WATER LEVEL MEASUREMENTS (SPECIFY)  17. STAL NUMBER OF CORE BOXES  17. HT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	T 1							
1 1 1 1 1 1	Travel	Drilling	2. DRILLING SUBCONTRACTOR  4. LOCATION  5-5 E of Connect Grow, 15  6. MANUFACTURER'S DESIGNATION OF DRILL  VICTOR SOME VICTOR  4" Lie bit  4" Lie bit  4" Lie bit  6" die bit	OF 4	1 SHEETS						
3. PROJEC	T			5-5 E of Conneil Grow, RS  6. MANUFACTURER'S DESIGNATION OF DRILL  Versa Source V 100  8. HOLE LOCATION  8. HOLE LOCATION  6. MANUFACTURER'S DESIGNATION OF DRILL  Versa Source V 100  8. HOLE LOCATION  6. MANUFACTURER'S DESIGNATION OF DRILL  10. DATE STARTED  11. DATE COMPLETED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED  5-1 Remarks  16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED	2						
5. NAME O		s Atlas	3-2	6. MANUFACTURER'S DESIGNATION OF DRILL  VISTA SONIC VIDO  8. HOLE LOCATION  8. HOLE LOCATION  8. HOLE LOCATION  10. DATE STARTED  11. DATE COMPLETED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED  5-2 Remarks  16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED  17. 47 bloc - 1 Day  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  17. 25 bloc - Post due logsmant  19. TOTAL NUMBER OF CORE BOXES							
J. NAIVIE U	NILLEN N	dask stable	ins	6. MANUFACTURER'S DESIGNATION OF DRILL  VISA Soaic V 100  8. HOLE LOCATION  10. Singlewell Sampler  10. DATE STARTED  11. DATE COMPLETED  12. Cosing  15. DEPTH GROUNDWATER ENCOUNTERED  See Remarks							
7. SIZES A	ND TYPES OF D			8. HOLE LOCATION  8. HOLE LOCATION  6. HOLE LOCATION  10. DATE STARTED  6. HOLE LOCATION  11. DATE COMPLETED  6. HOLE LOCATION							
AND SAM	MPLING EQUIPM	MENT Y	" dia singler	8. HOLE LOCATION  Singlewell Sampler  South (e wall Sampler)  10. DATE STARTED  11. DATE COMPLETED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED							
			to dia doubl	8. HOLE LOCATION  9   Surface ELEVATION  10. DATE STARTED  11. DATE COMPLETED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED							
				10. DATE STARTED 11. DATE COMPLETED 15. DEPTH GROUNDWATER ENCOUNTERED  SAR REMARKS  16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED							
		-4	dia cosing		10. DATE STARTED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED						
12 OVERB	URDEN THICKN	IESS	1	2 1 1 0 <del>1</del> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				G-9-15 TER ENCOUNTERED			
IZ. OVEND	ONDER THOM	3.5			67		54.	ER ENCOUNTERED See Remarks			
13. DEPTH	DRILLED INTO	ROCK	-1		16.	DEPTH TO WATER	AND ELA	ELAPSED TIME AFTER DRILLING COMPLETED			
7 3 5								toc - 1 Day			
14. TOTAL	DEPTH OF HO	JO .						MEASUREMENTS (SPECIFY)			
18 GENTE	8. GEOTECHNICAL SAMPLES				URBED			- Post development			
. GEUIE	OTHER DAIVIE	220						BER OF CORE BOXES  OTHER (SPECIFY)  OTHER (SPECIFY)  21			
20. SAMPL	ES FOR CHEMI	CAL ANALYSIS		METALS		8. HOLE LOCATION  2. 9. SURFACE ELEVATION  10. DATE STARTED  11. DATE COMPLETED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED  5xx Remarks  16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED  7. 47 56c - 1 Day  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  17. ES 6 6-2 - Post dual opmant  RBED  19. TOTAL NUMBER OF CORE BOXES  A	21. TOTAL COR				
		40.00	.114		10. DATE STARTED 11. DATE COMPLETED 6-9-15 15. DEPTH GROUNDWATER ENCOUNTERED SET REMARKS 16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED 17. AT 1 Stoc - 1 Day 17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY) 17. TS 4 to - Post duri logsmant UNDISTURBED 19. TOTAL NUMBER OF CORE BOXES 1/A  METALS OTHER (SPECIFY) OTHER (SPECIFY)  THE (SPECIFY)  THE (SPECIFY) 23. SIGNATURE OF INSPECTOR  MONITORING WELL OTHER (SPECIFY)  FIELD SCREENING RESULTS OR CORE BOX NO. 8  ANALYTICAL BLOW COUNTS REMARK BASING GOTECH SAMPLE NO. 1  OBS 4  Basin dr.  WI Sonic- Lit 4 4 4" Single was	RECOVERY %					
aa nicoo	SITION OF HOLI				UNDISTURBED  19. TOTAL NUMBER OF CORE BOXES  19. TOTAL NUMBER		100				
ZZ. DISPUS	SITION OF HUL	•	BACKFILLED	WONITORING V		19. TOTAL NUMBER OF CORE BOXES  A / A  OTHER (SPECIFY) OTHER (SPECIFY) OTHER (SPECIFY)  A / A  OTHER (SPECIFY) 23. SIGNATURE OF INSPECTOR  SCREENING GEOTECH SAMPLE OR OF INSPECTOR  SULTS OR CORE BOX NO. SAMPLE NO. COUNTS  d 8  OBS		1	_		
				X				1/00	MAI	~	
51.51	DEDTIL	DECC	COUDTION OF MATERIALS	F				THE RESERVE OF THE PARTY OF THE	OF NIA RECO		DEMADKS
ELEV.	DEPTH b	DESC					UX NU.	f f	TICAL BLOW COUNTS 9  OBS. Baj;  W S. L.+		h
G	2 3	- lass graces of high plans	avel (train)  j underm stiff astreits	2. DRILLING SUBCONTRACTOR  SHEET 1  OF 4 S  4. LOCATION  5-5 C of Conneil Grove, IKS  6. MANUFACTURERS DESIGNATION OF DRILL  VICE Spair V 100  3. HOLE LOCATION  Singlewall Sampler  10. DATE STARTED  11. DATE COMPLETED  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED  5-4 C Anniel Completed  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  17. Singlewall Sampler  19. TOTAL NUMBER OF CORE BOXES  NIA	4" dia						
				2. DRILLING SUBCONTRACTOR  4. LOCATION  5-5 E of Connect Crowe,  6. MANUFACTURER'S DESIGNATION OF DRILL  WITH Space VIEW  8. HOLE LOCATION  10. DATE STARTED  11. DATE COMPLETE  6-9-15  15. DEPTH GROUNDWATER ENCOUNTERED  Some Remarks  16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETE  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  17. THER WATER LEVEL MEASUREMENTS (SPECIFY)  WITH WATER LEVEL MEASUREMENTS (SPECIFY)  WHATALS  OTHER (SPECIFY)  OTHER (SPECI							

FIELD SCREENING GEOTECH SAMPLE ANALYTICAL BLOW	SHEET 2	5			PECTOR	IIN			ECT
DEPTH  DESCRIPTION OF MATERIALS  C  SAALE, dash, gallow (54,644),  was, weathered, exidation and  Som Jong worth ling present  T  T  T  T  T  T  T  T  T  T  T  T  T	OF 4 SHEETS		ANALYTICAL	COTTON CAMPUT	J.3	-5	, es Atlas 5-5	Forbe	U
SAALE, dasky gallow (54,64),	REMARKS h	COUNTS	SAMPLE NO.	OR CORE BOX NO.	RESULTS		DESCRIPTION		V.
g - becoming moderabily strong,  pray laminae present		9 08		OR CORE BOX NO.	RESULTS d	or yallow (54,6/4), arad 1 oxidation and offling present	SAALE, dasky mak, weather some gray moth		

ROUEDT  FOR STANDARD AND STANDARD SHEETS  FLEX. DEPTH  DESCRIPTION OF MATERIALS  FLEX. DECRIPTION OF MATERIALS  FLEX. DEPTH  DESCRIPTION OF MATERIALS  FLEX. DECRIPTION OF MATERIALS  FLEX. DECRIP
FIELD SCREENING DESCRIPTION OF MATERIALS  FIELD SCREENING OR ORDE BOX NO.  SAMPLE NO.  SAM
15  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  18  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and gravel present - linestone is chert, meathered, and in angular fragments  - linestone cobbles and angular fragments  - linesto
Considerates, pale gallowish brown (1078,612), clay matrix;  moderately well remeated, grains are time gravel to  cobble size, grains consist  of limestone, churt, and shale  21  Limestone, with medium bluish gray to dark gray churt,  yellowish gray (54,712), moderately  Strong, slightly weathered  22  Calcite vags 27.1 - 22.5

Forbes Atlas 5-5

		HTW DRILL		G			mw-035
JECT	Forb.	es Atlas 5-5	PECTOR J. 5	reart			SHEET 4 OF 4 SHEETS
EV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	24	EMESTONE, with medium wish gray to dark gray (57,761, with yearly strong, slightly weath  crinoid fossils present, invastone becoming pala gallowish own (1041, 6/2)  ALE, medium dara gray (4), moderately strong, fresh, hendant, crinoids, spiculus, and all freguents				y	0742
	30	Th= 70' bs					0856  0856: Oriller  Slops @ Job bys.  - Oriller installs  unil +0 27' bys  - Datails on
	32						- No fluid loss Generated 2700 gal IDW (liquid

MRK JUN 89 55-2 Forbes Atlas 5-5

CT _		RILLING LO				MW-033 SHEET !
for	Les Atlas 5-5		GEOTECH SAMPLE	ANALYTICAL	BLOW	OF / SHEETS
/. DEPTH	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	Top of Seal: A  Top of Seal: A	Committee Court  Court				Well installation details  Material: 2"di Sch 40 ppc  Cap: Point  Scran: 0.010"  Factory 16 Had  Riser: Blank  Puc  Man exactance:  Tohnson  BHTO: 30' bys  MUTO: 27' bys  L-myths  Cap: 0.24  Scran: 5.00  Rilar: 10.00  10.00  7.09  Total: 32.33  CutoA: 1.95  stickup: 2.68  Backfill / Filter  Pack  Premier Silica -  20/40 Grade  Silica Sand  30-18' bys  5-50# baps  Scal: POS  Pal-Pluy Bank.  Pellats  18-14' bys  5-50# baps  Scal: POS  Pal-Pluy Bank.  Pellats  15-59al had  E2 scal: 2-  Sox bys  Quick Crout:  0.2-Soctory  14-3' bys  14-3' bys

MRK JUN 89 55-2 Forbes Atlas 5-5 MW-035

			HTW	DRILL	ING	LO	G				HOLE	W-040
1. COMPAI	NY NAME					SUBCONTE	Y				SHEE	T 1
I. CUIVIFAI	T	ms & mc!	Donnell				ut Dall	1-19			OF 6	7 SHEETS
3. PROJEC	T					4. LOCATI	ION					
	Forb.	s Atlas 5-	5						uncil Grove			
5. NAME 0	F DRILLER								TION OF DRILL			
		ate Stabbi.					Juna So	mic	V100			
	ND TYPES OF		" dia bit			8. HOLE I	LOCATION					
AND SA	MPLING EQUIP	PMENT 4	"dia single wa	11 samples		VT 00 10 10 10	A DESCRIPTION OF A					
		4	dia double	vall sampl	41	9. SURFA	CE ELEVATION	V				
			" dia bit			40 DATE	CTARTER		1.	11. DATE COM	IDI ETEN	
		6	" dia casing			10. DATE	31-15				31-15	
40 OVEDE	NIDDEN THICK	MECC					H GROUNDWA	TER EN	COUNTERED			
12. UVERE	BURDEN THICK	L'				13. DEI 1	5-4 1					
12 DEDTH	DRILLED INTO	-				16 DEPT			APSED TIME AFTE	R DRILUNG CO	MPLETED	
is. DEPTH	DIVILLED IN I	64'				24.20	(807	164	· c - 2	Lays		
14. TOTAL	DEPTH OF H	DLE							SUREMENTS (SPE			
IOIAL		70'							ost davel			
18. GEOTE	CHNICAL SAN		DISTURBED	UNDI	STURBED	19	. TOTAL NUMI	BER OF	CORE BOXES			
2000			ALA		IIA	72 4 K	NIA	V 10				
20. SAMPI	LES FOR CHE	MICAL ANALYSIS	VOC	METAL	S	OTHER	(SPECIFY)	ОТ	HER (SPECIFY)	OTHER (S	SPECIFY)	21. TOTAL COR
			AIA		7.77		ماد		110	MIA		9 RECOVERY
				11/		_		60	NIA	) -		700000%
22. DISPO	SITION OF HO	LE	BACKFILLED	MONITORING	WELL	OTHER	R (SPECIFY)	23. 8	SIGNATURE OF IN	PEUL		
				×				1	Mul	48		
				1	FIELDS	CREENING	GEOTECH SA	AMPLE	ANALYTICAL	BLOW		
ELEV.	DEPTH b	DESC	CRIPTION OF MATERIAL	S		SULTS	OR CORE BO		SAMPLE NO.	COUNTS		REMARKS h
	2	- becoming (10 ya, 4/2)  CLAY, red damp, slift	dish brown ( , high plashi	57K, 4/4),							drilli	layins  To all 4" hit  dia single  samples.
	и —	chay, with fragments, damps sof	Light gray 1	10 YR, 7/2).								

torbes Atlas 5-5

	MW-040			G		HTW DRILL					
	SHEET LOF 9 SHEETS			rant	PECTOR J.S.	ROJECT Fortus Atlas 5-5					
	REMARKS h	BLOW COUNTS g	ANALYTICAL SAMPLE NO. f		FIELD SCREENING	DESCRIPTION OF MATERIALS	DEPTH				
	0855				0.0	ccat, with silt and lianstone fragments, light gray (107R. 7/2), clamp, soft, medium plasticity	1 70				
					0- 0	SHALE, ling, moderate gallow (5-1,710), weak, weathered, frieble	](3				
					0.0		7 —				
					0.0		8				
	0854				0.0	SHALE, dusky yallow (57,6/4), weak, moderately weathered	9 - 1				
2	Dellar advances 6" 4:4 9 casing to			,	0.0		/v = = = = = = = = = = = = = = = = = = =				
					0-0		" =				
					0.0	- oxidation present	12 -				
					0.0	LIMESTONE, dusky yellow (54,614), strong, moderately mathered	1 70				
					0.0		,4				

ROJECT Forbas Atlas 5-5 INSPECTOR								
	Fort	ses Allas 5-5	FIELD SCREENING	OF 9 SHEETS				
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h	
d	14 -	stace, yellowish gray (54,7/e) amak, slightly meathered					change e. 14' bgs	
	15	- becoming dusury yellow green (564,5/2) and strong	J. 0				/022 /028	
	14-		6.0					
	17	SHALE, audium darkgray (N4), Strong, fresh	- 6.0					
	(8		0.0					
	19—		0.0					
	20		ø. o				1047 Dillar 1052 reports 2100gal	
	71—		0.0				fluid loss 0-20' - using Haliba Quiza-cal in drilling fluid.	
	22—		0.0					
	23		0.0					

MRK JUN 89 55-2 Fortes Atlas 5-5

		HTW DRILL	ING LO	G			HOLE NO.
OJECT	<i>E</i> :	Las Atles 5-5	ISPECTOR	- yant			SHEET 4 OF 9 SHEETS
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
а	23 -	SHALE, andium dake gray (N4), strong, fresh	0.0				
	24		6.0				
	25		0.0				1101
	24	(N4), strong, slightly weathered, occosional light olive gray (54,61,1)	0.0				
	21-	court nodales  Comes Tool &, pale yellowish  Frown (104R, 6/2), strong,  slightly weathered  CHERT, medium bluish gray  (58,5/1), strong, slightly	0.0	, d			
	28	LEMESTONE, Moderale yallowish brown (104R,5/4), strong, slightly whethered, oxidation present.  Abundant small fassils  Lecoming pala yallowish brown  (104R, UZ)	0.0				- Orillar reports 28-30' were 5.ft
	29	- bluich gray churt present, a.j.  - bioturbation, possible burrows present 28.8 - 29.4' bys	0.0				5***
	30-	LIMES TONE, pale 7+16wish brown (104K, b/L), moderately Strong, slightly weathered	0.0				1129
	3(	LEMESTONE, with chart modium light gray (NG), strong, slightly unathered, chart is madium dark gray (NY)					
	32	must haved, churt is medium dark				HOLE NO.	

MRK JUN 89 55-2 For best Atlas 5-5 MW-04D

СТ	Est	HTW DRILL	INSPECTOR J. 3-7-A+					
	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	OF 9 SHEETS  REMARKS	
	32 - -	LIMESTONE, with chart, medican light gray (Nb), strong, slightly wasthered, chart is medium dark gray (N4)	d	e		g	h	
	3>-							
	34	TEMESTONE, pala gallowish brown (loyk, ble), strong, frob forsiliferous	.,					
	35 —	SHALE, pudium groy ( NS), moderately strong, fresh, abundant fossils+ crinoid plates spixulus, brachyopods	,				*	
	36-							
	37	moderately strong, fresh, abundant small fossil fragments	·+					
	38	SHALE, dark granish gray (564, 41,), man, fresh						
	39-							
							1205	
	40	SHALE, grayish green (56,5/k) Strong, fresh, blood					1320 1333: Bit play	
	41	PROJECT				HOLE NO.	BSO: Resume ey/	

OJECT	Facher	HTW DRIL	INCOLCTOD	SHEET G OF 9 SHEETS			
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING GEOTECH SAMPLE ANALYTICAL BLOW COUNTS				REMARKS
a a	42-	DESCRIPTION OF MATERIALS  CALC, grayish grace (56,5)  ALC, grayish red (108,4h  Leadely strong, fresh	d (.).	e e	f f	g	h
	50						1333 1416 1-040

T		INS	PECTOR	SHEET 7 OF 9 SHEETS			
	For	las Atlas 5-5	J.3.	GEOTECH SAMPLE	ANALYTICAL	BLOW	OF 9 SHEETS
	DEPTH	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
1	50 -	SHALE, granish red (10 R, 4/2).					1425
- 1		moderately strong, fresh					1 1 m
	-						
1	=						
	51-						
	=	SHALE, mothed grayish red (10K. 4h) to grayish grass					
	-	(56,5/L), moderately strong,					
		Slightly weatherd					
1	52-	SHALE, grayish and (IOR, 4/2),					
		weak, weathered					
	-						
١							
	53-	CHAIC MILE STORY					
	Ξ	SHALL, metted grayish red (10K, 4/e) to grayish green					
		(50,5/2), moderately strong,					
		slightly weathered					
	54-			1 1			
		- coarse gravel to cobble sized mudroca and limestone clasts	4				
		present					
	55-						
		41					
		No recovery 55-60'					
		6					
	56-	Sec.					
	-						
١	-	. 17					
	Ξ						
	57-						
	=						
	1						
	50-						
	-						
	12						
	-						
1	59 -		1				

	BLOW COUNTS RI	REMARKS h  - C 68' 45
DESCRIPTION OF MATERIALS  C  DEPTH  DESCRIPTION OF MATERIALS  C  RESULTS  OR CORE BOX NO.  SAMPLE NO.  C  OR  OR  OR  OR  OR  OR  OR  OR  OR	COUNTS R	h
68 - LIMESTONE, medium gray  (NS), strong, fresh, abundant  small fessil fragments  69 - SHALE, medium dark gray  (N4), strong, fresh	Change	e @ 68' hs
- IN41, strong, fresh		
	1540	
	stops - T-a monito to G Detai diagr - EC genera 5a1 - 15t	Trant e 70'bgs  ut installs  oring well  y'bgs.  ils on well  rom.  Ow (fluid)  whed: ~1100  tal fluid  : ~200 al.

ECT =	rbas Atlas 5-5	INSPECTOR	J.B. yant			SHEET ! OF ! SHEETS
V. DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREE RESULT	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW	REMARKS
	Top of grout		e		g	Usell Installation Details  TBH TO: 70' bgs  Wallisto: 64' bgs  Malwird  - 2" dia sch 40  PUC  - car: Point  - scraen: 0.010  Factory slotted  - Riser: Blank  Man: Johnson  Lingths  Cap: 0.37  Screen: 5.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00

			HTW	DRILL	NG	LO	G			58-		E NO. W-045
1. COMPA	NY NAME	100		2.	DRILLING	SUBCONTE	RACTOR	۸			SHE	SHEETS
	Bu	rs & Mi	Don't !!			4. LOCATI	Trant	Ori	lling		TOF.	SILLIS
3. PROJEC	T	es Atlas	C- 5			1 C C C C C C C C C C C C C C C C C C C		1 10	wrait bro	ve, KS		
E NAME (	F DRILLER	2 /4+ (4)	3-7				ACTURER'S DE					
D. IVAIVIE C	r Driller	Late Strb L	ins			ı	Arsa Si	enic	V100			
7. SIZES A	ND TYPES OF		" chia bit			8. HOLE I	OCATION					
AND SA	MPLING EQUIP		4" dia single wa	11 samples								
			fidia double w	all sampler	-	9. SURFA	CE ELEVATION					
			b' dia bit			10. DATE	CTARTER		- 1.	11. DATE COM	PLETED	
		4	" dia casing			2.20 (2.00) 2.	1-15			6-1-1	37.7	
12 OVED	BURDEN THICK	NESS				_	H GROUNDWAT	TER EN	ACTUAL DESCRIPTION AND ADDRESS OF THE PARTY			
IZ. UVEN	BUNDEN THICK	5 '				727	See 1	mar	rks			
13. DEPTH	H DRILLED INT	O ROCK				16. DEPT	WATER A	ND EL	APSED TIME AFTE	R DRILUNG CO	MPLETED	
44 TOTAL	DEDTH OF H	01.5							SUREMENTS (SPE			
14. IUIAI	L DEPTH OF H	40'				Jill			e - Post		ment	
18. GEOT	ECHNICAL SAM		DISTURBED	UNDI	STURBED	19	. TOTAL NUME	BER OF	CORE BOXES			
			MA	_ ^	IA		NI	_		-	Colleges 4	Tax
20. SAMP	LES FOR CHE	MICAL ANALYSIS	VOC	METAL	.S	OTHER	(SPECIFY)	OT	HER (SPECIFY)	OTHER (S	SPECIFY)	21. TOTAL COR RECOVERY
			6	211	4	6	- TOC		MIA	1	A	100 %
22. DISPO	SITION OF HO	LE	BACKFILLED	MONITORING	WELL	_	R (SPECIFY)	_	SIGNATURE OF IN			0
		10							1/helle	111	_	
-				X	- N-1 - 20		lana-s::::		1000	CH CHILL		
ELEV.	DEPTH	DE	ESCRIPTION OF MATERIAL	S	C The second	CREENING SULTS	GEOTECH SA OR CORE BO		ANALYTICAL SAMPLE NO.	COUNTS		REMARKS
a	b		C			d	е		f	9		e 1056:
	/	- becomi	ing dark browning dark brownin	ch reddish	0.0				58-10/S8-10 Dup-5/S	3	drilledia 6 wall	t begins ing w/4" it and sings sampler
	4	dry , 100	with cobbles a sand; light gr se, mostly lime agments, angu	stone and	0.0							

MRK JUN 89 55 Forther Allas 5-5

SB-10/mw-045

		HTW DR	ILLING LO	)G			HOLE NO.
JECT	Forbas	Atlas 5-5	INSPECTOR J.	Bryant			SHEET 2 OF 5 SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5 -544	LE, limy, moderate yello 1,7/6), mak, mathrad					change@5'bgs
		EMESTONE, dusky y allowist, by, weathered, fragmente, we chart nodalas present LL, moderate y allow (547)	2.				
		each withered, wet	0.0				
	8 —		0.0		1145 58-10/58-10 58-10/58-10		
	1-1-1	trong damp, moderat	0.0		58-10/58-11 Our-6/5	9-8-9-MSD	( Soturated, built prep)
	10	mestone, vary light gray that light bluish gray that one, weathered, large any,	1 (N8), 0.0 reduts,				1104
	11 - yel	mestane and interhedded s lowish gray (51,7/2), strong eathered, stace is modera Now (57,7/6), mak, maken	0.0				
	12 - was	LE, moderate gallowish ite, 5/41, were, smoderately athered, oxidation and gottling present	6.0		1220		
	13 - 100	ND , trace fine gravel, A clowich brown (104R, 741), woose, medium to coarse, orly graded, anywar, grain e primarily shale, limestone,	s,		58-10/58-10	-12-13	
	- Che	rt, <10% quarte, fining	0.0				

Fortes Atlas 5-5

HOLE NO. 58-10/mw-045

		HTW DRILL	ING LO	G			HOLE NO. 38-10/MW-045
DJECT			SPECTOR	2 1			SHEET 3 OF 5 SHEETS
	For	bes Atlas 5-5		GEOTECH SAMPLE	ANALYTICAL	BLOW	7.2 3
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS	OR CORE BOX NO.	SAMPLE NO. f	COUNTS g	REMARKS h
а		SANA, some fine starparse gravel, moderate yallowish brown (1048,5/4 weet, loose, median to coarse, scorly graded, anyular, grains	0-0				
		are primarily shale, limestone, and chart, K1000 grants, fining upward	0.0				1124
	14-	- Gravel with coarse sand	6.0				
	,1	SHALE, light olive gray (54,5/2), moderately strong, ylightly weathered	0.0				
	18 —		C+0				
	/7		c.0				
	70	SHALE, medium darkg ray (N4), weak, weathered	0.0				1150 /145: 1300 priller begins advancing 6" bit
	21		0.0		1405	P·21-22	and using 4" dia bit and double wall sample" - Also using
	22	SHALE, andium dare gray (N41), molerately strong, slightly weather	0.0				Halibuten aurue- cel in drilling fluid. ~50 g at fluid loss o-20' bgs
	27		0.0				

MRK JUN 89 55-2 Fortes Atlas 5-5

58-10 + MW-045

ECT			INSPECTOR	2 1		dr.	SHEET 4
	F	organ Atlan 5-5	FIELD SCREENING	GEOTECH SAMPLE	ANALYTICAL	BLOW	OF SHEETS
EV.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
_	23 -	SHALE, medium daragray (244), moderately strong, slightly much	0.0				
	24 —		0.0				
	25		0.0				1378
	26	SAND, shaley, some fine gram light gray (10 yR,7/2) to 7 x110 (10 yR,7/6), wet, Los medium dunsity, coarse, poorly grad angular 1 grains are primarit	0.0				
	27	LIMESTONE, shale, and churk, LIDDO greatz CIMESTONE, with bluish gray chert, pale yellowish brown (10/18,6/2), strong, shightly meath	_   0.0				
	=	pridation present, fossiliterous crimids, spiculus, small shall fragments	0.0				
	29	- possible biolarbation or vacg 29-30' bgs	s 0.0				
	70	- limestone color change to light gray (N7)	0-0				1324
	31	- occasional dark gray (N3 chert nodulas in addition the bluish gray chert		,			1400
	32		0.0				

CT		HTW DRIL	INSPECTOR				SHEET S
ECT	Fuch	es Atlas 5-5	J.	B-yent	ANALYTICAL	BLOW	OF 5 SHEETS
EV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	SAMPLE NO.	COUNTS	REMARKS h
		LIMESTANG, with blush gray and dark gray churt modules, light gray (N1), Strong, slightly unathund, oxidation	0.0				
	>> -	present, fossiliterous, crinoids spicules, small shell fragments	0.0				
	34-	SHALE, medium gray (NS), moderately strong, fresh, abuno crinoids, spiculas, trackipopods.	0.0				
		shell fragments	0.0				
	35—		0.0				
	36-	LIMESTONE, audium clark gra (al 41, strong, Fresh, abundant, Crinoids, spicules, brackiopodsha fragments					
	>1 —		0.0				
	38		0.0				
	39	SHALE, predium gray (NS), wase, slightly weathered	0.0				
	40		0.0				1418
	40	TD = 40' bgs			1055: ~. Top 20	1.	stops a 40 bs Trant will set will to say bss

DESCRIPTION OF MATERIALS  C  Top of Grows:  3' bys a	F		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	SHEET / OF 1 SHEETS  REMARKS  IN ULI I INStallation Details  Matriol: 2" dia Sch 40 PUL Cap: Flat Screen: 0.010" Factory 5 lotted Riser: PUC Blad
DESCRIPTION OF MATERIALS	Steel shive cover	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	SAMPLE NO.	COUNTS	Mell Installation Details  Material: 2" dia Sch 40 puc car: Flat Screen: 0.010" Factory slotted
Track County	Steal protochive cover	v				Material: 2" dia Sch 40 pul car: Flat Screen: 0.010" Factory slotted
	Solids Bentonite Crout  PUL  Riser  Bentonite  Scal  Slotted  built  Screen  SAND  Filter Pack  Bentonite  Bentonite  Bentonite  Bentonite  Bentonite					Manufacturer:  Johnson  BHTD: 40 1/2:  MWTD: 34 6/3:  Lingths (ft)  Cap: 0.35  Screen: 5.00  Riser: 10.00  10.01  10.01  10.01  10.00  Total: 45.37  Cutoff: 8.62  Stickup: 2.75  Backfill: PDS  Peli Plug Bentonite  Pentonic Silica 20/4  Silica Sand  36-25 1/5-50#  bags  Seal: Hatitant  Premier Silica 20/4  Silica Sand  36-25 1/5-50#  Poly Bentonite  Poly Bentonite  Poly Bentonite  Poly Bentonite
						EZSUP Pel-
	MWTO: 34' bys  Tot of Backfill: 36' bys  BHTD: 40' bys  Install date:	MWTD: 34' bgs  SAND Filter Pack  Top of Backfill:  36' bgs  BATD: 40' bgs  Backfill	MWTD: 34' bys  Tog of Backfill:  Betom  Cap  Bentonite  Backfill  Mot to scale:  Install date: 6-1-15	MWTD: 34'  Bys  SAND  Filtre  Pack  Tot of Backbill:  Bettom  Cap  Bettom  EBHTD: 40'bs  Total date: 6-1-15	MWTD: 34' bys  Top of Backlill:  Bottom Cap Bentonite Backfill  Buttonite Backfill  Tasfall date: 6-1-15	MWTO: 34'  Bottom  Cap  Bentonite  Bentonite

MRK JUN 89 55-2 Forbes Atlas 5-5

550 NW-045

			HTW I	DRILLIN	G LO	G				HOLE	NO. U-05D
1. COMPA	NY NAME				JNG SUBCONT	RACTOR	1, 2			SHEE	Т 1
	Burns 1	Medona	.11		T.	raut Dr	illin	7		OF	SHEETS
3. PROJEC	Furbes At	, ,	-		4. LOCAT			il Grove,	NS		
		145)-5				FACTURER'S D			72		
5. NAME C	F DRILLER	steblin.	•			Versa S					
7. SIZES A	ND TYPES OF DRILLIN		die bit			LOCATION		213			
	MPLING EQUIPMENT	4"	dia single wall	sampler							
		4".	dia single wall die double wa	11 samples	9. SURF	ACE ELEVATION	N				
		1"	dia sit		100			- 1.	11. DATE COM	DI ETED	
		6"	dia cosing			STARTED 30-15			5-30		
A OVER	DUDDEN THICKNESS					TH GROUNDWA	ATER EN	COUNTERED			
12. OVER	BURDEN THICKNESS	2			10. 52.			marks			
13. DEPTH	DRILLED INTO ROCK							APSED TIME AFTE		MPLETED	
	U	,4'						- 3 day			
14. TOTAL	DEPTH OF HOLE	0'						SUREMENTS (SPE			
re raper			DIOTUDADA	UNDISTUR		9. TOTAL NUM		CORE BOXES	PMAT		
18. GEOT	ECHNICAL SAMPLES		DISTURBED	Who was to have	4.54	9. TOTAL NOW		OUTL DUNES			
20. SAMP	LES FOR CHEMICAL A	NALYSIS	voc	METALS		R (SPECIFY)		HER (SPECIFY)	OTHER (S	SPECIFY)	21. TOTAL COR
		7.75						1.10	1	A	RECOVERY %
			N/4	NIA	_	n1/4	-	N/A			100 %
22. DISPO	SITION OF HOLE	-	BACKFILLED	MONITORING WEI	L OTHE	R (SPECIFY)	23. 5	IGNATURE OF INS	OK OK		
				X	3		19	unigh	<i>\</i>		
				FIE	D SCREENING			ANALYTICAL	BLOW		250005
ELEV.	DEPTH b		RIPTION OF MATERIALS		RESULTS d	OR CORE BO	OX NO.	SAMPLE NO.	COUNTS		REMARKS h
	2 - cca,	l, radding shift	dork brown (in high plastice stiff.	57R, 44), ity, true	.0					0846	deilling who Life 4"  ing he wall
	4	g <i>,</i>		0	o						
	4	<i>y</i> • • • • • • • • • • • • • • • • • • •		0							

		HTW DRII	LLING LO	G			HOLE NO.
DJECT	Fall	111-16-5	INSPECTOR	reat			SHEET 2 OF 9 SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. 1	BLOW COUNTS g	REMARKS h
a	5 -cc	my, voldish brown (54R, 44) imp, stiff, high plasticity, act fine sand	0-0				
	700	TALE, Limy, darn yellows cange (1048,616), whole, which	0.0 -hu-e2				
	7		0.0				
		LOSTONE. dark gelbwish oranger Lacu speckling					
		TALE, I integ, yellowish gray					
	70 = 7	tmestone, audium gray (N rong, weathered, oxidation	0.0				0854
	J ~	LALE, clusury rellow 157,6h war, slightly mathered, one oxidation present	41.				Hard, slow drilling
	(2		0.0				
	17—		0.0				
	14		0.0				

PROJECT

Forbes Atlas 5-5

HOLE NO.

	-	HTW DRI	INSPECTOR	- zaut			SHEET 4 OF 9 SHEETS
T	DEPTH	bes Atlas 5-5  DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
-	b	C	d	e e	f	g	h
ľ		MALE, mudium dark gray ( Al moderately strong, fresh	41, 0.0				
1		,					
1	=						
1	24-		0.0				
	=						1
1	=	SHALE, ling, molyan dorage	<del>-</del>				
1		SHALE. I'my, motion dock pro: (NU), strong, fresh, abundantly forsitiforms					
	25_	F=)3. V (4->0)	0.0				
	3	LIME FORE MUDSTONE, pale	-				
	-	Tellowish brown (10 YK, 6/2), stro.	91				ľ.
	24-	fellowish brown (10 4K, 6/2), strong 1: 64/9 weathered	0.0				
		CHERT, medium groy (NS), slip weathered					
1	¥-	LIMESTONE, pola Tallowish					
	1113	brown (10 YR, 6/2), strong, slight weathered, oxidation and solution	7 0.0				
1	27-	cavities present					
1	= =	- becoming grayish orange (10)					
		- possible bictorbalion or burn	S 0.0		l I I		
	. 3	21.5 - 20.1 195	0.0				
	3						
	21-		0.0	1			
	= =						
			0.0				
	30-	LIMESTONE, with blaish gr					1045
		chest, pale yellowish bown					
		(10 ya, b/z), strong, slightly west					
	7/-	CHERT revedium bluish gray(S) with medium gray(Als) limesto	B. 5/1 0 . c				
	-	strong, Fresh					
	1						
		Yellowish brown (104R,6/6), show	.,,				
	31 -	Slightly mathered, sens small for			(c =)	HOLE NO.	

MRK JUN 89 55-2 For les Atlas 5-5

T	6	orbas Atlas 5-5 Insi	PECTOR T	B-yant			SHEET 5 OF 9 SHEETS
	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	32 -	LIMESTONE, with chart, pale Yellowish brown (1041,661, 5 hours, Slightly weathered, some small formill	Ø. Ø	e		g	
. X	33 —		0.0				
	34 —		0.0				
	35	SHALE, dark gray (N3), weak, fresh	0.0				
	34-	LIMESTONE, andium dork groy (N41, strong, fresh, abundant fossils, conf multiple crimicals & spicules	0.0				
	>1	- B	0.0				
	38	strong, fresh , with thin interbedded mussione, gazish green (56,5/2), audich, strong, fresh	<i>0.0</i>				
	39-		0.0				
	40-		0.0				1112 - Duilly- H23 reports broken inner barrel allowing water inside same
	41	PROJECT				HOLE NO.	Septaces barrel

JECT	-	HTW DRIL	INSPECTOR				SHEET 6
		ACCUMENTATION AND AND	FIELD SCREENING	GEOTECH SAMPLE	ANALYTICAL CAMPLE NO.	BLOW	
JECT EV. a	U4	DESCRIPTION OF MATERIALS  SHALE, grayish grace (5G,5h), moderately strong, fresh, with thin intertedded amostone, grayish grace (5G4,5h), me strong, fresh  SHALE, groyish red (10R,4h), moderately than weak, fresh this intertedded mussrone, grayish redklock moderately strong, fresh  51.4 41, moderately strong, 51.4 41, meathered	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	SHEETS  REMARKS h
	49						1532

		HTW DRIL	LING LC	G			HOLE NO.
DJECT	Forl	res Atlas 5-5	INSPECTOR J.	3-yant			SHEET 7 OF 9 SHEETS
ELEV.			FIELD SCREENING	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
a	50	DESCRIPTION OF MATERIALS  SHALE, dark granish gray  (564,411), moderately strong,  Slightly weathered	d	e	1	g	1348
	55—	MUDSTONE. Pala gran (56,6/2) strong, slightly weathered  LEMESTONE, medium light gra (NG), strong, slightly weather the occasional fragmantal form	7 , red,				
	57	occasional thin, dark bands and nodules of chart  - becoming medium darkgra (N4)	7				
	58 -	PROJECT				HOLE NO.	

MRK JUN 89 55-2 Forbes Atlas 5-5

MW-05D

ROJECT	-	IN:	SPECTOR	7 1			SHEET 8 OF 9 SHEETS
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
ELEV.	b	C	d	e e	f	g	h
		LIMESTONE, medium claragray			1		
	1	(N4), strong, slightly anothered,					
	-	occasional fragmented forsils, occasional for dark, thin bands		1			l la se
	1154	and rodules					1407
	60-						1420
	1 =						
	[,,_]						
	61						
	=						
	7.5	SHALE Madium dark					
	3	SHALE, Madium dark gray LN41. Strong, Fresh, calcare					
	62						
	1						
	-	<u> </u>					
	3			1			
	63						
	=		ľ				
	=						
	7						
	3	_	ľ				
	64-						
	7						
		1		1			1
	3						
	65-						
	=	gray (Nb), strong i slightly					, , , , , , , , , , , , , , , , , , ,
	=	weathered, fossiliferous					
	1	marund, rossilitarias					
	. =						
	46 -						
	= =	2=					
	1 2						
	41						
	] =						1/1
			+				
	=	SHALE, dark gray (N3),					10
	1.0	moderately strong, slightly weathered					
	141	PROJECT				HOLE NO.	

CT	. 100	HTW DRII	LUCOSOTOS	SHEET 9 OF 9 SHEETS			
	Fo	, bas Atlas 5-5	FIELD SCREENING	GEOTECH SAMPLE	ANALYTICAL	BLOW	OF 9 SHEETS
V.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	68 = 5	HALE, dark gray (N3), moderately strong, slightly weathered					
	49—	Warunto					
	70	TD=70' bgs					1450: Driller stops @ 701893
	4						- alo groundwate observed - Total fluid
	4						- Fluid For
	=						general: -1400 gal
	=	PROJECT				HOLE NO.	

JECT		bes Atlas 5-5	INSPECTOR	Breat			SHEET / OF / SHEETS
EV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW	REMARKS
a	lll	Top of growth A High Bento grow  Top of seal: A PUL Risk  Top of fither pace:  Top of fither seens: 52' bs:  Serven: 52' bs:	solids nite cal  filler  and f	e		9	Monitority LAII  Toskolloton Whoils  BH TO= 70' by s  MUTD= 61' by s  Material: 2" dia  Sch 40 PUC  - Man: Johnson  - Cap: Point  - Screen: 0.010"  Factory Slotted  - River: Blank  Langths  Cap: 0.23'  Screen: 5.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  10.00  Total: 65.23'  Cutoff: 0.89'  Stickup: 2.67'  Backfill: Haliburton  3/8" bentonite chips  70-63' by s  2.25 - 50th bags  Filter Rack:  Premier Silica,  20/40 grade silica  50nd  63-52' by s  5.5 - 50th bags  Filter Back:  Premier Silica,  20/40 grade silica  50nd  63-52' by s  5.5 - 50th bags  Filter Back:  Premier Silica,  20/40 grade silica  50nd  63-52' by s  5.5 - 50th bags  Filter Back:  Premier Silica,  20/40 grade silica  50nd  63-52' by s  5.5 - 50th bags  5.5 - 50th bags  Filter Back:  Premier Silica,  20/40 grade silica  50nd  63-52' by s  5.5 - 50th bags  5.5 - 50th bags  5.5 - 50th bags  64-5' by s  64-5' by s  64-6'-6'-6'-6'-6'-6'-6'-6'-6'-6'-6'-6'-6'-

			HTW	DRILLI	NG	LO	G				1 1 1 1 2 1				
1. COMPAI						SUBCONTE	ACTOR		inu -		SHEE	T 1			
		, C'Mc Donn	. 11	1		4. LOCATI	rauf D		<u>"J</u>		OF C	O SHEETS			
3. PROJEC		Atlas s	- 5					1 60	uncil Gro	w - 5 0	fsun	o discharge			
5. NAME O	F DRILLER	771(2) 3				200		70.000	TION OF DRILL						
		e stebbing					140000000000000000000000000000000000000	ioni	C U100	OTHER (SPECIFY)  OTHER (SPECIFY)  ALA  100 %					
	ND TYPES OF		" dia bit			8. HOLE I	OCATION								
AND SA	MPLING EQUIP		dia sample			O CLIDEA	CE ELEVATION								
			dia double u		-	9. SUNFA	GE ELEVATION	•							
		4	din ourdrill	20.79		10. DATE	STARTED			11. DATE COM	IPLETED				
						-	-16-15			5-16	-15				
12. OVER	BURDEN THICK	(NESS 1.5'				15. DEPT	H GROUNDWA		COUNTERED						
40 DEDTI	DOUL ED INT				-	16 DEPT				R DRILUNG CO	MPLETED				
13. DEPTH	DRILLED INT	48.5	V.						· 3 days						
14. TOTAL	DEPTH OF H	OLE				17. OTHE	R WATER LEV	EL MEA	SUREMENTS (SPE	CIFY)					
		50'						_		develop	ment				
18. GEOT	ECHNICAL SAM	MPLES	DISTURBED N 1A	10-50-50	STURBED	19	TOTAL NUM		CORE BOXES						
20 SAMP	LES FOR CHE	MICAL ANALYSIS	VOC	METAL		OTHER	(SPECIFY)	_	HER (SPECIFY)	OTHER (S	SPECIFY)	21. TOTAL COR			
LU. GAMI	, 0,, 0,,								414	REC		RECOVERY			
22112010	2		n la	MONITORINO		OTHE	N/A	22 (	SIGNATURE OF INS		(A	100 %			
22. DISPO	SITION OF HO	Lt	BACKFILLED	MONITORING		UTHER	(SPECIFY)	20. 3	///	1	_				
				1					, now	9					
ELEV.	DEPTH	DESC	CRIPTION OF MATERIALS		C 20 194 244	CREENING	GEOTECH SA OR CORE BO		ANALYTICAL SAMPLE NO.		100	REMARKS			
a	b	DESC	C C			d	е	,,,,,,,	f	4.500.00		h			
	,	fragments, (104R,31,1), plasticity, becoming  LIMESTONE gale orange cliphtly are present, for  SHALE, I; unall, mode	trace limes.  Ulty dark  weist, stiff,  organics p  black lioyr,  E, with cher-  (1048,8/2), s  athered, oxid  as mented  stt alive bro  lerately area  itate deposits	y ray  , his h  present  21.)  1, very  strong,  lation  wn (57,5/6)  thered.							6.7	4" dia			
	5				0.0										
	) –										0917				

MHK JUN 89 55

		HTW DRILL	ING LO	G			HOLE NO.	
				u			SHEET 2	4
ROJECT	=	bas Allas 5-5	NSPECTOR J.	Brant			OF ( SHEETS	
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
a	=	SHALE, light olive brown (54. 1/6), weak, moderately weathered, small presitate deposits throughout				9	0920	
	4	- becoming moderately strong, slightly meathered, oxidation present	0.0					milian
	7 —	- medium gray (NS) mottling present	0-0					
		- occasional CALECHE noclulus						
	8 -		0.0					
	9		6.0					
	שון	- becoming mothled olive gray	0.0				0923 Hard 0923 drilling Trant switches to double wall	
	//	(ry, 41,1) to donk gray (N3)	0-0				Sampler (4") and 6" over drill casing 0950 : Trant	'
	12	ESMESTONE, with a hard variable waderate relievish brown (lexisty) to midium stray (NS), pudium bluish stary (NT), pudium bluish stary (NT), such thered (1078, 6/2), with make, highly weathered, crumbly	0				Supins adding Sureu get to drilling water to prevent water loss.	
	"> —	LIMESTONE, Yellowish gray (57, 8, 8) Strong, slightly weathered, exident	0.0					
	,		0.0					

MRK JUN 89 55-2 Forbas Atlas 5-5

mw-040

		HTW DR	ILLING LC	G			MW ~ A A		
DJECT	Forh	ous Atlas 5-5	INSPECTOR J. 6	J. B-7-nL					
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	OF SHEETS  REMARKS		
a	(4 -4	LEMESTONE, yellowish gray (51,61,), strong, slightly weat oxidation present	hered.						
	15-1		0 . 0						
	14 =	LEMESTONE, with chart, Tight (N7), hight blush gray (58,7%) chart, Strong, slightly meathered (LIMES TONLE, yellowish grad (54,81,1), strong, slightly weathered oxidation and solution cavities operant	Lared,						
	17 —		0.0						
	1 = 1	LI MESTONE, with chiet, light god light bluigh gray chief, strong, slightly mothered LI MESTONE, Yellowich gra 174, 81, 1, strong, slightly weathered, some small fessils	'7						
	19 -	- becoming method yellows.	0.6				1005 - Drillar		
	20-	LEMESTONE, with chart, yalled Jray (57,8%), light bluish gri (58,7%) chart, strong, slight wasthered, small solution cavil	0.0				1005 - Britary 1013 reports -300ja fluid 1055.		
	21		0.0						
		SHALE, medium dark gray (N' Strong, frosh							
	23	PROJECT	0-0			HOLE NO.			

		HTW DRI	LLING LO	G			HOLE NO.	
JECT	-1.	4+las 5-5	INSPECTOR J. 8	rant			SHEET 4 OF 6 SHEETS	
EV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS	
a	23 _ SHA	of the state of th	4),	e		9		
	24 - 5 140	ale, grainish gray (564, 6	·/ <sub>1</sub> ),					
	25		0.0					
	24-		0-0					
	27————————————————————————————————————		ø. 0					
	28-		0.0					
	29		0.0					
	30 - 5 HA	ine, grayish red (10k, 4h),	0.0				1035	
	21		6.0					
	32	PROJECT	0-0			HOLE NO.		

MRK JUN 89 55-2 Forbas Atlas 3-5

T	- 1		INSPECTOR	T. B. yant					
		Atlas 5-5	FIELD SCREENIN	G GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	OF C SHEETS  REMARKS		
	EPTH b	DESCRIPTION OF MATERIALS  C ALE, grayish red (108.4/1-	d d	e e	f f	g	h		
32	- = 34,	rong, fresh	0.0						
		3	0.0						
	=			1					
3	3—		0.0		1				
	=					1 1			
	=								
	. 🗦		6.0						
34	<b>'</b> =								
	=								
33	5_		0.0						
	= =								
	= 3								
3	4		0.0						
	=								
	3								
3	,		0.0						
1	- St.	ALE, grayish green (1064,	1/2),						
	-1								
	= =		0.0						
32	9 —		0.0						
	=								
	=		1 4						
,	9—		0.0						
	´ 🖠	G	,						
	_ <del>_</del> _×	_ <del></del> _	×						
1.							409		
44			0.0				1195		
	=								
	- 43	MESTONE, medium gray (NS in bands of daragray churt	·),	1					
4	11 = 1	in bands of daragray chi-t							

ECT		HTW DRILLI	PECTOR				SHEET 6
	Forb.	s Atlas 5-5	J.	GEOTECH SAMPLE	ANALYTICAL	BLOW	OF 6 SHEETS
EV.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	41 -	LIMESTONE, making gray (N5), Strong, fresh to scipetly weathered, thin bands of dark gray chert					
	=	Strong, fresh to sijetly weathered,					
		Thin bands of clark gray cherr				1	V
	42-	17					() A -
	=		h l'				
	=	3.7					
	=						\ \ \ \ \ \
	43-	=					
	=	5					
	-		}				
	1 3						
	44 -						
	3						
	]						
	45_						
	=						
	_ ==						
	=						
	E.,u						
	46						
	I _3						
	=						
	47						-
			(1)				
	==						
	=						
	48 =						
	' =						
	=	المنتاب والمسترار والمستر					
		SHALE, medium gray (NS), strong fresh			. 10 //		
	49_=	+7634					
	377						flurations After
	1 4						
	-						stops e sos
	50 =	TD = 50' 695					manitoring well to 48' bus.
-		PROJECT				HOLE NO.	in ig/

ECT		RILLING LO	Bigant			SHEET / OF / SHEETS
EV. DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW	REMARKS
	Top of Server 38 bys  Top of Server 48 bys  Top of Server 48 bys  Top of Server 48 bys  Top of bys  Not to scale.  Transfall date: 5.		e		HOLE NO.	Monitoriny wall Oxfails  Motorial:  2" dia Sch 40 PC  cap: Flat  Sermen: 0.010"  Factory Slotted  Riser: Blank PVC  Manufacturer:  Johnson  BATD: 50' bys  MUTD: 48' bys  Longths:  Cap: 0.23'  Sermen: 5.05'  Riser: 10.01'  10.00'  10.00'  10.00'  10.00'  10.00'  10.00'  10.00'  10.00'  10.00'  10.00'  10.00'  Total: 55.29'  Cutoff: 4.54'  Stick up: 2.75'  Backfill:  Premier Silica,  20/40 Silica Sand  48-38' bys  5-50# bys

			HTW I	DRILLING	G LO	G			HOLE STS.	NU. -08/mw-065	
1. COMPA					NG SUBCONT				SHEE OF 4	T 1 / SHEETS	
0 000100	т	rus & mel			4. LOCAT	ION VIIII	<u>م-</u>		101		
3. PROJEC	Fort	es Atlas S	-5		5-5, E of Council Grove, 185						
5. NAME C	F DRILLER				6. MANUFACTURER'S DESIGNATION OF DRILL						
		Traut Ori			8. HOLE LOCATION						
to the second	ND TYPES OF MPLING EQUI		for dia bit	11		LUCATION					
AND SA	WIFEING EGG	, MEN	4" dia ciryle 4" dia dante	wall someter	9. SURFA	ACE ELEVATION					
			C' dia bit						0.775		
		- 5	6" dia casing		1917 617	STARTED	1	1. DATE COMPL 5-29-1			
VIC 17-44						TH GROUNDWA	TER ENCOUNTERED	5 07 1			
12. OVER	BURDEN THIC	2				5.	er remarks				
13. DEPTI	DRILLED INT	TO ROCK			16. DEP	TH TO WATER	AND ELAPSED TIME AFTE	R DRILLING COM	PLETED		
		28					10c - 2 d.		_		
14. TOTA	DEPTH OF H	10LE 30 1					EL MEASUREMENTS (SPE		mat		
18 GEOT	CHNICAL SA		DISTURBED	UNDISTURB			BER OF CORE BOXES				
TO. GEOT	J. II. IOAL OA		2/4	NIA		NIA					
20. SAMP	LES FOR CHE	MICAL ANALYSIS	VOC	METALS	OTHE	R (SPECIFY)	OTHER (SPECIFY)	OTHER (SPE	CIFY)	21. TOTAL CORI	
			48	~/A	4.	-TOC	NIA	NA	4	100 %	
22. DISPO	SITION OF H	OLE	BACKFILLED	MONITORING WELL	-	R (SPECIFY)	23. SIGNATURE OF INS	PECTOR			
22. 2101 0		377		×			Mally	18			
_				1	D SCREENING	GEOTECH SA	1	BLOW		/	
ELEV.	DEPTH	- DES	CRIPTION OF MATERIALS		RESULTS	OR CORE BO		COUNTS		REMARKS	
a	D _		c		d	е	1	9		h	
	0 =	E	silk, with .	17 0.	0		1340			re 1320:	
	=	1104R,3/1), 4	ut, soft, and				58-08/50	08-0-1	raut	اب وماريط	
	_	plasticity.	organies press	ent						ia bit a	
	= =	10000000								a single	
	1 -	}		0.0						Jampla /	
	=	1								Jany	
	-										
	-										
	1				_						
	2 -	SUAL E LUI	It olive brown	1575/10.	•	ı					
	=	אתבב, ויין	htly weather	الماديد الم							
		man, sing	htiq warm	- Children							
		10									
	-	Present					1 1				
	3	Prejent									
	3 =	Prejent									
	3_=	Prejent		0.	o						
	3_=	7			0						
		SHALE, du	sky yallow (	51,4/4) 0,74	0						
		SHALE, du	(H4)	51,6/4) with modifies,	0						
	- - -	SHALE, du medium da mar to m	oderaly st	57,4/4) with moHling,	The state of the s						
	- - -	SHALE, du medium da mar to m	(H4)	57,4/4) with moHling,	The state of the s		1350	-04-4-5			
	- - -	SHALE, du medium da mar to m	oderaly st	57,4/4) with moHling,	The state of the s		1350 58-08/50	-08-4-5			
	- - -	SHALE, du medium da mar to m	oderaly st	57,4/4) with moHling,	The state of the s		1350 58-08/50	~08-4-5 <u></u>			
	- - -	SHALE, du medium da mar to m	oderaly st	57,4/4) with moHling,	The state of the s		1350 58-08/50	~08-4-S	/3	z L	

		HTW DRIL	LING LO	G			HOLE NO.
JECT	Endu	rttlas 5-5	INSPECTOR J.	3.7ext			SHEET Z OF Y SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
a	5 -50	HALE, dusky yellow (54,64) po udium dark gray (N4) mottling reducately strong, slightly mathemate oxidation present					/324
	7-	bacoming ling	0.0				
	8 4	IMESTONE, moderal medium  Sant gray (N4) to gallowith	_ 0.0		1400 53-08/58	08-89	
	9	ent (57,7/21, strong, slightly weathered, exidation and small elation carities present	0.0				
	10 - 3	ellowish gray (54,7/2), strong, slightly weathered  onclomerate, ling, yellow, and (57,7/2), weally commended, angular prairs, course	-74				Droller switches to 4" dia double
	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	EMESTONE, with chiet, yallowid gray (51,7/2), chiet is light blag gray (50,7/2), strong, weathers exidation a solution carities prepart	14 0.0				wall sampler.
	12-		0.0				
	13 —		0.0				
	14 =	PROJECT	0.0			HOLE NO.	

MRK JUN 89 55-2 Forbes Atlas 5-5

50-08 / MW-065

		HTW DRILL	ING LO	G			HOLE NO. 50-08/MW-065
JECT	66	mes Atlas 5-5	ISPECTOR	Bryant			SHEET 3 OF 4 SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
u	14 =	CEMESTONE, with churt, yellowish gray (54.7/2), churt is light blussh gray (58,7/1), strong, unathural, oxidation & galution carities present	0.0				
	/\		0.0				
	17		0.0				
	=						
	-	Intertubed of SMALL and LIMESTONE, Shalz, is geranish gray (564,61).  was, slightly weathered, Limestone is yallowish gray (54,76), strong, weathered, both shirtly budded  LEMESTONE, with chart.  Yallowish gray (54,76) with light  gray (NT) limestone interfugacing  strong, fresh to slightly	0.0				
		- abundant medium gray (NS)  chart  SHALE, granish gray (564,61,)	0.0				1756 Driller 1410 advances 6" dia casing he 20"
	12	PROJECT				HOLE NO.	

MRK JUN 89 55-2 Forbes Atlas 5-5

58-08 mw-065

CT			INSPECTOR	+			ST3-08/MW O6> SHEET 4 OF 4 SHEETS
	7.	S PATIAS S-S	FIELD SCREENING		ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS
	24	DESCRIPTION OF MATERIALS  CHALC, greenish gray (564,6)  Land, fresh  From (N4), strong, slightly  Mathemal, fossilifarous  CHALC, greenish gray (564,6)  Moderately strong, fresh		OR CORE BOX NO.	1455 SB-08/SB	9	HEMARKS h
	28						1435
	uluuluuluu	TD= 30' by;  PROJECT				HOLE NO.	stops @ 30' bs - Driller installs will to 21' bs Ground water not absenced - Uted 700 Ja' water - lost 250 Ja'

Forbas Atlas 5-5	FIELD SCREENING RESULTS	Brant		HTW DRILLING LOG  INSPECTOR  T. Kon A  OF 1 SHEET 1					
V. DEPTH DESCRIPTION OF MATERIALS			19000 Feet of	12/12/14	OF / SHEETS				
	d	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	COUNTS g	REMARKS h				
Top of bentonity  Top of sentenity  Sentenity		OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f		REMARKS				

		HTW	DRILLING	LOG			HOLE NO	1mw-07
. COMPA	NY NAME		2. DRILUNG	G SUBCONTRACTOR	0 110-		SHEET 1	77.2.1.
	Burns & Me Forbes Atlas	Donnell		4. LOCATION	Orilling		UF 3	SHEETS
. PROJEC	Forbes Atlas	5-5		A CONTRACTOR OF A CONTRACTOR OF THE CONTRACTOR O	f Council G.	rove, KS		
	OF DRILLER			6. MANUFACTURER'S D	ESIGNATION OF DRILL			
	Nate Stel	obins			onic Ulou			
	AND TYPES OF DRILLING	4" dia bit		8. HOLE LOCATION				
AND SA	AMPLING EQUIPMENT .	4" dia singlaw		9. SURFACE ELEVATION	N			
	-	4" dia double u	rall barrel	9. SURFACE ELEVATION	N			
	+	6" dia cains		10. DATE STARTED		11. DATE COMPLE	TED	
		0 01- (0.)		5-28-15		5-28-15		
2. OVER	BURDEN THICKNESS			15. DEPTH GROUNDWA				
	4.2				Remarks	ED DON LING COMP	ETED	
3. DEPT	H DRILLED INTO ROCK			The state of the s	AND ELAPSED TIME AFTE		LETED	
4 TOTA	35.8 L DEPTH OF HOLE				VEL MEASUREMENTS (SP			
4. 101A	40.0	,		18.69-	Post davel			
8. GEOT	ECHNICAL SAMPLES	DISTURBED	UNDISTURBE		MBER OF CORE BOXES			
		NIA	NIA		A OTHER (CRECIEVA	OTHER (SPEC	CIEVA T	1. TOTAL COR
20. SAMP	LES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPEC	CIFY) 2	RECOVERY
		6	NIA	6-TOC	NIA	NIA		100 %
22. DISPO	OSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF IN	SPECTOR /		
			X		MANA	10		
				SCREENING GEOTECH SA	AMPLE ANALYTICAL	BLOW		
ELEV.	b	DESCRIPTION OF MATERIALS	Constale	d OR CORE BO	f			MARKS h
	1 -cury, w.	the roca fragment (104K, 7/4), which you are fragment (104K, 7/4), many high plasticity	nts, very		513-04/50-0	5.	-illing .	al 4" dia

		HTW DRI	INCRECTOR	1-15			58-04/mw-075
T	Fort	ies Aflas 5-5	2	-Brant			OF 5 SHEETS
	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5 =	(57,6/4) to light olive gray (5 strong, unathered, fragmentes	7,又)				
	¢ =	5HALE, 1:my, moderate 411 (54,716) to dusky 7-1100 (54,614), weak, weather	0.0				
	7 =		0.0		1125	H-7-8	
	8	- thin CALECHE band (SI".  LEMESTONE MUDSTONE, I'S  Olive stay (54,5/L), Strong,  Slightly weathered, fragment	0.0	1-			
	9 —		0.0				
	10-	CIMESTONE, dusky 1 1/000 (54,6/4) to light olive gray (54,5/2), moderately strong, highly meathered to grand sond size fragments	0.0				105 <b>9</b>
	" ====================================	- becoming shaley	0.0				
	12	SHALE, light olive brown (54,5/6), weak, slightly weathered, oxidation presen	0.0				
	13	Matmad, Driver p	0.0		1150		
	,4		v-0		50-04/50 Dup-4/50	HOLE NO.	

OJECT	7		INSPECTOR	1			SHEET 3
JULUT	For4	es Atlas 5-5	J. 3	ryant		DI OW	OF 5 SHEETS
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	1	SHALC, light olive brown (54,56), weak, slightly weathered, exidation present	0.0				
	к <u>-</u>	- becoming light olive gray (57,5/2)	0-0				1115
	14-		0.0		225 5B-04/SE	1-04-16-17	
	,1 —		0.0				
	=	SHALE, clasky yallow (57,44) with dark gray (N3) mother weak, slightly menthered, oxidation present	0.0				
	14-	ongenea para	0.0		1235	-04-19-20	1120: Trant adam
	20-	SHALE, back gray (N3), weak, wethered	0.0		1250 51304/513-1	( 24-31	4" dia casing to 20'bgs. 1135 1141 - Traut switches
	21-	- becoming strong, slight weathered	119 0.0		5/504/3/5-1		to 4" dia double wall sample - & u'dea bit - Driller estimates azso gal fluid
		LIMESTONE, mothed andre dara gray (N4) to yellowish	- 1				1055 0-20' 43
	13	gray (57,7/2). Strong, slight mathered, for small lossil	0.0				

		HTW DRILL	ING LO	G			HOLE NO. SB-04/MW-075
ROJECT	Forber	Atlas 5-5	INSPECTOR	3-7ant			SHEET 4 OF 5 SHEETS
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS h
а	-da	I MESTONE, mottled medium or grow (N4) to yellowish grow 7,7/z), strong, slightly meather we shall fossils	5			y	
	24-	ENCSTONE, yellowish gray					
	25 - 5	ray (58,711), strong, frust to skielly amathred, some mall fossils and solution wities	0.0				
	=						
	26-		0.0				
	27	chart modules present, medical arm gray (N4)	U. O				
	28		0.0				
	25-		0.0				
	30		0.0				1156 1204 Driller reports
	41		0.0				Additional 25079 Fluid loss
	32		0.0				

MRK JUN 89 55-2

PROJECT Forlas Atlas 5-5

HOLE NO. SB-04/MW-073

		HTW DRI		JG			515-04/MW-07
СТ	Forter	Atlas 5-5	INSPECTOR	Bizat			SHEET 5 OF 5 SHEETS
<i>I</i> .	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	32 - 5HI	ALC, madium gray (NS), we shally weathered					change @ 32' bgs
	700	emestone, medium dark ey (N4), strong, slightly athered, fossiliterous	0.0				
	34		0.0				
	35	HALE, grayish green (56, oderalely strong, fresh	0.0				
	36—		0.0				
	31		0.0				
	38		0-0				
	39—		0-0				
	40		6. 0				reed: Orillar stop
		TO= 401 bys	1 7				- Trant installs we to 32' bys No groundwater observed Total fluid loss - 300 sal.

C1.6			PRILLING LOG				
CT F	-bas Atlas 5-5	IN	J.	Bizant			SHEET I OF \ SHEETS
V. DEP	H DESCRIPTION OF MA	TERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	Top of scal:  19' bys  Top of filher  Pace: 23' bys  Top of screen  27' bys  Top of beatill:  34' bys  Top of beatill:  Top o	Protection Comer  Comer				HOLE NO	Well installation details  Material: 2" dia Sch 40 pvc  Screen: 0.010" Factory slotted Cap: Fat Point Riser: 8lack pvc  Manufacturer: Johnson.  Lengths:  Cap: 0.24  Screen: 5.00  Riser: 10.00  10.00  Total: 35.38  Cutoff: 0.0  Stickup: 2.8  - Backfill: Halibuston 3/8" bys  Cutoff: 2.8  - Backfill: Halibuston 3/8" bys  Used 2-50# bys  City of act 5:lica  Zolto grade silica  Zolto grad

5. NAME OF DRILLER	ns & Ala	Donnell & Avat	2.	DRILLING							W-085	- 1	
5. NAME OF DRILLER	s Atla	OBNATAL PART		5,11,5	SUBCONI	RACTOR uk/		<del></del>		SHE			
5. NAME OF DRILLER	7,,,,,,	1 5-5 5th	<u> </u>		4. LOCAT	ION		s site,	Lyan				
	4 11		*****		6. MANU	FACTURER'S D	ESIGN/	ATION OF DRILL	- //	<u>, , , , , , , , , , , , , , , , , , , </u>	<u> </u>		
7. SIZES AND TYPES OF	Jathan .	Strbbins H"dia bit				<i>Versa - U</i> Locatidn	2-11	1 1-100				-	
AND SAMPLING EOUIS		4" dia single	wall samp	1100								_	
	-	b" dia bit			9. Surf <i>i</i>	CE ELEVATION	4						
						STARTED				TE COMPLETED			
12 OVERBURDEN THICK	OVERBURDEN THICKNESS					<u> </u>	TER EN	ICOÚNTERED	6-3-	14		$\dashv$	
	<u> 15`</u>					See	Ri	marks				4	
13. DEPTH ORILLED INTO	o rock も、							APSED TIME AFTE		MPLETED			
14. TOTAL OEPTH OF H							EL ME/	ASUREMENTS (SP					
18. GEOTECHNICAL SAN		DISTURBED ALA		STURBED	19	TOTAL NUMI		CORE BOXES					
20. SAMPLES FOR CHEM	AICAL ANALYSIS		METAL		OTHER	(SPECIFY)	OT	HER (SPECIFY)	OTHER (S	PECIFY)	21. TOTAL COR RECOVERY	Ε	
		N/4	NIA			N/A		NIA	NI	A	100 %		
22. DISPOSITION OF HO	LE	BACKFILLED	MDNITORING	WELL	OTHER	(SPECIFY)	23. 5	SIGNATURE OF IN	PECTOR				
			<u> </u>					1 Mill	()				
ELEV. DEPTH		DESCRIPTION OF MATERIALS		RES	CREENING Sults d	GEOTECH SA OR CORE BO		ANALYTICAL / SAMPLE NO. f	BLOW COUNTS g		REMARKS h		
	- 9 ~ 4 ~ 1.5-7,5 °	me sith, light ali damp, medium s medium plasticit; ", limestem frag and brown methol tys ; It (trave sith)	l'y	0.0		alf		MA	AlA	0850	o: Shark		

Forbes Atlas 5-5

		HTW DRILI	ING LC	G			HOLE NO. MW-085	
PROJECT	Forbe	s Atlas 5-5	INSPECTOR J	. B-yant			SHEET 2 OF 4 SHEETS	
ELEV.	DEPTH	description of materials	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
	5	ceay, trace silk, occasional limes, fragments, light olive gray (51,6/2) with gray and brown mottling, stiff, medium plasticity, dans	·	4/4	Alh	AlA		
	7 —		0-0					
	8	CLAY, shaloy, very dark prayise brown (104R, 3/z), dame, stiff, mudium plasticity, olive mottlin oxidation, limestone fragments	5, 0.0					
	9		0.0					
		CLAY, with limestone and chert frommats, brown (104R, 5/3), damp, soft to medium stiffness trace to medium plasticity	6.0		,	·		
	//		0.0					
	[2	-abundant chief fragments 12.5-1 bys	o.0					
	/3— ———————————————————————————————————		0.0				/ .1	
	14	- Gacoming moist PROJECT	0.0			HOLE NO.	Harder drilling	F

MRK JUN 89 55-2 Forbes Atlas 5-5

PRODUCT  FOLIS PHIOS 5-5  DESCRIPTION OF MATERIALS  RELIGIOUS SHAPE SHEETS  RELIGIOUS SHAPE MATERIALS		HTW DRILLING LOG  HOLE NO.  MW-085											
BENN DIPTH  DESCRIPTION OF MATTHES  RELIGIOUS OR CORRESON NO. SAMPLE NO. COUNTY of COU	PROJECT	Fork	es Atlas 5-5	NSPECTOR J.	B-yout			SHEET 3					
Injustice, bound (1878, 181).  Jest J., 3614, mellion platified, abundant clase fragmands  14-11.6 by  THALE, light retire yeary (1878).  mich, highly meathers  14-11.6 by  mich, highly meathers  10-0  17-  CETHESSONE, yesterish gray  157, 172) with blush gray to  fragmands 10-16.2 by  0.0  17-  CETHESSONE, yesterish gray  158, 172) with blush gray to  gray check nowling, steeps  138, 189, weathered, occasional  small ways, meethy fragmands  18-  18-  19-  THALE, matium dark gray (N4),  mane, moderally meethered,  amane, moderally meethered,  20-  methode forms, sandales dark,  circuisis  - Alternating thin bads of  more pastitual shale and meethered  thate 20-20.5  21-  - Becoming greenish gray  (567,10),)  22-  - Becoming greenish gray  (567,10),)	ı	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS					
Lemestones, writing of linestone fragments 16-16.2 bs  Cemestones, yellowish gray (51/1/h) with think gray to gray check problems, strong, Highly weathered, occasional small engls, mother fragments in top 0.5'  SHALE, madium dark gray (N4), was an engls, mother fragments o. 0  SHALE, madium dark gray (N4), was an engls, mother fragments o. 0  SHALE, madium dark gray (N4), was an engls, mother fragments o. 0  - Alternating thin bads of more gravithal thate and weathered (164), 20-20.5'  O. 0  - Becoming granish gray (564,61,1)  22  - Becoming granish gray (564,61,1)		15 -	fragments, brown (1042, 512), moist, soft, medium plastien abundant churt fragments 14-14.2' by s  SHALE, list olive gray (54,5/2	Alles	<del> </del>	WIA							
CEMESTALE, yellow of your to  1547/2) with huith gray to  gray check nodulas, strong;  11; ktly meathered, occasional  small vegs, methy fragments in top 0.51  18  in top 0.51  5.00  5.NACE, matium dark gray [NY],  whole, mediantly meathered;  conicids  - Alternating their bads of  more positions shall and meathered that 20-20.51  - Decoming granish gray  (564,011)  22  - Decoming granish gray  (564,011)  22  - Decoming granish gray  (564,011)				a									
SHALE, Madium dark gray (N4),  SHALE, Madium dark gray (N4),  Lower property, saulabered,  crimoids  - Alternating thin bads of  more prositant shale and weathered  thale 20-20.5'  0.0  21  - Decoming granish gray  (564,61,1)  22  - October Tout shows  - October Tout show			(54,7/2) with bluish gray to	<u> </u>  -  -  -									
20— producate forsils, sectatal detais, co. 0. 0  - Alternating their bads of  more passistant shale and weathers  Thate 20-20.5'  21—  - Decoming greenist gray  (564,67,1)  22—  22—  22—  23—  24—  25—  25—  25—  25—  25—  25—  25			in top 0.5'										
- becoming greenish gray  (564,47,1)  22		I ⊸	unau, moderately weathered, moderate fossils, saulated libric crinoids - Alternating thin bads of more passistant shale and weath	o. v									
- Joyo: Trant slips.		21	- becoming greenish gray (564,67,)					- - - - - - - - - - - - - - - - - - -					
23 - 10=23 095			TO=23'bgs		,								

MRK JUN 89 55-2 Fortes Atlas 5-5

mw-085

HTW DRILLING LOG											
ROJECT For	bas Atlas 5-5	ISPECTOR J. B.	rant			SHEET 4 OF 4 SHEETS					
ELEV. DEPTH	OESCRIPTION OF MATERIALS	FIELO SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h					
FORM	Lucuing protective cover  C. S.  Top of Seal 2' by  Top of Fither Pace 10' bys  Top of Serven 15' bys  Borchola TD 23' bys  PROJECT				HOLE NO.	MW-085 Artails  Material:  Z'dia Sch 40  PUC  Cap: Flat  Screen: 0.020"  Factory 510Hed  PUC  Tohnson  Lengths  Cap: 0.22  Screen: 5.05  Riser: 10.05"  Total: 25.37  Cutoff: 2.35"  Stickup: 3.03"  Filter Pain:  Permissilica  20/40 5:11ica land  23-10' bys  Used. 6-50#  Seal: Halliburba  3/6" Bentonite  Chips  10-2' by s  2-50#bags  Surface  3 x 3' Comunt  Pad  Hollards  Orange Paint					

MRK JUN 89 55-2 Forbes Atlas 5-5

SCHEMEN MAKE  FOR IS A HAS 5-5  MAKE OF PRILISE  LETT THE MALE STATE LAND SHETS  A LOCATION  FOR IS A HAS 5-5  MAKE OF PRILISE  LETT SHE MALE STATE LAND SHE WAS  B. MAMER OF PRILISE  LETT SHE MALE STATE LAND SHE WAS  B. MAMER OF PRILISE  LETT SHE MALE STATE  B. MAMER OF PRILISE  B. MAMER OF PRILISE  LETT SHE MALE STATE  B. MAMER OF PRILISE  B. MAMER OF PRILISE  LETT SHE MALE STATE  B. MAMER OF PRILISE  B. MAMER OF PRILISE  LETT SHE MALE STATE  B. MAMER OF PRILISE  B.				H1	rw [	DRILL	ING	LO	G				HOLE	NO. W-095	
LINDUCE FOR 16 14 15 5-5  LINDE OF PRILET  LIND SHAPE THE DEBUTTOR  LIND DEFENDED  LIN	1. COMPA	NY NAME	1 44 0	···	1 1	2.	DRILUNG	SUBCONT	RACTOR	<u> </u>	1.11				٦
R. MANUFACTURES DESIGNATION OF DESIG	3. PROJEC	<u>رم مرکز</u> ر	ns & Mell	unnell Ti	HUNTA	Υ <u> </u>			ION		·			J SHEETS	
SUES AND PIPES OF DEBLURA  AND SAMPLING EQUIPMENT  4" Sp. 1.7 2 3. HOLE LOCATION  5. 9 4 5. Location  6. 2-10  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  7. THE WARTER LOCATION TO WARTER AND ELEVERS DIME AFTER DRIBLING COMPARTED  8. SECURION OF HOLE  9. SECURION OF HOLE  8. SECURION OF HOLE  8. SECURION OF HOLE  9.		For	has At	las 5-5								you Co.	,15		4
SOURCE AND THREE COUNTRIES  AND SAMPLING EQUIPMENT  4" Sign And Sampling Equipment  5" Sign And Sampling Equipment  5" Sign And Sampling Equipment  5" Sign And Sampling Equipment  6" Sign And Sampling Equipment  7" Sign And Sampling Equipment  8" Sign And Sampling Equipment  9" Sign An	5. NAME O	F DRILLER	1. then	Stebbias											
AND SAMPLES COUPMENT  4" bis Samples Coupment  10. Date Started  12. Defend Ground Ted  13. Date Completed  14. Date Completed  15. Defini Groundate Recognition  16. Defini Groundate Recognition  17. Defend Groundate Recognition  18. Defend Groundate Recognition  19. Defend Gro	7. SIZES A				Lit :	i de				/ [ .	0-100				ᅱ
10. DATE STAMPLED  10. DEPTH DRUCKUPTER DRUCKUP	AND SA	MPLING EQU	IPMENT	4" din	Single		moler								4
2. OVERBERGEN THEORIESS  3. DEPTH GROUNDWARTER RECOUNTERED  5. 9 1  3. DEPTH ORACE IN THE WATER LIVE LAWS IN A PATE DULLING COMPLETED  6. 2. 16. DEPTH TO WATER AND LAWS IN A PATE DULLING COMPLETED  7. 17. OTHER WATER LIVE LAWS IN A PATE DULLING COMPLETED  7. 17. OTHER WATER LIVE LAWS IN A PATE DULLING COMPLETED  7. 17. OTHER WATER LIVE LAWS INFORMATIS (SPECIFY)  8. GEOTECHNICAL SAMPLYS  9. DESTREMEND OF HOLE  19. TOTAL NUMBER OF CORE ROXES  11. TOTAL NUMBER OF CORE ROXES  12. TOTAL CORE  13. DEPTH (SPECIFY)  14. TOTAL NUMBER OF CORE ROXES  15. DEPTH OWNER (SPECIFY)  16. TOTAL NUMBER OF CORE ROXES  17. OTHER (SPECIFY)  17. OTHER (SPECIFY)  18. STUDY OF THE ROPECHY  18. STUDY OF THE ROPECHY  19. DEPTH OWNER CORE  19. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  19. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  19. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  19. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  19. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  10. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  10. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  10. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  10. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  10. DEPTH OWNER AND LAWS IN THE ROY OF THE ROPECHY  10. DEPTH OWNER AND LAWS IN THE ROY OF			-	le" dia	6,1			9. SURFA	CE ELEVATION	4					
2. OVERBURDEN TIPICKNESS  3. DEPTH DRILLED NITO ROCK  4. TOTAL DEPTH ORDE  2. TOTAL DEPTH ORDE  3. DEPTH CHARGE NITO ROCK  4. TOTAL DEPTH ORDE  2. ST. SAL			-	Le dit	CASIA	.,		10. DATE	STARTED		-	11. DATE COM	PLETED		┪
S. 9   See As marks    3. DEPTH DIVIDED MICH RADIO RECOMPLETED    4. TOTAL DEPTH OF HOLE    5. OTHER WATER LIVEL MEASUREMENTS (SPECIFY)    4. TOTAL DEPTH OF HOLE    5. OTHER WATER LIVEL MEASUREMENTS (SPECIFY)    5. OTHER (SPECIFY)    6. DEPTH OWNER AND LIVEL MEASUREMENTS (SPECIFY)    6. DEPTH OWNER AND MEASUREMENTS (SPECIFY)    7. OTHER WATER LIVEL MEASUREMENTS (SPECIFY)    7. OTHER WATER LIVEL MEASUREMENTS (SPECIFY)    8. DEPTH OWNER AND MEASUREMENTS (SPECIFY)    9.												6-2.	-16		_
S. DEPTH DWILED MID PLAND THE PROBLEMS COMPLETED   17. OTHER WATER ADD ELARS DITMS ATER DUTING COMPLETED   17. OTHER WATER ADD ELARS DITMS ATER DUTING COMPLETED   17. OTHER WATER ADD ELARS DITMS ATER DOTTED WATER AND ELARS DITMS (SPECIPY)   18. TOTAL NAMER OF COME BOXES   18. TOTAL COME SPECIPY)   19. TOTAL COME SPECIPY)   19. TOTAL COME SPECIPY   19. TOTAL	12. OVERE	BURDEN THIC	KNESS					15. DEPT							
4. TOTAL DEPTH OF HOLE  25   8. GEOTECHNICAL SAMPLES  S. GEOTECHNICAL S	13. DEPTH		•					16. DEPT				R DRILLING CO	MPLETED		┪
B. GEOTECHINCAL SAMPLES  OLSTURBED  ALA  OLSTANDISCHOLA ANALYSIS  OLSTANDISCHOLA ANALYSIS  OLSTANDISCHOLA ANALYSIS  VOC  METALS  OTHER (SPECIPY)  OTHER (SPECIP															_
B. GEOTECHNICAL SAMPLES  USSILIBRED  UNDSSTUPEN  UNDSTUPEN  UNDSTU	4. TOTAL							17. OTHE	R WATER LEV			ECIFY)			
O. SAMPLES FOR CHEMICAL ANALYSIS  VOC  METALS  OTHER (SPECIFY)  OTHER (SPE	18. GEDTE			DISTU	JRBED	UND	ISTURBEO	119	. TOTAL NUMI			•			$\exists$
REDUENT  RECOVERY  A NIA NIA NIA NIA NIA NIA NIA NIA NIA NI			<u>-</u>	1					^	lla					$ \bot \!\!\! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! $
ELEV. DEPTH DESCRIPTION OF MATERIALS  ELEV. DEPTH DESCRIPTION OF MATER	20. SAMPL	ES FOR CHE	MICAL ANALYSI	s <u>vo</u> c	;	METAL	LS	OTHER	(SPECIFY)	01	HER (SPECIFY)	OTHER (S	PECIFY)		
ELEV. DEPTH DESCRIPTION OF MATERIALS  O CLAY, some sitt, track timestone  fragmats, dank grays become  (1000, 400, damp, suction  1 titlast, mating plantists coals  o organize in top 1  CLAY, some sitt, with timestone  and chard fragmats, grant to  collessived, tramally, years to  collessived, tr				N,	A	1114	7	1	1A		NIA		4	1	
ELEV. DEPTH DESCRIPTION OF MATERIALS  OCCUPY, some sith, trace timestone fragmants, don't grayish known (10 yrs, 4/2), doner, suchism (10 yrs, 4/2), some sith, with himstone ord chart fragmants, gravet to collessized, brown (1244, 4/3), clary to maish, soft, trace  OCCUPY, some sith, with himstone ord chart fragmants, gravet to collessized, brown (1244, 4/3), clary to maish, soft, trace  PROJECT  PROJECT  HOLE NO.	22. DISPO	SITION OF H	DLE	BACKFI	LLED	MONITORING	WELL	OTHER	(SPECIFY)	23. \$	SIGNATURE OF IN	SPECTOR			
ELEN, a  DEPTH  OESCRIPTION OF MATERIALS  RESULTS  OR CORE BOX NO. SAMPLE NO.  CLAY, some sith, trave limestone  fragmants, clark graying brown  Livya, 4th, domp, madrium  Stillness, madium playlieth, reads  organics in top 1  CLAY, some sith, with limestone  and chart fragmants, grant to  colule sized, brown (1870, 183),  clamp to maish, solth, trave  3  PROJECT  PROJECT  PROJECT  PROJECT  HOLE NO.						×			_		6/1/1/14	US -	/		
CLAY, some sith, trave limestone fragmants, dark graying brown livya, 46), domp, medium stitliness, medium plasticity, crosts g organics in top 1'  CLAY, some sith with limestone and chart fragmants, grant to Cothle sized, brown (1040, 1/5), clamp to more h, softh, trave  3  PROJECT  PROJECT  HOLE NO.		I				<u>'</u>	FIELD SI	CREENING							_
CLAY, some sith, trave limestone fragments, dark grayish brown [loya, the), domp, sudium shidness, madium playlists creats gorganies in top 1'  CLAY, some sith, with limestone and chart fragments, graves to cubble sized, brown (10/18, 1/3), damp to maist, solth, trave  PROJECT  PROJECT  HOLE NO.				DESCRIPTION OF A	MATERIALS		1		1	X NO.				REMARKS h	
fragmats, dank grayich brown  (1048, 46), damp, medium  shiffness, medium plassissify creats  georganies in top 1'  CLAY, some sitt, with limestone and chart fragmats, graves to  cutble sized brown (1048, 4/6),  damp to maisd, solth, trace  1  1  1  1  1  1  1  1  1  1  1  1  1		0_	CLAY, SO.	ne sitt i fo	ase lin	nestone	1		(1.				1038	: start	7
1 (104R, 4h), Samp, medium  Shithness, medium plashisty creats  To organies in top 1  Cody, some sixt, with limstone and chart framats, grant to  Cobble sized, brown (104R, 4h),  clamp to maish, soft, true  Plashicity  PROJECT  HOLE NO.		-	fraiment	s, dork .	که طرحا به سر	brown			MIA		NIA	NIA	1020	. 5 / 4 / .	Ī
2 CLAY, some sixth with timestone and chart fragments, grand to cobble sized, thrown (10/10, 1/15), damp to maish, soft, traine plashingly		l —	(10ye, 4	2), domp	mdi	um	0.0	<b>,</b>							
2 CLAY, some sixth with timestone and chart fragments, grand to cobble sized, thrown (10/10, 1/15), damp to maish, soft, traine plashingly			Stiffness	, medium ,	plaskie.	the crooks									l
CLAY, some sith, with limstone and check fragments, gravel for collie sized, brown (1048, 45), damp to maish, soth, trace  3  PROJECT  PROJECT  HOLE NO.		/	* Orjan.	ies in top	• / '		10.6								ļ
CLAY, some sixt, with limstone and chart fragments, gravel to  Cobble sized, brown (1040, 4/5),  damp to maish, soft, train  Plashinity  O.O  PROJECT  HOLE NO.	•						"								F
CLAY, some sixt, with limstone and chart fragments, gravel to  Cobble sized, brown (1040, 4/5),  damp to maish, soft, train  Plashinity  O.O  PROJECT  HOLE NO.		=													[
CLAY, some sixt, with limstone and chart fragments, gravel to  Cobble sized, brown (1040, 4/5),  damp to maish, soft, train  Plashinity  O.O  PROJECT  HOLE NO.						•									ŀ
CLAY, some sixt, with limstone and chart fragments, gravel to  Cobble sized, brown (1040, 4/5),  damp to maish, soft, train  Plashinity  O.O  PROJECT  HOLE NO.															ŀ
and check fragments, granel to cobble sized, brown (1048, 4/3), damp to maisk, soft, trase  Plaskin, th  O.O  PROJECT  HOLE NO.		L —_	CLAY .		<del>.</del>		0:0	0							
Jeans to maish, soft, train  Jashirith  O.O  PROJECT  HOLE NO.			and he	al Comme	the lin	mstone									
Jenskrivky  O.O  PROJECT  HOLE NO.		í —	cobble s.	22d, brown	- 1 10V	1 V/ 1									
3 — 0.0  4 — 0.0  PROJECT HOLE NO.		]	camp /	- maisk	soft,	fores									
PROJECT   HOLE NO.			Plaskie,	1,											
PROJECT 0.0		=					0.0	ı							
PROJECT 0.0															
PROJECT 0.0															
PROJECT 0.0		] , ]													
PROJECT HOLE NO.		┦ —]					_								-
PROJECT HOLE NO.							0.0								
PROJECT HOLE NO.															ļ
PROJECT HOLE NO.															ļ
		5					0.0								_
IRK JUN 89 55 Focks Atlas 5-5 NW-095				PROJECT											-

	HOLE NO. MW-095							
PROJECT	<u> </u>	HTW DRILL  - Jes Atlas 5-5	SPECTOR	egant			SHEET Z- OF <b>S</b> SHEETS	
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
	5 -	CLAY, same sitt, with limstone and chart fragments, gravel to cobble sized brown (1048,4/3), damp to muist, soft, trave plasticity	0.0	N  A	ni IA	N)A		
	\(\sigma \)	SHALE, light alive brown (54, 5%) with moderate gallow to light gray and dark oran	0. 0					-
	7	highly unathered	0.0					
	8 —	- Occasional calibratedules	0.0					
	9 —		0.0					
			0.0				1100: Trant Stops to offload	
		- Frymated, unathered, exidized limes fore mixed with shale yo.5-11.5 bys	0 - 0				suid loader & take Inneh.  1250: Trant  resumes @ 10'.  - Compelant rock	
	12-		0.0				@ 10.5' bgs	-
	- - - - - - - - - - - - - - - - - - -							
			0.0					
	14 -	PROJECT	0.0		,	HOLE NO.		上

Forbas Atlas 3-5

HOLE NO. MW-U95

HTW DRILLING LOG  HOLE NO.  NW-085												
PROJECT	Enc	bes Atlas 5-5	NSPECTOR J	Bryant			SHEET 3 OF 5 SHEETS					
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS 9	REMARKS h					
a	14 =	SHALE, light olive brown (54,5%) with moderate yellow to light gray mothing and laminar, wear, highly weathered	0.0	. W IA	NIA	NIA						
	  -    -  -  -  -		0.0									
	=	LIMESTONE, medium Huish gray (58,5/1), strong, unathroad LIMESTONE, interpredded shale	0.0									
	/7 -=    	gellowish gray (54, 81,) with bluish gray to inclium gray chert modules, strong, weathered, worthy fractured fragmented										
	18	- color change to gallowish gray (54,7/2)	0.0									
	19-		6-0									
	20-	LIMESTONE, medium blaish  gray (58,5/1) to medium gray (NS), strong, slightly weathered	0-0				1320					
	2 1 —	moderate suchtal debris, crinoid LIMES TOME, light gray (NT), strong, slightly meathered, sparse suchtal debris, occasional wags (small)										
	22	~ occasional bluish gray churt nodulas	0-0									
	23 -	PROJECT _ ,	0-2			HOLE NO.		<u>E.</u>				

HTW DRILLING LOG  HOLE NO.  MW-995												
PROJECT	For	les Alles 5-5	INSPECTOR J.	Brank			SHEET 4 OF 5 SHEETS	1				
ELEV.	DEPTH b	description of materials c	FIELO SCREENIN RESULTS d	G GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h					
	23 -	SHALE, medium days gray (N4), ascan to moderately strong, fresh to moderately weath abundant crinoids, fusilinius, 9 suchtal clabris in top 1'	wed,	NA	NA	<i>ه/</i> لہ	Change & 23'					
	25-						1335	<u> </u>				
		7D=25'63					1335: Trant Shops @ 25' bys.  Base of Langet formation is 23' bys.  Trantinstalls mun to 23' bys.  Details ment Page.					
 ∕IRK ∰	PRM 989 55-	2 PROJECT For has 14 flo	1s 5-5		<u> </u>	HOLE NO.	1w-098	-				

OJECT _	HTW DRIL	INSPECTOR				MW-095 SHEET 5
Fo	be, Atlas 5-5	J,	Brant	,		OF 5 SHEETS
LEV. DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	Control  Court  Court  Court  Count  Count	he er				MW-095 Datoils  Material: 2"dia,  Sch 40 PUC  Cap: Flat  Screen: 0.020"  Factory Stotled  PUC  Tohnson  Lengths  Cap: 0.23  Serren: 5.04  Riser: 10.04  Total: 25.55  Filter Pack:  Premier Silica  WHO Silica Sand  25-14 1/11  Used G-50tay  Seel: Halli landon  3/8" Bentonite  Chips (Hydraked)  14-2" bys  Used 3-50tay  Surface  3'x3' Cement  Pad  4 Bollards  orange paint

				HTW [	RILL	ING	i LO	G				- 1	E NO. W-105	
1. COMPA	NY NAME	,	10	101	2.	DRJLUNG	SUBCONT					SHE	ET 1	1
3. PROJEC	٠r			nnell & Avat	ar		7 14. locat	raut h	4//	Inc		OF	5 SHEETS	+
3. PROJEC	Foch.	es Atlas	5.	.5						E of Coun	eil Grave	. KS		
5. NAME C	E DOLLIED						6. MANUI	FACTURER'S D	ESIGN.	ATION OF DRILL				
- 01750.4		an Stel	bin.	<u> </u>			0.11015	<i>Lysa - 1</i> ) Location	<u>ci   </u>	11 100				-
1	.nd types o .mpling eou			"dia bit "dia single wall	analex		8. HULE	LUCATION						
			4	dia bit	sampiti		9. SURFA	CE ELEVATION	į		•			7
			6"	dia casing			<u> </u>							_
								STARTEO -24-14			11. DATE COM 5-24-1			
12. OVERE	BURDEN THIC	KNESS (						H GROUNOWA		ICOUNTERED	<u> </u>	*		1
		2	'							emarks				_
13. DEPTH	I DRILLED IN	ro rock 23	ı	•			16. DEPT			APSED TIME AFTE toc, ~19		MPLETED		
14. TOTAL	DEPTH OF H						17. OTHE			ASUREMENTS (SP				-
		10LE 25	<u> </u>						CA		,			
18. GEOTE	CHMICAL SA	MPLES	Í	DISTURBED	ומאט	STURBED	19			CORE BOXES				
20 SAMPI	ES EOR CHE	MICAL ANALYS	sis.	VOC	 Metal	NA s	OTHER	(SPECIFY)	·	HER (SPECIFY)	OTHER (S	PECIEY	21. TOTAL CORE	  -
	20 7 011 0112	anone yau izi	,,,		2612.1712			`					RECOVERY	
				NA	NA		_	VA		NA	∧A		100 %	-
22. DISPD:	SITION OF H	DLE	}	BACKFILLED	MONITORING	WELL	OTHER	(SPECIFY)	23. 3	SIGNATURE OF IN	SPECIOR			
					<u> </u>					Muly	bh_			
ELEV. a	DEPTH b		DESC	RIPTION OF MATERIALS			CREENING SULTS d	GEOTECH SA OR CORE BO		ANALYTICÁL SAMPLE NO. f	BLOW COUNTS g		REMARKS h	
	0 _	CLAY, SOI	ne s	st swith line	stone			.,			,	1424.	Trant start dia single samplera nd 6"dia	<b>/</b> s-
	_	fragmin t	48 ; 0 	lack gray SYA with soft, too organies in too	2,4/,),	1	A 12	NA		NIA	NA	W/ 4"	dia single	E
·		o myonig	400	organits in fre	or person	7/7,	0.0					Wall	Samplera	<u> </u>
					•							bit a	ide casing	þ
				<del></del>	<del></del>	ο.	O		,	Ì		overr	inc casi-y	_
	' =	CLAY, SO	. عمير	silt, dark rado	ash prown	,				Ì				F
		(57/6,7/)	), co d L	race plasticity	( <i>III</i> (145)							:		F
	_	F# 5416	7, 7	, , , ,										E
						-							•	_
	2-	LTMEST	-a.16	, with clay "		υ.	. 0				/			H
		grayith	ore	nor (10/R, 7/4)	Lith	i i								F
		medium	911	y (NS) chart	rodules,									<b> </b>
	-	strong, u	nat	haved, fractura	dimostly									E
	_ 7	gravels	'/ Z ec	& Fragmots		o.	0							E
	J —			thy tellow (5)										Ļ
	$\equiv$			rately weather	ied, tan									
		and gray	y la	mial										_
														F
	े ५ — 🗖													_
						0.	o .				-			E
														E
								•						
ĺ	5					4.	_	ŀ						_
	<u> </u>		PRO	JECT		0,	<u>o</u>	<u> </u>			HOLE NO.	<u> </u>		

MRK JUN 89 55 Forbes Atlas 5-5

		HTW DRIL	LING LO	G			HOLE NO. MW-105	]
PROJECT	F 1.	s Atlas 5-5	INSPECTOR J. Z	ryant			SHEET Z OF 5 SHEETS	]-
ELEV.	DEPTH	description of materials		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS	
<u>a</u>	5 -	stace, dusky yellow (54,6/4), weak, moderately weathered , ton and gray laminar	0.0	N/a	~/4	NA		
	4	- dark gray mottling 5.9-7'	0.0			,		
4		- reddish brown mothling 6.4-6.						
	7 -	- Coliche nodulus 7'-7.4'	0.0					
	8		0.0					
,	9	- organics 9. z-9.4', 2 my and yallow mostling	0.0					
	10 —		ه. ه				1530: Orilling mud returning to	
	  /		అ. లె				surface under mud tub. Traut stops T seals borehole. 1555: Traut resun w/6"@11" bys.	
	12		0.0		·			
<b>(</b>	13 —	·	0.0					
	),4 -	LIMESTONE, light olive gray (54,611), Shuish gray to light gray chief notices, strong, meathered, me project	allow 0.0			HOLE NO.		

MRK JUN 89 55-2

Forhes Atlas 5-5

HOLE NO. MW-105

		HTW DRILL	ING LO	G			HOLE NO. 1UW-105	
PROJECT	Fort	us Atlas 5-5	SPECTOR J.	Breat			SHEET 3 OF 5 SHEETS	
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS 9	REMARKS h	
	14 -	(57,61,), bluish gray to light gray church nodules, strongs unathered, weathered shale interted	0.0	NA	NIA	MIA		
	バー		0.0					
	16 -	LIMESTONE, Yellowith gray to (54,7/2) with bluish gray to dark gray chart modules, strong, weathered, large angular fragments	0 - 0					
	/7	- highly fragmented 17-18 bs	0.0			·		
	18	•	0,0					
	19-	LIMESTONE, medium light gray (NG), dark gray that nodules; Slightly unathered, strong	Ø, Ø					
	20-	~small veys 20.2-20.5' bys	o. o					
	21-	LIMESTONE, light brownish gray (57R, 41, 1, strong, slightly unathered, occasional gray chart	٥.٥					
		SHALE, medium dark gray (N4) to dark gray (N3), moderately strong to mat, slightly mathered to moderately mathered, occasional	<i>0.0</i>					
	23	Crinoids and shall Projects PROJECT	0+0			HDLE NO.		<u>E</u>

PROJECT

	HTW DRILLING LOG  HOLE NO.  NW-105												
PROJECT	Fo	ches Atlas 5-5	INS	PECTOR J.	Bryant			SHEET 4 OF 5 SHEETS					
ELEV.	DEPTH	DESCRIPTION OF MATERIALS		FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h					
		SHALE, mudium dark gray (N4) to clark gray (N4), moderately strown weak, slightly weathered to moderately weathered, occasional Crinoids and shell fragments	roj d	0.0	NIA	NIA	ns la						
	25	TO = 25' by 5					HOLE NO.	1030: Trant stops @ 25' bs. Base of target Lone is 22' bs. Trant Mishils well to 22' bs. Details next page.					

PROJECT Fortes Atlas 15

mw-105

	HTW DRILLING LOG  HOLE NO.  MW-105											
PROJECT	Forbes		PDECTAG	Brant		-	SHEET 5 OF 5 SHEETS					
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX ND. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h					
	PAM C.	Localing productive  Cover  Top of bentroite  Seal 2' by 5  Top of Screen  17' by 5  Top of Screen  17' by 5  Borehole TD  25' by 5  PROJECT				HOLE NO.	MW-10s Details  Materials: 2"  dia, Sch 40 puc  Cap: Flat  Screen: 0.020"  Factory slotted  Manufacturer:  Johnson  Lengths  Cop: 0.15'  Screen: 5,00  Kiser: 10.05  10.05  Total: 25.25  Cutoff: 0.48  Stickup: 2.17  Fither pack:  Premier Silica  20/40 Silica  20/40 Silica  3 and  25-14' bys  Used: 5-50#  bays  Seal: Hallibarbon  3/8" Hole Play  Bentonite Chips  14-2' bys  Hydrated in  1' lifts.  Used: \$\forall_{\text{S}}\$  Soft bys  Surface  3 x 3' Cemunt  Pad  4 bollowds  Orange Paint					

MRK JUN 89 55-2 Forbis Atlas 5-5

mw-103

				HTW [	DRILL	ING	i LO	G				1	E NO.	
1. COMPA	NY NAME	2	<i>a</i> n		2.	DRILLING	SUBCONT					SHE	ET 1	1
3. PROJEC	<u> </u>	urns & 1 es Atlas	re D	onne //	l		4. LOCA	LIUN		Whils, I			SHEETS	$\dashv$
		es Atlas	بی .	-5			2	Erbes At	1/93	5-5-5:4	, Lyon	Co.	15	4
5. NAME (	OF DRILLER 人	Sathan.	Ste	blins				HACTURERS L Dersa D		ATION OF DRILL  V-100			4	
1	ND TYPES C	F DRILLING		4" dia bit				LOCATION						
AND SA	MPLING EOU	PIPMENT	_	4" dia Single v	VAll Somp	lar	9. SURF	ACE ELEVATIO	v					4
				le" dia cosing										_
						•	4	STARTED - 25 - / (	,		11. DATE COM			
12. OVERI	BURDEN THIC	CKNESS	ــــــا ا					TH GROUNDWA		NCOUNTEREO				1
10 05011	I DRILLED IN	•	8				16 DED			Cemar As APSED TIME AFT	ED DOULING CO	MOI ETEN		4
13. UEFIR	I DAILLED IN	24	2					9.	. 29	bloc,	7 days	MICLETED		
14. TOTAL	. Depth of 1	HOLE 30	,				17. OTH	ER WATER LEV		ASUREMENTS (SP	ECIFY)			
18. GEOTE	ECHNICAL SA			DISTURBED	UNDI	STURBED	19	). Total Num		CORE BOXES				$\dashv$
00 000	ED EOE 21	-1004: 42:20:00	1	N/A	•	N/A	OTUE!	N/A		INED (Optoing	071/50 /0	DEDICA.	04 TOTAL 000	
20. SAMPI	ES FOR CH	EMICAL ANALYS	51S	VOC	METAL	.5	UIHE	R (SPECIFY)	0	THER (SPECIFY)	OTHER (S		21. TOTAL COR RECOVERY	-
aa piana	0.TOU 05.11			N/A	MONITORING		<del>)                                    </del>	1/A	00	~//A	N/i	4	100 %	-
22. DISPU	SITION OF H	ULE	}	BACKFILLED	MONHORING	WELL	UINEI	R (SPECIFY)	23.	SIGNATURE OF IN	SPECION			
	I				X	Incine	CREENING	GEOTECH SA	L A	ANALYTICAL 9	BLOW	$\overline{}$		4
ELEV. a	DEPTH b			RIPTION OF MATERIALS C		RES	SULTS d	OR CORE BO		SAMPLE ND.	COUNTS		REMARKS h	
	υ _	CLAY, so,	3~C 5%	11. limestom g	ravel for	0.	v	AJA		NIA	JIA	1634	Trank drilling dia bit & and wride casing	F
	=	dange	soft	with brown loops to mudium s	fillowss,						• -,,	1.1.	drilling	F
		trace 1	lasti	rity								014	dia bit t	E
	], =					0.	0					6' 01	urride casin	<b>,</b>
														E
	_											İ		F
														E
	_					0.	_							ļ.
	2 —					0. (	0							
														E
	_													F
	_	- becom	رون.	light alive br	own	ø.	-1							E
	3 —	(2.5)	y, 5/L	17		0.	U							F
	1   1													E
					-									-
				Carrie 1 - 1										E
	4-	yellowish	ניימ נ ניימ נ	fragmats to (54,8/1) folis	essier,	0.4	0				-			<b>F</b>
		Fray (54	41,	, strong, mod	wately									E
		weather	مراد	-	•									F
	-	- Misad	اه اس	live brown (2.5	7, 4/4)	_								F
	5	c/44	PRO	JECT		0.	0	ļ <u>.</u>			HOLE NO.			
MRK 🖔	DRM N 89 55				Atlas	<i>د-</i> و					1	1w-1	75	

		HTW DRILL	ING LO	G		· · · · · · · · · · · · · · · · · · ·	HOLE NO.  MW-115
ROJECT	Ford	bes Atlas 5-5	SPECTOR	Bryant			SHEET 2 OF 5 SHEETS
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	=	CIMESTANE, with plive brown clay, yellowish gray (54,81,140 light olive gray (54,61,), strong, LD moderately unathural, fragments to calbles		NA	~1/4	n la	
	٥ —		0.0				
	1 - 1	SHALE, Jusky yellow (54,6/4), with medium light gray (Nb) and moderate yellow (54,7/6) mostling and laminae, weak, moderately to highly weather					
		, ,					
	8 —		0.0				
	9		0.0				·
	//		ن , ی				1715 - mixing mid 1715 - mud mixer not working. Crew repair
	// — 		v. v				
	12		0.0				
	13	-limistant fragments & gray chart fragments, sand to cobble size	0.0				
	14 -		g. D				

Forhes Atlas 5-5

		HTW DRILL	ING LO	G			HOLE NO.  MW-1/5	
PROJECT	Fo	ribes Atlas 5-5	SPECTOR J	Bryant			SHEET 3 OF 5 SHEETS	
ELEV.	OEPTH b	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
	111 -	LIMESTONE, pale yellowish brown (104K, 6/2) with light bluish gray to dark gray chert nodules, strong, moderately weathered, wostly fragmented		~!/A	NA	NIA	Charge E. 14'bss	
		·	0.0				·	
	<u>-</u>	- Culor changes to yellowish  gray (54,7/e), occasional  solution cavities	0.0					
		- sparsa suchehal debris						
	/8		0.0					
		CIMESTONE, very lightgray (N9), chalky, weak, highly weathered, black chart and fragments	t				1945	
	20-		0.0				1800	
	21		0.0	·				
		SHALE, medium dara gray (NH), unale to moderately strong, slightly unathered, abundant skelatel debris in upper 1-2'						
L	123	PROJECT	1			HOLE ND.	<u> </u>	

Forbes Atlas 5-5

		HTW DRIL	LING LO	G		<del></del>	HOLE NO.	
PROJECT	For	bes Atlas 5-5	INSPECTOR J.	Bryant			SHEET 4 OF 5 SHEETS	
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BDX ND. e	ANALYTICAL SAMPLE NO. f	BLOW Counts 9	REMARKS h	
	24	SAALC, medium dark gray; mak (NY) to moderately strong, slightly medicad, abundant skaletel debris in uppar 1-21	υ.υ	N/A	NA	N/A		-
	25-		0.0			,		
	24 -		0.0					
	27	SHALE, grayish green (56,5/2), anak to moderate of strong, slightly meathered	0.0			,		
	2 <i>f</i>		0.0					
	29		0.0				1815 : Trant	
	70	10=30' bys					Tad Base of target formation is ze' by s. Transf, installs well to ze' by s. Details next page	F
		PROJECT			<u> </u>	HOLE NO.		<u>г</u>

MRK JUN 89 55-2

Forber Atlas 5-5

	HIW	DRILLING LO	G			HOLE NO.
PROJECT	Forter Atlas 5-5	INSPECTOR J. 3.	jant			SHEET AS OF 5 SHEETS
	OEPTH OESCRIPTION OF MATERIA		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS b
d .	Top of Seal  2' bys  Top of Joseph Jo				HOLE NO.	MW-115 Dehails  Moberial: 2" dia, She 40 PVC  Cap:  Sernan: 2" dia, 0.020" factory slotted  Manufacturer:  Tohnson  Longths  Cap: 10.15  Sernen: 5.00  Riser: 10.06  10.05  Total: 25.26"  Cutoff: 0.43"  Stick up: 1.83"  Fromier 5: lian 20140

				HTW I	DRILL	ING	LO	G				- 1	E NO. ! W - 12 S	
1. COMPAI	NY NAME 2		./ ^	. 0. 1	2.	DRILUNG	SUBCONTE					SHE		
3. PROJEC	<i>Οι</i>	erns & P	(()0	s-5	tav			<del>t wuiss</del> 1011					S SHEETS	┨
	For	be, A	flas	5-5			F	orbes A	Has	5-5-514	t, Lyon	1, CO.	, KS	4
5. NAME O	F ORILLER		teb				6. Manuf			ATION OF DRILL ごローひ~17	30			
7. SIZES A	ND TYPES O		4	M'dia Rit			8. HOLE I							
and sa	MPLING EQU	PMENT		F" dia Single	wall Sam	19/11	O CIIDEA	CE ELEVATION	·					
				"dia bit			9. SUNFA	GE ELEVATION						
							10. DATE	STARTED			11. DATE COM			
12. OVERE	UROEN THIC	KNESS		<u></u>			<del></del>	H GROUNDWA		VCOUNTERED	9 - C <b>G</b> -	7 6		$\dashv$
		4.5	_ '	·						Remarks		USI ETEO		4
13. DEPTH	DRILLED INT	O ROCK ( <i>B .</i>	~ ·				16. DEPT			APSED TIME AFTI				
14. TOTAL	DEPTH OF H	IDLE	,			,	17. OTHE		EL ME	ASUREMENTS (SP				
40 0000	CHNICAL SA	25	. 0	DISTURBED	LINOS	STURBED	19	LATER LATOR	RER OF	CORE BOXES				- -
18. GEOIE	UTNIUAL SA	MFLEO		N/A		1/4	, , , ,	~//		OONE DOKED				╛
20. SAMPL	ES FOR CHE	MICAL ANALYS	SIS _	VOC	METAL	.S	OTHER	(SPECIFY)	01	THER (SPECIFY)	OTHER (S	PECIFY)	21. TOTAL COR RECOVERY	
				3	MIA	7	3	-TOC	_	N/A	NIA		100 %	╛
22. DISPO	SITION OF HO	DLE		BACKFILLED	MONITORING	WELL	OTHER	(SPECIFY)	23.	Signature of in	SPECTOB -			
					X_					pp	44		•	╛
ELEV.	DEPTH b		DESC	RIPTION OF MATERIALS			CREENING SULTS d	GEOTECH SA OR CORE BO e		ANALYTICAL SAMPLE NO. f	BLOW Counts g		REMARKS h	
	0 -	CLAY, S.	pore s	ilt, some fory,	ments,			NA		1410:	NIA	1340	: Trau +	F
	-	of chart	. an.	limestone, g	in loye. SI	<b>,</b>	<i>a</i>		•	515-11-0-1 515-11-0-1-1			no drilling	F
				formith brown s.			,			58-11-0-1-1		-	"dia bit	E
		trace p	lasti	icity, organic	es in top	1	_						mpler and a bil p	<u>_</u>
	1 -	,				0-	o						ide casing	E
	=												-	E
														-
	p											<u> </u>		E
	ر					0-1	0							F
	_			•										F
												, <b>6</b> 99/3		F
	3	<del></del>					Λ							
		LIMEST blusher	ONE	mixed with a gray chick	fragments,	0.	U				,		,0"	þ
		4-110wis	4 5 00	17,8(1) to	عمتاه لجلوارا	l .							÷	E
		gray (54	, 6/, )	, strong, weath	ured, frage	kated								E
	4	yravel to	ماهے د	له عزر بالم		c	o							<u> -</u>
						· °	•							E
														E
		CLAN	مدارًا ع	estone fragmin	ts, dark									þ
	5 =	grayish h	row.	a ( wyre, 4/2), s	till, damp	į	<u>.</u>			,			<u></u>	F
		7,57	PROJ	JECT							HOLE NO.			

MRK JUNES 55 Foches Atlas S-5

		HTW DRILL	ING LO	G			HOLE NO.	
PROJECT	ر سِم	bes Atlas 5-5	PECTOR	Brant			SHEET 2- OF 5 SHEETS	
ELEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW Counts g	REMARKS	
	5 - - - -	ccay, some limstone fragments, dark grayish brown (104x, 4/2), stiff, damp, madium glasticity	1.6	MA	50-11-5-6 Dup-1/5B	NIA	1425: Samk 5-6' 6,5	
			0.0					
	7 -	SHALE, clusky yellow (51,6/4), 74110w to gray mothing and lamina wask, moderately weathered	0.0					
	8		0.0					
	9		0.0		Per a management of the second			
	10		0.0		•			
	/		σ, υ					
	12-		Ø Ø			·		
	/3 —		1/. 1					
	14 -	PROJECT	27.5			HOLE NO.		<u>E</u>

PROJECT Forbes Atlas 5-5

HOLE NO. MW-125

		HTW DRILL	ING LO	G			HOLE NO. MW-125	
PROJECT	Fort	us Atlas 5-5	SPECTOR J	Broaut			SHEET 3 OF SHEETS	
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS c	RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
	14 -	SHALE, Jushy gallow (54,4/4), Yallow to gray mothing and laminal, which, puderately weathered  LIMESTONE, with introduced shale, dark pray (NH) to light olives ray (54,4/1), strong, moderately weathered	27.5	NA	<u> </u>	Z/A	1440: Sampla 14-15' ys	
	16-		0.0					
	-	LIMESTONE, pale y allowish brown (1048,6/2) with light bluith gray to dark gray chert nodules, strong, moderately weathered, mostly fragmated in upper 2'.	0.0					
	——————————————————————————————————————	LEMESTONE, very light gray (N9), Chalky, smak, highly weathered, bluish gray to black chart modules	0. 40			•		
		CIMESTONE, light brownish gray (57R, 41,), strong, shipply woderately meathered, occasional small vys	0.0					-
	2 / — — — — — — — — — — — — — — — — — —		1.0					
	23	CEMESTONE, light bluish gray 15871, to light brownish gray (548,61), bluis gray chart no dulas, strong, sightly mathemal, small vegs	Δi			HOLE NO.		

PROJECT

Fortes Atlas 5-5

HOLE NO.

NW-123

		HTW DRILL					HOLE NO.	
PROJECT	Forl	ies Atlas 5-5	PECTOR J. る・			<del></del>	SHEET Y OF 5 SHEETS	-
ELEV.	ОЕРТН	description of materials	RESULTS	OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS	
a		LIMESTONE, light bluish gray (5B,71,) to light brownish gray (5YR,6/1), bluish gray churt Mudules, strong, slightly mathematical	d 0.0	» AIA	L/A	» »LlA	h.	
	-	recasional small vugs	0.0		·			
	25-	SHALL, medican clark gray (14), moderately strong to weak, slightly to moderately weathered, crimoids, whill fragments	0.0		•	A DATE OF THE PARTY OF THE PART	1435; Trank stops e25'by 1.	
		TD=251 bys			-		Trant installs unil to 25' bys. Details next page.	
								- - - -
	- - - -	<u>-</u>						- - - - - -
,							·	- - - - - -
								- - - - - - - -
	anu a	PROJECT / " //			<u> </u>	HOLE NO.		-  -  -  -

MRK JUN 89 55-2

PROJECT Forbes Allas 5-5

		LING LO	G			MW-12S
OJECT /	orbas Atlas 5-5	INSPECTOR J.	Bront			SHEET 5 OF 5 SHEETS
ELEV. DEPTH	DESCRIPTION OF MATERIALS C	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. 8	ANALYTICAL SAMPLE ND. f	BLOW COUNTS 9	REMARKS h
	Locuing Protective Cover  Sea 1  Sea 1  Sea 1  Sea 1  Solution Riser  Top of fither Face 12 bys  Top of sensen 15' bys  Can  Benton Sea 1  Solution Riser  Utall TD 25' bys  Can  Benton Sea 1  Compad  Scholo Riser  Compad  Top of fither Face 12' bys  Compad  Top of fither Face 12' bys  Top of fither Face 12' bys  Can  Decompad  Top of fither Face 12' bys  T	face actor 7			Uni E NO	MW-125 Actails  Material: 2"dia, Sch 40  PUL  Cap: Flat  Screen: 2"dia, 0.020" factory slotted pue  Monufacturer;  Johnson  Lengths  Cap: 0.15  Screen: 10.00  Ristr: 10.05  Total: 30.25"  Cut off: 3.22"  Stickup: 2.03"  Filter fack: Premier silica 2140 silica fand 25-12" bgs  Used 8-50#lage  Seal;  Halliburton 3/6"  Bentonite chips -tydrated in 1" lifts 12-2" bgs  Used 4-50#bys  Surface 3×3" Cament Pad  4 Bollards  O Ruge Paint

			HTW	DRILL	ING	LOG			HOLE	NO. -135
1. COMPA	NY NAME	,		2.	DRILLING :	SUBCONTRACTOR				T 1 SHEETS
			Donnell & Avat	av		Traut 1	ele 11		OF S	SHEETS
3. PROJEC	01 ————————————————————————————————————	les Atlas	. 5-5		1	4. LOCATION	los 5-5 site	/	,	
5 NAME (	OF DRILLER	777743	<u> </u>			R MANIFACTURER	S DESIGNATION OF DRI	: - <u></u>	-0.	
o. main. c	Alak	han Steb	Spires				711 V-100	LL		
7. SIZES A	AND TYPES D		4" dia bit			8. HDLE LDCATION	7. 7 7.			
ANO SA	AMPLING EOU	IPMENT		Vall Sample						
			4" dia - Single w			9. SURFACE ELEVAT	ION			
			G'dia casing							
		-\_				10. DATE STARTED	٠	11. DATE COM	PLETED	
						6-1-16		6-1-	16	
12. OVER	BURDEN THIC		- 1				WATER ENCOUNTERED			
		1.	<u>.                                    </u>				ne Ramar			
13. DEPTH	1 DEFLLED IN	TO ROCK	< '			16. DEPTH TO WATE	R AND ELAPSED TIME			
14 YOTAL	L DEPTH OF I		<del></del>			17 OTUED MATER I	フハロートトレC EVEL MEASUREMENTS			
14. IUIAL	L UEPIN UPI	الاد کو'	)			17. OINEN WATEN L	EVEL MEASUREMENTS んんん	(SPECIFT)		
18. GENTA	ECHNICAL SA		DISTURBED	יחאוו	ISTURBED	19. TOTAL M	IMBER OF CORE BOXE	 S		
			LIA	1	NA	1	,			
20. SAMPL	LES FOR CHE	MICAL ANALYSIS		METAL	LS	OTHER (SPECIFY)		Y) OTHER (S	PECIFY)	21. TOTAL CORE
				NIA		> ~	14			RECOVERY
			3	+ -		3-TOC		NIA	<u> </u>	100 %
22. DISPO	SITION OF H	DLE	BACKFILLED	MONITORING	WELL	OTHER (SPECIFY)	<b>⊣</b> ////			
				X			1 Aff hu	Holy .		
				1 /	EELD SCI	REENING GEOTECH	1 700 1	<del></del>		
ELEV.	DEPTH		DESCRIPTION OF MATERIALS	S	RESU	JLTS OR CORE		1	R	REMARKS
а	b		<u> </u>		d	l e	f	g		<u>h</u>
	0 -	CLAY, son	mesilt, limestone	frogments,		الم	. 1	114	1140:	start
	-	dark gra	yish brown (104A tidnus, trace p	1,4/e), damp		~1	SB-12-0	1 N/A		•
		midium s	fillness, trace p	lasticity	60	0		<del></del>	12.203	5 - 1 A bg 5
	] =								~	/- [ " <del>- 35</del> 3
	1, =									
	'	-mixed	with olive sho	le						
	_				0.0					
	-							ŀ		
		SHALE	lusky yellow (5		1.					
	=	Yellow	1 / Jane ()	1,0141 111	<del>የ</del> እ		l l			
			Maria							
	2	usean 1	dyray mottling a	and lamina	<b>-</b> ,					
	2	cuean, hi	d gray mottling a ship weathered	and lamina	0.0					
	2	cuean, hi	d gray mothing a ship unathered	and lamina	0.0					
	2	cuean, h,	d gray mottling a six ly weathered	and lamina	0.0					
	2   -	arean, h,	d gray mottling a ship weathered	and lamina	0.0	7				
		culan, h,	d gray mottling a it is a weathered	and lamina	0.0					
	2	cuen, h,	d gray mottling a ship weathered	and lamina	0.0					
		unen, h,	d gray mothling a	and lamino	0.0					
		unen, h	d gray mothling a it has been a	and lamina	0.0		62- 17-3			
		unen, h,	d gray mottling a	and lamina	0.0		58-12-3	; <b>-</b> →	1230:	Sample
		unen, h	d gray mothling a	end lamina	0.0		53-12-3	:- <del>-</del> -	-	•
	»   No. 1		d gray mottling a sightly weathered		0.0		SB- 12-3	:	1230:	•
	»   No. 1		d gray mothing a sight useathered		0.0		53-12-3	:-4	-	•
	»   No. 1		d gray mottling a sightly weathered		0.0		58-12-3	; <del></del>	-	•
	»   No. 1		d gray mottling a sightly weathered		0.0		53-12-3	:	-	•
	»   No. 1		d gray mottling a sightly weathered		0.0		53-12-3	:-	-	•
	»   No. 1		d gray mottling a sightly weathered		0.0		53-12-3	:-4	-	•

	<del></del>	HTW DRILL	ING LO	G			HOLE NO. WW-135	
PROJECT	Fai	-bes Atlas 5-5	SPECTOR J.	Segant			SHEET ZOF LA SHEETS	
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS C	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
	5 -	SHALE, dusky Tallow (54,6/4/with 421100 and gray muttling and lamin max, highly consthered	0-0	NIA		NIA		
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		0.0		58-12-G-	7	1240: Sanete	
	7 —	LIMESTONE, with intersedded shale dark gray (N4) to light alive gray (54,61,), strong, moderately unather						السياس
	8 -	CTMESTONE, pale jullowish brown (104R, 6/2) with light bluish , ray to dara gray chart and les	0.0					
	9	- Oxidation and small vags 8,5-9'  (IMESTONE, very light gray (Ng), Chalky, make history (Ng)	0.0					
	10 -	Wheish jong chart modules, osidah  Present  - several small vass in bother 2:  CIMES TONE, light bluich gray  (58,711) to yellowish jong (57,81,  Strong, wasthand for	0.0				1153	
		strong, unathured, fractured, oxidation	0.0					
		LIMESTONE, Yellowish gray (54,8h), man, mathered, light bluish gray to medium gray chert nodules	v.º		-			
	パー!		g. 0					
	14 -	PROJECT	6.0	·		HOLE NO.		<u>E</u>

MRK JUN 89 55-2 PROJECT For bes plas 5-5

		HTW DRILL	ING LO	G			HOLE NO. MW-135	
PROJECT	Fac	hes Atlas 5-5	SPECTOR J.	Bryant			SHEET 5 OF 4 SHEETS	1
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS	
u u	14 =	CIMESTONE, yellowish 5-07 (54,8/1) with hight bluish gray to medium gray chart modules, unall, meathered	0.0	NIA	N/A	NIA		
	15		0.0					
	/4-	SHALE, light olive gray (51,4,), wear, anathered to highly weathered Limestone, pale gallowish	0.0					
		brown (104R, 6/z) to light plive gray (54, 6/1), strong, slightly to moderately meathered, medium light						
		gray churt modules oxidation present in bottom	0.0			·		
	18 —	SHALE, medium dark gray (N4), unan to moderately strong, moderately weathered, fossilitarous	0.0					
	19		0.0					
	20 -		2.0	· 			1250	<u> </u>
		10= 20' sos					1250: Traut stops @ 20' bys. Base of target formation is 18' bys. Traut sets well to	
	۰/		·		-		18 bys. Defails MXX page.	
	22 —							
	23 -	PROJECT				HOLE NO.		<u>-</u>

MRK JUN 89 55-2 PROJECT For his Atlas 5-5

MW-135

		1221	TW DRILL	ING LO	G			HOLE NO. MW-135
ROJECT	Tobes At	las 5-5	11	ISPECTOR J. 3	- yant	-400		SHEET 4 OF 4 SHEETS
1	PTH b	DESCRIPTION OF	MATERIALS		GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS	REMARKS
	Top of so f	Sand Sand	Coment pad  Coment pad  Bentunite  Seal  PUL riser  PUL screen  Bottom  Car					Material: 2" dia, Sch 40 PUC  - Johnson  Cap: flat  Screen: 2" dia, 0.020" factory slotted puc  Lengths  Cap: 0:22  Screen: 10.06  Total: 20.33  Cutoff: 0.57'  Stickup: 1.76'  Filter pack: 20/40 silica 20/40 silica 20-5' bys  Used 7-50tags  Seal: Halliburbon 3/8" Benfonite chirs 5-2' bys.  Used 1-50tags  Surface 3 × 3' Comunt Pad  L Bollards  Oronge Paint

MRK JUN 89 55-2 For Les Atlas 5-5

MW-135

			HTW I	DRILLI	NG	LOG				HOLE	NO. 5-02
. COMPAN	IY NAME					BCONTRACTOR		U.		SHEE	T 1
. COM A	Burns	& McDonnel	. (			THE RESERVE THE PROPERTY OF THE PARTY OF THE	( - au	+		OF L	SHEETS
B. PROJEC	T = 1	s Atlas 5	- 6		4. LOCATION  5-5 & of Council Grove						
5. NAME O		s Atlas s	- 3		6.	MANUFACTURE			1 02000		
. NAME U		Stebbins			Versa Sonic VIDO						
7. SIZES A	ND TYPES OF		dia bit		8.	HOLE LOCATION					
AND SAI	MPLING EQUIP		dia double w				1000		_		
		6	dia overdrill	casing	9.	SURFACE ELEV	ATION				
			dia bit	1.6	( - 10	O. DATE STARTE	D	- 1	1. DATE COMP	PLETED	
	4" dia single wal				"	5-15-15			5-15		
2. OVERE	URDEN THICK	NESS _ 1			15	5. DEPTH GROU		NCOUNTERED			
7		91						e Remarks			
13. DEPTH	DRILLED INTO	ROCK			16	6. DEPTH TO WA	TER AND E	LAPSED TIME AFTE	R DRILLING CO	MPLETED	
	DEDTH CE III	21'			4	7 OTHER WATER	R I EVEL ME	ASUREMENTS (SPE	CIFY)	_	
14. TOTAL	DEPTH OF HO	30 '				. OTHER WATE	. CLYCL WIL	MIA	7.11.11		
18. GEOTE	CHNICAL SAN		DISTURBED	UNDIS	TURBED	11 11 11 11 11 11 11		OF CORE BOXES			
			NIA	N			NA	ADDED TO SERVICE OF	1		Tax
20. SAMPI	ES FOR CHEM	MICAL ANALYSIS	VOC	METALS	3	OTHER (SPECIF	Y) (	THER (SPECIFY)	OTHER (S		21. TOTAL COR RECOVERY
			4	NIA		4 (TOC)		NIA .		1	100 %
22. DISPO	SITION OF HO	LE	BACKFILLED	MONITORING	WELL	LL OTHER (SPECIFY) 23. SIGN.		SIGNATURE OF INSPECTOR			
		Y	X					Mulle			
					FIELD SCR	EENING GEOTE	CH SAMPLE	ANALYTICAL	BLOW		
ELEV.	DEPTH	DESC	CRIPTION OF MATERIALS	5	RESUL d	LTS OR CO	RE BOX NO		COUNTS		REMARKS
	1		sond content		0.5			0540 5	3-2-3	4" di	ing wl a bit & e wall samp
	-	sand, some grayish b- shiff, mudi-	inestone our (104R,5/2 our plasticit our pottling	), dans, 1, occasion	0.9			S18-04-5	- 12		

DJECT		HTW DRI	INSPECTOR				SB-02 SHEET Z
_	Fo. bes	Atlas 5-5	J.3	ryant			OF 4 SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	1	chay, brown (10 yr, 4/4), dominard, medium plasficity, occas inceche deposits, same gray mething, exidation present	e, 			9	Chare & 5'bg.
	4		0.0				
	7-		0.9				
	,	- Becoming shaley - abundant CALICHE from 2 bys	9-9'		58-02/58	-8-9	
	1 -14	IMESTONE, Yellowish gray 154,7/2), were strong . Shightly perothered . that present	7.3				
	10-3	Emestale, there present  Emestale, yellowish gray  54,7/2), very strong, fresh  HALE, dusky yellow (54,614)  wan, modrofely meathered	2.4				<u>0MS</u> 0119
	,		0.0				
	12		0-0				
	13—		0.0				
	14 = 5	HALE, Yellow gray (SYITE), noderately weak, skyhtly mathred  PROJECT	0.0			HOLE NO.	

		HTW D	RILLING LO	OG			HOLE NO. 50-02	
JECT	Furbe	s Atlas 5-5	INSPECTOR J.	Brzant			SHEET 3 OF 4 SHEETS	
LEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENIN RESULTS	_	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
a	14 - 5	HALE, yallow gray L54,7/2 waderately weak, sightly w	l,					
N	=							
	7/	FALCY SAND, Yellowish gran 57,76), dense, audium to					0943 - 12:11:4) 0947 hand. Trantus	
		oarse, pourly graded, surry war to enjular	ь				bajins using sim	
	14-		0.0				Over drive Case	9
	=						4	
	17 =		8.0					
	1							
	18 = 5	HALE, light olive gray (5	(,5/2),					
	= 4	Mace, slightly weathered						
	,9		0.0					
	34						0715 1010	
	- 3	- ENESTONE, dark gray ( some chert modules and land grain inclusions, un	ert.				1019	
	1	trong , slightly was the						
	1 3	TMESTONE, pale yellow brown (104K, 1/k), strong, fossiliferous	fresh.					
	12	LIMESTONE, yellowish	J-7 0.0					
		sy, 7/2), strong, slightle mathemalionidation pro some small forsils	Sent,					
		- bacoming churty	0.0			HOLE NO		

07		HTW DRIL	INSPECTOR				SB-02 SHEET 4
СТ	Furt	res Atlas S-5	J. 3.	CENTECH SAMPLE	ANALYTICAL	BLOW	OF \ SHEETS
EV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	OR CORE BOX NO.	SAMPLE NO.	COUNTS	REMARKS h
	23 - L	in estable, with chart, yello ray (5%, 7/2), medium gray (N. hert, strong, slightly meating ridation present, some small fossils	5) 0-0				24-25 ' very
	-	IMESTONE, interleded	0.0		1150 58-02/518	-25-26	Possible groundwater 25-261 bs - oxidation
	24 = 1	highly meathers) I pale dellowish orange (10)K,866) of strong limstone, very mean shale, with chart, ye pray (54,86), medium dark	Ibwith		50-06/2/3		present
		fresh	,.0				
	28 —	- church becomes darher (Dark gray (N3))	0-0				
		LIMESTONE, with chart, mas 5 mg (NS), strong, fresh	dium 0.0				
	30		0.0		-		- 1
		TN = 30' bgs	0.0 JB				stops @ 30' by Trant backfill borehole w/ burstonite chip
		PROJECT				HOLE N	0.

			HTW [	DRILLIN	G LO	G				03
COMPAN	V NAME			2. DRILL	ING SUBCONTE				SHEET	1 SHEETS
CUMPAN	Bu-ns &	M. Do-	mell			Drilling			TOF C	OFFICE
PROJECT					4. LOCAT					
	Forhes All	as 5-5			5.	5,60	A Council G	row, KS		
NAME OF	DRILLER				6. MANU		SIGNATION OF DRILL	1100		
T. III.	nlat.	stebl	bins				ose Sonic 1	100		
SIZES AN	ID TYPES OF DRILLING	4" 2	lia bit		0	LOCATION				
	MPLING EQUIPMENT	4" 1	in linela wall	cample barr	. 1					
		4" d	lia doublew	all sample be	9. SURFA	ACE ELEVATION				
		6" 8	lia bit						4DI ETED	
			die overdrill	casing		STARTED		11. DATE COM		
						8-15		5-18	4-13	
2 OVERR	URDEN THICKNESS				15. DEP		TER ENCOUNTERED			
L. JVLIID	Ч	1			14		Remarks		OLAD: ETES	
3 ПЕРТН	DRILLED INTO ROCK				16. DEP	TH TO WATER A	IND ELAPSED TIME AF	TER DRILLING C	OMPLETED	
S. DEF III	2.0	, '					AlA	DEOLES .		
4. TOTAL	DEPTH OF HOLE				17. OTH	ER WATER LEV	EL MEASUREMENTS (S	SPECIFY)		
. isin	3	0							_	
8. GEOTE	CHNICAL SAMPLES		DISTURBED	UNDISTU	100		BER OF CORE BOXES			
J. 02012	AVAINA 02 20200 323		nl la	114		N/A			ADDEOUG A	21. TOTAL CORE
0. SAMPI	ES FOR CHEMICAL AN	ALYSIS	VOC	METALS	OTHE	R (SPECIFY)	OTHER (SPECIFY)	OTHER	(SPECIFY)	RECOVERY
			,	1		- TOC	NIA	1	(A	100 %
			6	MIM	77 10 10 10 10 10			-		1/20
22. DISPO	SITION OF HOLE		BACKFILLED	MONITORING WE	LL OTHE	R (SPECIFY)	23. SIGNATURE OF	A A		
							1/4/11	us	_	
			7		U D CODETUUS	GEOTECH S	MPLE ANALYTICAL	BLOW		
1		0500	DIDTION OF MATERIAL		RESULTS	OR CORE BO	OX NO. SAMPLE NO.	COUNTS		REMARKS
ELEV.	DEPTH b	DESC	RIPTION OF MATERIAL		d	e	f	g	1	h
d		. /		/ /					10	15 C 1115:
			e sill Louis L	I'M SOME						
	0 - 224	1, 4-4	silly trace to	1. dome	0		1145			
	Jury	dara s	r-7 (104R, 3/	), dome	.0		1145	A-03-0-1		
	- wedin	dara s m still	ress. high p	), dome	, .0		1145	B 03-0-1		
	- organ	dara s im stiff airs pr	rest high po	), dome, lasticity, 0	, .0		58-03/50 58-03/50	A-03-0-1		
	- organ	dara s im stiff airs pr	ress. high p	), dome, o			1145 58-03/5 58-03/50	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	- Some	dara s im still airs pr	freeze, high poresent and present	lasticity,	, .0		1145 58-03/5 58-03/50	1-03-0-1 -03-0-1-M		begins ing w/f"dia to 4" dia single sample
	- Som	dara 3 im still airs pr coarse	facts, high poresent and present	), dome, of lasticity, of			58-03/5 58-03/5 58-03/50	1-05-0-1	drilli bit a	begins ing w/f"dia to 4" dia single sample
	- Some	clara s im still aris pr coarse motte	freeze, high persons and present a sand present and present and present and present and present all the gray and gray	1 still to			1145 58-07/5 58-03/58 58-03/58	1-03-0-1	drilli bit a	begins ing w/f"dia to 4" dia single sample
	- Some - Some - CLAY - Clark	dara s m still arcs pr coarse motte scar( plas	facts, high poresent and present	1 still to			1145 58-07/5 58-03/58 53-03/58	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	- Some - Some - CLAY - Clark - Free - Press	dara s m still aris pr coarse matte scar ( m plas	freeze, high persons and present a send present a s	1 dome, of lasticity, of of (51,5/2) to mp, stiff, lation	0		1145 58-07/5 58-03/58 53-03/58	1-03-0-1	drilli bit a	begins ing w/f"dia to 4" dia single sample
	- Some -	dara s im still airs pr coarse matter scap ( a plas int	freeze, high persons of alive gray descriptions of alive gray descriptions of the freeze of the free	1 sticity, 0  1 sticity, 0  1 st, 5/e) to  mp, stiff,  lation  ), damp,			58-03/50 58-03/50 58-03/50	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	- Some -	dara s im still airs pr coarse matter scap ( a plas int	freeze, high persons and present a send present a s	1 sticity, 0  1 sticity, 0  1 st, 5/e) to  mp, stiff,  lation  ), damp,	0		58-03/5 58-03/50 58-03/50	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	Jury - midis	clara som still aries processed in metter scarge plassent in the weeking the median in	fress, high posts of all the state of the st	1), dome, of lashicity, of the	0		58-03/5 58-03/50 58-03/50	1-05-0-1	drilli bit a	begins ing w/f"dia to 4" dia single sample
	Jury - midiu - organi - some -	clara som still airs processes course course plant ont la brown to media	rep (104R, 21, facts, high por espect	1 dome, of lasticity, of lasticity, of lasticity, of lasticity, of lasticity, of lastice,	0		1145 58-07/5 58-03/50 58-03/50	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	LLAY  CLAY  SHIM  CLAY  PICSA  CLAY  PICSA  CLAY  PICSA  CLAY  PICSA  CLAY	dara som still aris promise course course some plasmont in brown in with and in the brown in the	rep (104R, 21,  Less, high portion of sond present  a sond present  a sond present  a sond present  (54, 41,), do-  licky, oxion  (7.54R, 4/s  con plosticion  (oarse sono  won (NYR, 4/s	1 dome, of lasticity, of lasticity, of lasticity, of lasticity, of lasticity, of lastice,	0		1145 58-07/5 58-03/58 58-03/58	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	LLAY  CLAY  Shift  CLAY  Shift  CLAY  Shift	dara som still aris proper course cou	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1 st, 5/2) to  1 st, 5/2) to  mp, stiff,  lation  ), damp,  to  d, dark	0		1145 58-03/58 58-03/58	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	Jury - midiu - organi - somm -	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  Less, high portion of sond present  a sond present  a sond present  a sond present  (54, 41,), do-  licky, oxion  (7.54R, 4/s  con plosticion  (oarse sono  won (NYR, 4/s	1, domp, of stiff, of stif	5.0		1145 58-03/58 58-03/58	1-03-0-1 -03-0-1-M	drilli bit a	begins ing w/f"dia to 4" dia single sample
	LLAY  CLAY  Shift  CLAY  Shift  CLAY  Shift	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1, domp, of stiff, of stif	0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	Jury - midiu - organi - somm -	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1, domp, of stiff, of stif	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	Jury - midiu - organi - somm -	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1, domp, of stiff, of stif	5.0		12.30	1-03-0-1 1-03-0-1-M	drilli bit a barra	begins ing w/f"dia to 4" dia lingle sample
	Jury - midiu - organi - somm -	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1, domp, of stiff, of stif	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	Jury - midiu - organi - somm -	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1, domp, of stiff, of stif	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	Jury - midiu - organi - somm -	dara s  m stiff  nies pr  coarse  mette  sray (  plas  int  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  nucliv  mston	rep (104R, 21,  facts, high poresent  a sand present  a sand present  (54, 41,), do  fict ty, oxio  (7.51R, 4/3  coarse sand  coarse sand  colostic  colostic  colostic  colostic	1, domp, of stiff, of stif	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	2 Stiff	dara s  im shift  aris pr  coarse  mothly  sray(  nothly  noth  no	report (104R, 21, Iners, high portion of sand present of alive gray (54, 41,), don't (7.54R, 4/3 or plosticism plosticism (NYR, 4/2 olastic of ragments	1, domp, lasticity,  of  (54,5/2) to  mp, stiff, lation  ), damp,  d, dark  J, manth,  e gravel	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia lingle sample
	JULY MICHALLY OFFICE SOME SOME SOME SOME SOME SOME SOME SOM	dara s  dara s  m stiff  aris pr  coarse  mette  sray (  plas  int  nuith  int  nuith  mstom  ent	rep (104R, 21,  Thers, high por  resent  e sand present  es and present  (54, 41,), do-  firsty, oxio  (7.54R, 4/3  coarse sane  won (NYR, 4/2  plastic  e fragments	1 down, of askirity, of askirity, of askirity, of amp, stiff, lation  1, damp, of and of askirity, of askirit	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia lingle sample
	JULY MICHALLY OFFICE SOME SOME SOME SOME SOME SOME SOME SOM	dara s  dara s  m stiff  aris pr  coarse  mette  sray (  plas  int  nuith  int  nuith  mstom  ent	report (104R, 21, Iners, high portion of sand present of alive gray (54, 41,), don't (7.54R, 4/3 or plosticism plosticism (NYR, 4/2 olastic of ragments	1 down, of askirity, of askirity, of askirity, of amp, stiff, lation  1, damp, of and of askirity, of askirit	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia lingle sample
	JULY MICHALLY OFFICE SOME SOME SOME SOME SOME SOME SOME SOM	dara s  dara s  m stiff  aris pr  coarse  mette  sray (  plas  int  nuith  int  nuith  mstom  ent	rep (104R, 21,  Thers, high por  resent  e sand present  es and present  (54, 41,), do-  firsty, oxio  (7.54R, 4/3  coarse sane  won (NYR, 4/2  plastic  e fragments	1 down, of askirity, of askirity, of askirity, of amp, stiff, lation  1, damp, of and of askirity, of askirit	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	JULY MICHALLY OFFICE SOME SOME SOME SOME SOME SOME SOME SOM	dara s  dara s  m stiff  aris pr  coarse  mette  sray (  plas  int  nuith  int  nuith  mstom  ent	rep (104R, 21,  Thers, high por  resent  e sand present  es and present  (54, 41,), do-  firsty, oxio  (7.54R, 4/3  coarse sane  won (NYR, 4/2  plastic  e fragments	1 down, of askirity, of askirity, of askirity, of amp, stiff, lation  1, damp, of and of askirity, of askirit	5.0		12.30		drilli bit a barra	begins ing w/f"dia to 4" dia single sample
	JULY MICHALLY OFFICE SOME SOME SOME SOME SOME SOME SOME SOM	dara s  dara s  m stiff  aris pr  coarse  mette  sray (  plas  int  nuith  int  nuith  mstom  ent	rep (104R, 21,  Thers, high por  resent  e sand present  es and present  (54, 41,), do-  firsty, oxio  (7.54R, 4/3  coarse sane  won (NYR, 4/2  plastic  e fragments	1 damp, lasticity, of 1 of	5.0		12.30		drilli bit a barra	byins in w/t dia the dia light sample

		HTW DR	ILLING LO	G			HOLE NO. 50 - 03	
OJECT	F-0-L	al Atlas 5.5	INSPECTOR 5.	Brant			SHEET Z OF 4 SHEETS	
LEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS	
a	=	IMESTONE, medium dark gra NY), strong, slightly meathered, alcile crystals throughout		e	f	g	1121	
	9 -	HALE, dusky gallow (54,6%) sockerately shoons, slightly and widation present	4), . thered, 0.0					
	7		0.0					
	8		0.0					
	1 ' -	becoming weathered 4 weak, light olive gray (51, 5/2)	0.0		1 <u>=40</u> 55-03/55-0	3-9-10	1127	
	" —		0.0					
	12-		0.0		1250 53-03/50- Dup-2/51			
	13	HALE, no Fled moderate 1210 54,76) to olive jog (51,46) nochrololy strong, slightly a	wather U.O					
	[ H		0-0					

		HTW DRILL	Contract of the Contract of th	G			55-03
JECT	61	ies Atles 5.5	SPECTOR J.	Bizant	(*)		SHEET S OF \ SHEETS
LEV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO.	BLOW COUNTS g	REMARKS h
a	1	AALE, no Hlad moderate pellow (57,016) to olive gray (57,41), man, mathered	0.0		)300 SIS-03/SB	03-14-15	change @
	15	- becoming strong, slightly must hered	0-0				
	14-		0.0				
	(7)	SHALE, method medium  gray (NS) to grayish yallow  (54,8/4), moderately strong,  slightly meathered	0.0				
	18 —	- accar, weathered	0. 0		1310	03-18-19	
		SHALE, medium gray (N5), medarately strong, fresh	0.0				
	1 3	CIMESTONE, nettled pale yallowish brown (104R, 6/2) to mediam light gray (NIb), strong, slightly					roy -iniller sets 6"dix ourded cosing =
	=	- becoming y ellowish gray (54,7/2)	0.0				begins using t' dia double wall Sampler barrel
	22	LIMESTARE. Yallowish gray (54,7/2) to light bluish gray (58,7/1), strong, frash	0.0				
	23		0.0			HOLE NO.	

		HTW DRILL	ING LO	HOLE NO.			
ECT	En.L.	Atlas 5-5	ISPECTOR J-	Breat			SHEET 4 OF 4 SHEETS
V.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d		ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	23 =	LEMESTONE, yellowish gray £84,7/2) to light bluish gray (58,711), strong, fresh	0.0				
	24-	- slightly mathemal	0.0				
			0.0				
	25						
	24		0.0				
	27	stone stone, churty, yellowish gray (51,76) to light bluich gray (58,7/1), strong, Slightly mothered	6.0				
	28		0-0				
	-	CIMESTONE. light olive gray (54,61,1) to medium clark gray	0.0				
	30	(N4), strong, stightly weathered small sports that nodules	p- 0				1220
		TD= 30' bgs					Stops @ 30' bys Trank backfills boring wo bankmill Abo groundwaler observed
		PROJECT Forbas Atla				HOLE NO.	B-03

MRK JUN 89 55-2

1. COMPANY NAME A CHARLES & McDonnell 2. DRILLING SUBCONTRACTOR A CHARLES & McDonnell 3. PROJECT FORMS Atlas S-5 5. NAME OF DRILLER A CHARLES Stabbins 7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT AND SAMPLING EQUIPMENT 4. COVERBURDEN THICKNESS 4. LOCATION  J. DATE STARTED S. LOVERBURDEN THICKNESS 4. LOVERBURDEN THICKNESS 5. NAMPLES FOR CHEMICAL SAMPLES 5. LOVERBURDEN THICKNESS 5. LOVERBURDEN THICKNESS 5. LOVERBURDEN THICKNESS 6. MANUFACTURER'S DESIGNATION OF DRILL 7. LOVERBURDEN THICKNESS THICKNESS THE COUNTY OF THE COMPLETED STATEMENT OF THE CONTROL THE COMPLETED STATEMENT OF THE CONTROL T				HTW	DRILL	ING	LO	G			3.15.83	E NO. 3-05
1. DOTE COMPLETE  SEES AND TYPES OF DELING  SEES AND TYPES OF DELING  AND SAMPLING COUMERT  AND SAMPLING COUMERT  10. DATE STATED  S. I. J.	1. COMPA			-							SHEE	T 1
ENDING A HOS S + LOVING  MANUFACTUREND DESCRIPTION OF PRILLIP  LOVER DOFTH HORIZON  AND DAMPLIED ROTORISE  LOVER STARTED  S. HOLE LOCATION  10. DATE STARTED  S14-15  S. SERMANDED  S14-15  S. SERMANDED  S. SE			- / Bu.	-ns & M. Do	anell		Trau	+ Dril	ling		OF '	> SHEETS
5. MANAPATURERS DESIGNATION OF DRILL  Vector of Porling  1. SUZES AND TYPES OF DRILLING  AND SAMPLING EQUIPMENT  4. dia Authorized  4. dia Authorized  4. dia Authorized  5. HOLE LOCATION  9. SURFACE ELEVATION  10. DATE STARTED  5. 1-1-15  11. DATE COMPLETED  5. 1-1-15  12. OVERBURGEN THICKNESS  13. DEPTH OPHILLED INTO ROCK  5. 14. TOTAL DEPTH OF HOLE  9. 17. OTHER WATER INVIEW MEASUREMENTS (SPECIEV)  14. TOTAL DEPTH OF HOLE  15. TOTAL DEPTH OF HOLE  9. 17. OTHER WATER INVIEW MEASUREMENTS (SPECIEV)  16. GEOTECHNICAL SAMPLES  17. OTHER WATER INVIEW MEASUREMENTS (SPECIEV)  18. TOTAL DEPTH OF HOLE  19. TOTAL DEPTH OF HOLE  20. SAMPLES FOR CHEMICAL ANALYSIS  VOC MERLES  21. ANALYSIS  22. SAMPLES FOR CHEMICAL ANALYSIS  23. SAMPLES FOR CHEMICAL ANALYSIS  24. ANALYSIS  25. CAPPLES FOR CHEMICAL ANALYSIS  26. SAMPLES FOR CHEMICAL ANALYSIS  27. ANALYSIS  28. SAMPLES FOR CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  21. TOTAL UNDSTITUTED ANALYSIS  22. SAMPLES FOR CHEMICAL ANALYSIS  23. SAMPLES FOR CHEMICAL ANALYSIS  24. ANALYSIS  25. CHEMICAL ANALYSIS  26. SAMPLES FOR CHEMICAL ANALYSIS  27. ANALYSIS  28. SAMPLES FOR CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  21. TOTAL LORGE STRUCK OF CHEMICAL ANALYSIS  22. SAMPLES FOR CHEMICAL ANALYSIS  23. SAMPLES FOR CHEMICAL ANALYSIS  24. ANALYSIS  25. CAPPLES FOR CHEMICAL ANALYSIS  26. SAMPLES FOR CHEMICAL ANALYSIS  27. ANALYSIS  28. SAMPLES FOR CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  21. TOTAL LORGE STRUCK OF CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  29. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPL	3. PROJEC	Τ_,				-				, ,		
AND SAMPLES FOR CHEMICAL AMALYSIS  20. SAMPLES FOR CHEMICAL AMALYSIS  21. DEPTH DESCRIPTION OF HOLE  22. DESPOSITION OF HOLE  23. DEPTH DESCRIPTION OF MATERIANS  24. DEPTH  25. DEPTH  26. DEPTH  27. OTHER (SPECIPY)  28. HOLE LOCATION  19. TOTAL DEPTH TO WATER AND ELARS DIME ATTER DELIUNG COMPLETED  29. SAMPLES FOR CHEMICAL AMALYSIS  20. SAMPLES FOR CHEMICAL AMALYSIS  21. DEPTH  22. DESPOSITION OF HOLE  23. SENAPLES FOR CHEMICAL AMALYSIS  24. DEPTH  25. DESCRIPTION OF MATERIANS  26. DEPTH  27. DEPTH  28. DEPTH  28. DEPTH  29. DESCRIPTION OF MATERIANS  PELLO SCREEMING SECTICAL SAMPLE MALYTICAL  29. DEPTH  20. SAMPLES FOR CHEMICAL AMALYSIS  20. DEPTH  21. DESCRIPTION OF MATERIANS  PELLO SCREEMING SECTICAL SAMPLE MALYTICAL  29. DEPTH  20. DESCRIPTION OF MATERIANS  PELLO SCREEMING SECTICAL SAMPLE MALYTICAL  20. SAMPLE FOR CHEMICAL AMALYSIS  21. DEPTH  21. DEPTH  22. DESCRIPTION OF MATERIANS  PELLO SCREEMING SECTICAL SAMPLE MALYTICAL  23. SENATUPOPOPURSPECTURE  AMALYTICAL  24. SAMPLES FOR CHEMICAL  25. DEPTH  26. SAMPLE FOR CHEMICAL  26. SAMPLE FOR CHEMICAL  27. SAMPLES FOR CHEMICAL  28. SON DEPTH  29. DEPTH  21. TOTAL DOM  29. SENATUPOPOPURSPECTURE  AMALYTICAL  20. SAMPLE FOR CHEMICAL  21. DEPTH  21. DEPTH  21. DESCRIPTION OF MATERIANS  PELLO SCREEMING SECTICAL SAMPLE  AMALYTICAL  26. SAMPLE FOR CHEMICAL  27. SAMPLE FOR CHEMICAL  28. SON DEPTH  29. DEPTH  29. DEPTH  20. SAMPLE FOR CHEMICAL  AMALYTICAL  20. SAMPLE FOR CHEMICAL  AMALYTICAL  21. DEPTH  21. DEPTH  21. DEPTH  22. SENATUPOPUP MATERIAL  AMALYTICAL  24. SAMPLE FOR CHEMICAL  AMALYTICAL  25. DEPTH  26. SAMPLE FOR CHEMICAL  AMALYTICAL  28. SON DEPTH  29. DEPTH  29. DEPTH  20. SAMPLE FOR CHEMICAL  AMALYTICAL  29. DEPTH  20. SAMPLE FOR CHEMICAL  AMALYTICAL  20. DEPTH  21. TOTAL COMPLETED  21. TOTAL COMPLETED  21. TOTAL COMPLETED  22. SENATUPOPUP MATERIAL  AMALYTICAL  26. SAMPLE FOR CHEMICAL  AMALYTICAL  27. DEPTH  28. HOLE DECEMINE  29. DEPTH  21. DATE OF CHE			Atlas	3-5						1000	e , 1()	
2. SUPPRISE AND TYPES OF DRILLING  AND SAMPLEN OF DRILLING  10. DATE STATTED  5 - 14 - 15  11. DATE COMPLETED  5 - 14 - 15  12. OVERBURDEN THICKNESS  13. DEPTH TO MATER AND ELARSES THE AFTER DRILLING COMPLETED  5 - 14 - 15  14. TOTAL DEPTH OF HOLE  15. DEPTH TO WATER AND ELARSES THE AFTER DRILLING COMPLETED  16. GEOTECHNICAL SAMPLES  ALA  17. OTHER WATER AND ELARSES THE AFTER DRILLING COMPLETED  18. GEOTECHNICAL SAMPLES  ALA  20. SAMPLES FOR CHEMICAL ANALYSIS  VOC  METALS  ANALYSES FOR CHEMICAL ANALYS	5. NAME C		: ما ما . L									
AND SAMPLING EQUIPMENT  4 dia 4:11 Lit  9 SURFACE ELEVATION  10. DATE STARTED  10. DATE STARTED  5 - 14 - 15  5 - 14 - 15  11. DATE COMPLETED  5 - 14 - 15  12. DUFFILH REQUIREMENT REPOCUNTERED  13. DEPTH ORDILLED MITO ROCK  14. TOTAL DEPTH OF HOLE  17. OTHER MATERIELY MEASUREMENTS (SPECIFY)  18. GEOTECHNICAL SAMPLES  19. TOTAL NUMBER OF CORE BOXES  10. SAMPLES FOR CHEMICAL ANALYSIS  10. SAMPLES FOR CHEMICAL ANALYSIS  10. SAMPLES FOR CHEMICAL ANALYSIS  10. DIFFER (SPECIFY)  11. DITAL NUMBER OF CORE BOXES  11. A IA  12. ( TOC)  13. DEPTH DESCRIPTION OF MATERIALS  14. A IA  15. DEPTH  16. DESCRIPTION OF MATERIALS  17. OTHER (SPECIFY)  18. GEOTECHNICAL SAMPLES  19. DIFFER (SPECIFY)  19. DIFFER (SPECIFY)  10. DIFFER (SPECIFY)  10. DIFFER (SPECIFY)  11. DIFFER (SPECIFY)  12. SAMPLES FOR CHEMICAL ANALYSIS  12. SAMPLES FOR CHEMICAL ANALYSIS  13. DEPTH  14. DEPTH  15. DEPTH  16. DESCRIPTION OF MATERIALS  16. DEPTH  17. DIFFER (SPECIFY)  18. DESCRIPTION OF MATERIALS  19. DESCRIPTION OF MATERIALS  19. DESCRIPTION OF MATERIALS  19. DEPTH  19. DEPTH  19. DESCRIPTION OF MATERIALS  19. DEPTH  1	7. SIZES A				wall sam	ole-			7111 0 100			
9. SURFACE ELEVATION  10. DATE STARTED  11. DATE COMPLETED  5-14-15  12. OVERBURDEN THICKNESS  13. DEPTH DRULLD INTO ROCK  14. TOTAL DEPTH OF HOLE  15. DEPTH TO WATER AND ELEVES THAT ASSURED THAT AFTER DRULING COMPLETED  16. COPY OF HOLE  17. OTHER WATER LEVEL WEASHINGSHOT INTO AFTER DRULING COMPLETED  18. GEOTECHNICAL SAMPLES  19. DISTURBED  10. DITHER (SPECIFY)  10. THERE (SPECIFY)  11. DATE COMPLETED  5-14-15  12. COPY OF THE ASSUREMENTS (SPECIFY)  13. DEPTH OF HOLE  14. TOTAL DEPTH OF HOLE  15. DEPTH DESCRIPTION OF HOLE  16. DEPTH DESCRIPTION OF MATERIALS  17. OTHER WATER LEVEL WEASHINGSHOT OF CORE BOXES  18. DEPTH DESCRIPTION OF MATERIALS  18. GEOTECHNICAL SAMPLES  18. DEPTH DESCRIPTION OF MATERIALS  18. DEPTH DEVELOPMENT OF MATERIALS												
12. OVERBURDEN THICKNESS  13. DEPTH DRILLED INTO ROCK  14. TOTAL DEPTH OF HOLE  15. DEPTH TO WATER AND ELAPSED THE AFTER DRILLING COMPLETED  16. DEPTH TO WATER AND ELAPSED THE AFTER DRILLING COMPLETED  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  18. GECTECHNICAL SAMPLES  19. TOTAL NUMBER OF CORE BOXES  10. SAMPLES FOR CHEMICAL ANALYSIS  11. OTHER (SPECIFY)  12. SIGNATURED OF MORE (SPECIFY)  12. SIGNATURED OF MORE (SPECIFY)  13. DEPTH  14. LOCATI, with sirt, light formality of the RESULTS  15. OF THE (SPECIFY)  16. CLAY, with sirt, light formality of the RESULTS  17. OTHER (SPECIFY)  18. OTHER (SPECIFY)  29. SIGNATURE OF CORE BOXES  19. OTHER (SPECIFY)  20. SAMPLES FOR CHEMICAL ANALYSIS  19. OTHER (SPECIFY)  21. TOTAL CORE  10. O **  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  11. OTHER (SPECIFY)  12. TOTAL CORE  10. O **  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  12. TOTAL CORE  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  12. TOTAL CORE  10. O **  10. O **  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  12. TOTAL LOW RECOVERY  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  12. TOTAL LOW RECOVERY  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  12. TOTAL LOW RECOVERY  10. O **  10. O **  11. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  12. TOTAL LOW RECOVERY  13. OTHER (SPECIFY)  14. SAMPLE NO. COUNTS  14. SAMPLE NO. COUNTS  15. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  16. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  18. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  19. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  10. OTHER WA							9. SURFA	CE ELEVATION	1			
12. DVERBURDEN THECKNESS  13. DEPTH DRILLED INTO ROCK  14. TOTAL DEPTH OF HOLE  15. DEPTH TO WATER AND ELAPSED THE AFTER DRILLING COMPLETED  5. A.												
15. DEPTH GROUNDWATER RENCOUNTERED  13. DEPTH TRICKNESS  14. TOTAL DEPTH OF HOLE  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  18. GEOTECHNICAL SAMPLES  19. TOTAL NUMBER OF CORE BOXES  20. SAMPLES FOR CHEMICAL ANALYSIS  20. DEPTH GROUNDWATER RENCOUNTERED  21. TOTAL DEPTH OF HOLE  22. DISPOSITION OF HOLE  22. DISPOSITION OF HOLE  22. DISPOSITION OF HOLE  23. SIGNATURED OF MATERIALS  24. Toc.)  24. ALA  25. ALA  26. CERY, with sid, light humanity grants  26. CERY, with sid, light humanity grants  27. CLAY, some side, and analysis  28. CLAY, some side, and analysis  29. O CLAY, some side, and analysis  20. O CLAY, some side, and analysis  20. O CLAY, some side, and analysis  20. O CLAY, some side, and analysis  21. Total CORE  25. CLAY, some side, and analysis  26. CLAY, some side, and analysis  27. CLAY, some side, and analysis  28. SIGNATURAL ANALYSIS  29. O CLAY, some side, and analysis  29. O CLAY, some side, and analysis  29. O CLAY, some side, analysis  29. O CLAY, some s												
13. DEPTH DRILED INTO ROCK  14. TOTAL DEPTH OF HOLE  15. DEPTH TO WATER ALEXED TRUBE AFTER DRILLING COMPLETED  16. DEPTH TO WATER ALEXE ASSUREMENTS (SPECIFY)  16. DEPTH TO WATER ALEXE (SPECIFY)  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  18. GEOTECHNICAL SAMPLES  19. TOTAL MAJERS OF CORE BOXES  14. A LA  16. DEPTH MAJER ALEXE OF CORE BOXES  16. DEPTH MAJER ALEXE OF CORE BOXES  17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY)  18. DEPTH MAJER ALEXE OF CORE BOXES  19. OTHER (SPECIFY)  20. SAMPLES FOR CHEMICAL ANALYSIS  10. OTHER (SPECIFY)  21. TOTAL COR  10. OTHER (SPECIFY)  22. SIGNATUSPO OF MAJER ALEXE  22. DEPTH DESCRIPTION OF MAJERIALS  10. OTHER (SPECIFY)  23. SIGNATUSPO OF MAJER ALEXE  24. OTHER (SPECIFY)  25. SIGNATUSPO OF MAJER ALEXE  26. OTHER (SPECIFY)  27. OTHER (SPECIFY)  28. SIGNATUSPO OF MAJER ALEXE  29. OTHER (SPECIFY)  29. SIGNATUSPO OF MAJER ALEXE  20. SAMPLE NO. COUNTS  21. TOTAL COR  20. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO		NIDDEN THOUSE	00				_			3-1	4-17	
13. DEPTH DRILLED INTO ROCK  14. TOTAL DEPTH OF HOLE  15. OTHER WATER LAW ASSUREMENTS (SPECIFY)  16. GEOTECHNICAL SAMPLES  17. OTHER WATER LAW ASSUREMENTS (SPECIFY)  18. GEOTECHNICAL SAMPLES  18. GEOTECHNICAL SAMPLES  19. TOTAL DIMBER OF CORE BOXES  1/A  20. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  22. DISPOSITION OF HOLE  13. OTHER (SPECIFY)  23. SIGNATURE OF THER (SPECIFY)  24. TOTAL COR  25. RESULTS  16. OTHER (SPECIFY)  26. SIGNATURE OF THER (SPECIFY)  27. TOTAL COR  28. SIGNATURE OF THER (SPECIFY)  29. SIGNATURE OF THER (SPECIFY)  20. SOUNTS  20. SOUNT BOX NO.  20. SIGNATURE OF THER (SPECIFY)  21. TOTAL COR  22. DISPOSITION OF HOLE  22. DISPOSITION OF HOLE  23. SIGNATURE OF THER (SPECIFY)  24. TOTAL COR  25. SIGNATURE OF THER (SPECIFY)  26. SIGNATURE OF THER (SPECIFY)  27. SIGNATURE OF THER (SPECIFY)  28. SIGNATURE OF THER (SPECIFY)  29. SIGNATURE OF THER (SPECIFY)  20. SIGNATURE OF THER (SPECIFY)  20. SIGNATURE OF THER (SPECIFY)  21. TOTAL COR  22. DISPOSITION OF HOLE  22. DISPOSITION OF HOLE  23. SIGNATURE OF THER (SPECIFY)  24. TOTAL COR  25. SIGNATURE OF THER (SPECIFY)  25. SIGNATURE OF THER (SPECIFY)  26. SIGNATURE OF THER (SPECIFY)  27. TOTAL COR  28. SIGNATURE OF THER (SPECIFY)  29. SIGNATURE OF TH	12. OVER	BURDEN THICKNE	55 4				IS. DEPI			,		
14. TOTAL DEPTH OF HOLE  15. DISTURBED  16. DISTURBED  17. DITHER WATER LEVEL MEASUREMENTS (SPECIFY)  18. GEOTECHNICAL SAMPLES  19. TOTAL NUMBER OF CORE BOXES  1/A  1/A  20. SAMPLES FOR CHEMICAL ANALYSIS  20. SAMPLES FOR CHEMICAL ANALYSIS  21. TOTAL COR  12. TOC.)  22. DISPOSITION OF HOLE  13. DEPTH  14. DEPTH  15. DEPTH  16. DESCRIPTION OF MATERIALS  16. DEPTH  16. DESCRIPTION OF MATERIALS  17. DEPTH  18. DEPTH  18. DESCRIPTION OF MATERIALS  18. DEPTH  18. DEPTH  18. DEPTH  18. DESCRIPTION OF MATERIALS  18. DEPTH  18. DESCRIPTION OF MATERIALS  18. DEPTH	13. DEPTH	DRILLED INTO R	OCK				16. DEPT				MPLETED	
18. GEOTECHNICAL SAMPLES  DISTURBED  A   A  UNDISTURBED  A   A  A   A  A   A  20. SAMPLES FOR CHEMICAL ANALYSIS  VOC  METALS  OTHER (SPECIFY)  OTHER (SPECIFY)  OTHER (SPECIFY)  OTHER (SPECIFY)  A   A  RECOVERY  (I O O %  RECOVERY  12. OTHER (SPECIFY)  OTHER (SPECIFY)  OTHER (SPECIFY)  OTHER (SPECIFY)  OTHER (SPECIFY)  PRECOVERY  I O O %  RECOVERY  RECOVERY  RESULTS  OR CORE BOX NO. SAMPLE MALLYTICAL  BLOW  RESULTS  OR CORE BOX NO. SAMPLE NO.  OCLAY, with sit, light homosphare  Flatfield, organis and abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer for same abundant  CLAY, some sith, very dark yer									NIA	Man area		
18. GEOTECHNICAL SAMPLES  DISTURBED  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A  A   A	14. TOTAL	DEPTH OF HOLE	-1				17. OTHE	R WATER LEV		ECIFY)		
DESCRIPTION OF HOLE  LEV. DEPTH  CLAY, with sit, light township and love fragments and abundant  CLAY, with sit, light township and love fragments and abundant  CLAY, some sith, very dark year  CLAY, some sith								-120-22	10-1-			
20. SAMPLES FOR CHEMICAL ANALYSIS  VOC  METALS  OTHER (SPECIFY)  21. OTHER (SPECIFY)  22. DISPOSITION OF HOLE  BACKFILLED  MONITORING WELL  OTHER (SPECIFY)  23. SIGNATURE OF MILLY (100 %  RECOVERY)  24. OTHER (SPECIFY)  25. SIGNATURE OF MILLY (100 %  REMARKS  OF CORE BOX NO.  REMARKS  OF CAPY, with cit, light homewith gas playing the following profits and particular of the following particul	18. GEOTI	CHNICAL SAMPL	ES	77.77 (77.77)			19					
22. DISPOSITION OF HOLE  BACKFILLED  MONITORINS WELL  OTHER (SPECIFY)  23. SIGNATURE OF MALTICAL  MALTICAL  BLOW  SAMPLE NO.  COUNTS  FIELD SCREENING  RESULTS  OF CORE BOX NO.  AMALTICAL  BLOW  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  AMALTICAL  BLOW  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  AMALTICAL  BLOW  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  AMALTICAL  BLOW  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OF CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  OR CORE BOX NO.  SAMPLE NO.  COUNTS  FIELD SCREENING  SAMPLE NO.  COUNTS  FIELD SCREENING  AND COUNTS  FIELD SCREENING  AND COUNTS  FIELD SCREENING  FIELD SCREENING  AND COUNTS  FIELD SCREENING  SAMPLE NO.  COUNTS  FIELD SCREENING  FIELD SCREENING  FIE	OU CVIND	ES EUB CHEMIC	AL ANALYSIS				OTHER			OTHER (S	SPECIFY	21 TOTAL COR
ELEV. DEPTH DESCRIPTION OF MATERIALS  O CLAY, with sit, light bounds to get fled Screening RESULTS  O CLAY, with sit, light bounds to get fled Screening RESULTS  O CLAY, with sit, light bounds to get fled Screening RESULTS  O CLAY, with sit, light bounds to get fled Screening RESULTS  O CLAY, with sit, light bounds to get fled Screening RESULTS  O CLAY, come si h, very dark jory  CLOY, some si h, very dark jory  Plasticity or garies and rock  fragments abundant  Line gener where come and rock  Line gener where com	ZU. SAWIF	LES FOR GILLWIO	AL AIVALISIS	100	WEINE	.0			1000	1		
ELEV. DEPTH DESCRIPTION OF MATERIALS  FIELD SCREENING GEOTECH SAMPLE MAINTICAL BLOW SAMPLE NO. COUNTS  FIELD SCREENING GEOTECH SAMPLE NO. COUNTS  FRESULTS  OR CORE BOX NO. SAMPLE NO. COUNTS  FRESULTS  FIELD SCREENING GEOTECH SAMPLE MAINTICAL BLOW SAMPLE NO. COUNTS  FRESULTS  FRESULTS  FRESULTS  OR CORE BOX NO. SAMPLE NO. COUNTS  FRESULTS  FRESU				2	الم	A				100	A	100 %
DEFINE DESCRIPTION OF MATERIALS  PELD SCREENING GEOTECH SAMPLE MAINTICAL BLOW COUNTS  RESULTS  OF CORY, with sit, light bounds by the county of the county o	22. DISPO	SITION OF HOLE		BACKFILLED	MONITORING	WELL	OTHER	(SPECIFY)	23. SIGNATURE OF IN	SPECTOR 1		
DEFINE DESCRIPTION OF MATERIALS  PELD SCREENING GEOTECH SAMPLE MAINTICAL BLOW COUNTS  RESULTS  OF CORY, with sit, light bounds by the county of the county o				×					6/1/1/4	18AL	/	
ELEV. DEPTH  DESCRIPTION OF MATERIALS  RESULTS  OR CORE BOX NO. SAMPLE NO.  CLAY, with sit, light bounding any least, etc.), damp, seth, and wan plasticity, organics and abundant cet fragments  CLAY, some sith, very dark gray  (100/R, 3/1), damp, seth, high  Plasticity, organics and rock  fragments abundant  1725  D. 0  SE-05-12.5				- /	1	FIELD SC	CREENING	GEOTECH SA	MPLE ANALYTICAL	BLOW		
CLAY, with sit, light bounds gay  [1986, 66), down p i soft, and was  plaskichy, organics and abundant  CLAY, some sith, very dark year  (100/R, 31), damp i soft, high  plaskichy organics and rock  fragments abundant  1725  58-05-0-2  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1725  1726  1725  1725  1726  1725  1725  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1727  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726  1726		10.000	DESC		S	RES	ULTS	OR CORE BO	100 000 000 000 000 000 000 000 000 000	COUNTS		REMARKS
CLAY, some silk, very dark gray  CLOYR, 31, damp; soft, high  Plashicity 100 anies and rock  fragments abundant  1725  CLOY, with come some and rock  fragments abundant  1725  December of (2.57,041),  Jamp 150ft, auction plassicity  Cosy, since fragments, check  rockers, olive yellow (2.57,66),  dry, nection silfness, motion  plusticity  Space, olive yellow (2.57,66),  dry, nection silfness, motion  plusticity  Space, olive yellow (2.57,66),  dry, nection silfness, motion		0 -00	AY, with	sit, light boo	which gray	v.0					5-14	-15 C 1639:
Lety, some sith, very dark gray  (10x1R, 3[1), damp, soft, high  plasticity 10x paics and rock  fragments abundant  0.0    1725		700	asticity, o	organies and	ahundant				.21		Tran	+ begins
Lety, some sith, very dark gray  (10x1R, 3[1), damp, soft, high  plasticity 10x paics and rock  fragments abundant  0.0    1725		= '	oce fragm	anti						,7	drill	ing of
Lety, some sith, very dark gray  (10x1R, 3[1), damp, soft, high  plasticity 10x paics and rock  fragments abundant  0.0    1725		1							55 55 .01	=1	4" 4	7 4 4
Plasticity, organics and rock  fragments abundant  1725  58-05-1,5-25  The graves whate red (2.578,441),  lamp soft, purching plasticity,  casy, limes bear fragments, chart  robules, alive yellow (2.57, 661),  dry, medium shiffness, medium  plustrety  SNACE, alive yellow (2.57, 661),  unak, meathered		1 =									doubl	e wall
Plasticity, organics and rock  fragments abundant  1725  58-05-1,5-25  The graves whate red (2.578,441),  lamp soft, purching plasticity,  casy, limes bear fragments, chart  robules, alive yellow (2.57, 661),  dry, medium shiffness, medium  plustrety  SNACE, alive yellow (2.57, 661),  unak, meathered		100	My, some	silt, very d	ark gray	0.0					Samo	.( - /
Decety, with convert some and the start of (2.54, 4/1), when sold, and in fortiety of confe, such and soldier, of the present of the product		1 3	10/12, 31, ),	dampiser	d rack							
Decety, with convert some and the start of (2.54, 4/1), when sold, and in fortiety of confe, such and soldier, of the present of the product		$-\frac{1}{2}$	m-ments a	bundant	0 7000							
Cesty, with course some and and fin graves weak red (2.54R, 4/41),  fin graves weak red (2.54R, 4/41),  damp isoft, perdium plasticity  cesty, lines tone fragments, che-t  robules, cline yellow (2.54, 6/6),  dry, medium shiffness, medium  plusticity  SHALE, cline yellow (2.54, 6/6),  weak, meathered		Η Ξ΄	'ayı								1	
CLOTY, with course some and and fin grass week red (2.57R, 4/4),  fin grass week red (2.57R, 4/4),  damp isoft, puchism plasticity  cody, linestone fragments, che-t  robules, clive yellow (2.57, 6/6),  dry, medium shiffness, medium  plusticity   SHALE, clive yellow (2.57, 6/6),  unak, meathered		I. 7							1725		1.	
Jesty, with every sond and  Lim grans, we he red (2.51R, 4/4),  lamp 1 sold), suchium plasticity  cody, limistane fragments, check  redules, clim yellow (2.54, 6/6),  dry, melium stiffness, medium  plusticity  share, olive yellow (2.54, 6/6),  meak, meathered		1				19.0				-25]		
Testy, with coarse sond and  fin graves weak red (2.51/2,4/4),  fin graves weak red (2.51/2,4/4),  framp soft, purdium plasticity  cody, lives fore framents, chert  nobules, olive yethow (2.54,6/6),  dry, medium stiffness, medium  plusticity   space, olive yethow (2.54,6/6),  unal, meathered		1 7								_		
-cc. 44. lines fore fragments, che-t  nobules, olive yellow (2.54, 6/6),  -dry, medium stiffness, medium  prostrecty  -share, olive yellow (2.54, 6/6),  weak, meathered									Aug-1-5	87		
-cc. 44. lines fore fragments, che-t  nobules, olive yellow (2.54, 6/6),  -dry, medium stiffness, modium  -prostreety  -space, olive yellow (2.54, 6/6),  meak, meathered		1 7									1	
-cc. 1/2 lives fore fragments, che-t  nobules, olive yellow (2.54, 6/6),  -dry, medium shiffness, modium  prestreety  -share, olive yellow (2.54, 6/6),  weak, meathered		1. 4.	Total X								1	
-cc. 44. lines fore fragments, che-t  nobules, olive yellow (2.54, 6/6),  -dry, medium stiffness, modium  -prostreety  -space, olive yellow (2.54, 6/6),  meak, meathered		> <del>-</del>  ≠	m grave!	man red 12.	518,4/41	1					1	
- robules, olive yellow (2.54, 6/6),  dry, medium stiffness, motion  - plusticity  - space, olive yellow (2.54, 6/6),  mucak, meathered		1 - 1			/	0.0						
- dry, medium shittness, medium - prostrecty - share, other yellow (2.54. 6/6), - meak, meathered		00	AY. lines	tone fragmen	to chi-t							
4 = prostreity - share, other yellow (2.54. Gh), weak, weathered		1	dules, oli	a stiffness.	molium ,							
SHALE, olive yellow (2.54. 6/6),  weak, weathered		70	Lustreity	and the state of t								
Juneak, meathered		4-7	- ·	1 4.16w 12.	54. 6/6/1							
		**	MAK, MA	Thered								
5 = 0.0		=="										
						0.0			- 1			
5 -		-						111				
						11					1	

СТ		HTW DRIL	INSPECTOR	58-05 SHEET 2			
	Forbes	s Atlas 5-5	J.	Bryant	I	Di Out	OF 2- SHEETS
	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	= 2	EMESTONE, thin shale interteds noderate gellowish frown 100 yR, 5/4), strong, slightly weathered	0.0				change & 5'
			1.2				
	7 - 1	HALE, medical, yellowish brown 104R, 5/4), strong, slightly weath	1.3				
	77	FARSTONE, with chirt, moder rallowish brown (10412,5/4), moder ight gray (NG) chirt, strong,	t.z				
	9	TO = 9' bys					1700: Trant stops e 9' bys. -Trant backfill
	10 -						bentonite chips - No Grandus Observed
	12						
	/3						
	/4	PROJECT Forbes Atlas				HOLE NO.	58-05

		HTW	DRILLIN	IG LC	G				HOLE S B	NO. -05 R
. COMPAN	NY NAME	20.000	2. DRI	LUNG SUBCON	TRACTOR				SHEE	T 1 SHEETS
PROJEC	Burns & M	· Donnell		4. LOCA	Trant Do	-1111	<u> </u>		TOP	SHEETS
. PROJEC	Forbes Allas	5-5			5-5 E		Council	Grove		
NAME O	F DRILLER			6. MAN	JFACTURER'S D					
CIZEC A	ND TYPES OF DRILLING	obins 4" dia doub	la	l 8 HOLE	LOCATION	Soni	L V100			
	MPLING EQUIPMENT	4" dia bit	אר שינוי איני							
		lo" dia bit		9. SURF	ACE ELEVATION	1				
	-	le" dia overe	rill lasing	10. DAT	E STARTED		1	1. DATE COM	PLETED	
					5-15-15			5-15-	15	
2. OVERE	BURDEN THICKNESS J			15. DEF	TH GROUNDWA					
	H DRILLED INTO ROCK			16. DEF			APSED TIME AFTE	R DRILLING CO	MPLETED	
3. DEPTH	26					ALA			Y Y Y	
4. TOTAL	DEPTH OF HOLE			17. OT		N A	SUREMENTS (SPE	CIFY)		
18 CENTI	ECHNICAL SAMPLES	DISTURBED	UNDISTU	IRBED 1	9. TOTAL NUM		CORE BOXES			
J. GEOTE	Editione draw LEO	N/A	21	4	11.	A	107			1
20. SAMPI	LES FOR CHEMICAL ANALYSIS	VOC	METALS	ОТН	R (SPECIFY)	OTI	HER (SPECIFY)	OTHER (S	PECIFY)	21. TOTAL CORI
		2	NIA	2	(TOC)		NIA	N	/A	100 %
22. DISPO	SITION OF HOLE	BACKFILLED	MONITORING W	ELL OTH	ER (SPECIFY)	23. S	IGNATURE OF INC	PECTOR /		
		×					holh	AX		
9.00				ELD SCREENING			ANALYTICAL	BLOW	-	i Smilia
ELEV.	DEPTH D	ESCRIPTION OF MATERIALS C	5	RESULTS d	OR CORE BO	OX NO.	SAMPLE NO.	COUNTS		REMARKS h
	-abundant 	rock fragments esit, very de damp, soft, i organics and ments	Light oberdant	0.0					drilli bit a doubt	bogins as orl d'dia ad 4" dia c vall sample
	- des, o des, medi plasticity	stone fragments, live yellow (2.5 um skiffness. N live yellow 12 eathered	chart 7, 4/6), adjum 57.6/61,	0-0						
	Trodules, o des, medi plasticity SHALE, o wale, w	live yellow (2.5 mm sliffness. N	chart 7, 4/6), adjum 57.6/61,					HOLE NO.		

		HTW DRII	LING LO	G			HOLE NO.  SO-05R  SHEET 2	
JECT	_	bes Atlas 5-5	INSPECTOR J.3	rant			OF 4 SHEETS	
EV.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h	
1	5 - -	LIMESTONE, with chart, modern Yellowish brown (1048,5/4), stro slightly weathered	te				Change & 5'	
	ا ا	sHALE, moderate gallowish bo LIOYR, 5/4), Itong, Slightly weo	0.0					
	7 -		0.0					
	-							
	8 -	LEMESTONE, some chert, moder yellowish brown (10/R,5/4), strong	0.0					
	9-	slightly meathered, few solutions cavities  SHALE, Jusky yellow (546)  Strong, fresh	0.0				Hand drilling	
	10		v - °				9-20'	
	//	- slightly weathered, some oxidation present	0-0					
	/2 —		0.0		1545 5B-05R/S 5B-05R/S 5B-05R	1-12-13	mso.	
	/3 —		0.0					
	14	PROJECT				HOLE NO	).	_

		HTW DR	ILLING LO	G			HOLE NO. 58-05 R
JECT	Forbes	Atlas 5-5	INSPECTOR J.	Broat			SHEET 3 OF 4 SHEETS
LEV.	DEPTH b	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
a	14 - SH	ALE, dusky 7+110w (54,6/4) rong, slightly weathered, we exidation present	0.0				
	I for	ALC, dark gray (N3), esh, thin laminae, modern How (51,7/6)	strong,				1513
	14-		0.0				
	11-		0.0				
	18		0.0				
	19 ====================================		0.0				
	20	thinly ninterbedded with me mathered shale	. k , 0.0		1640 58-05K   5	3-20-21	1558 Hard drilling 20-50'
	21		0.0				
	- 9°	MESTONE, mothled medium of (N4) to gellowish growth thin interbeds of medium or programmed shale, strong	Jank 7 (54,7/2), lium				
	27 = 4	PROJECT	0.0			HOLE NO.	

		HTW DRILLI	NG LO	G			HOLE NO. SB-05R	
JECT	Enl	us Atlas 5-5 Insi	PECTOR T.	Brzant			SHEET 4 OF 4 SHEETS	
v.	DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW	REMARKS	
1	23 -	LIMESTONE, with this dark gray shale interbeds, mottled medium dark gray (NH) to yellowish gray (54,7/L), strong, fresh  LIMESTONE, with light bluish gray (58,7/L) chest, light gray (NT), strong, slightly meathered	0.0	е		g		
		Strong, slightly meathered  LIMESTONE, pale gallowish  orange (104R, 5/6), strong,  Slightly meathered, oxidation  present, thin, light gray (N7)  Shale interbeds	0.0					The second second second
	27—	LIMESTONE, Yellowish stay (54,7/2), weak, highly weathered,	0.0					
	-	exidation present  LIMESTONE, gellowish gray  157,7/2), moderately strong, slightly  weathered, some small fossils  - Chert present, light bluish  grey (513,7/1)	0.0					
	29		6.0					
		TO = 30' bgs					1628: Trant Stops @ 301 - Abundon borin w/ bentonits No grounder observed	3

MRK JUN 89 55-2 Forbes Atlas 5-5

5B-05R

			HTW	DRILL	ING	LOG			1000	E NO.
1. COMPA		10.000		2.		JBCONTRACTOR			SHE	ET 1
		¿ McDon	nell			Trant Dr	-illing		OF	3 SHEETS
3. PROJE		s Atlas	5-5		4	LOCATION S-5 C	. of Counci	Comme	165	
E NAME	OF DRILLER	5 H+ Ids	5-5		6	MANUFACTURER'S D		1 0-000	1117	
3. NAIVIE		Jata Stek	bine		ľ		a Suric VI	00		
7. SIZES	AND TYPES OF		t" dia double	wall samp	1- 8	HOLE LOCATION	,,,,,,			
AND SA	AMPLING EQUI		" dia drills							
			6" die bit			SURFACE ELEVATION	N			
			b" dia casi-	,						
					1	O. DATE STARTED		11. DATE COMP		
OF - 1						5-14-15		5-14	-17	
12. OVER	BURDEN THICK	2 1			1	5. DEPTH GROUNDWA				
40 DERT	U DOULED INT	THE P. P. LEWIS CO., LANSING, MICH.			- 1,		AND ELAPSED TIME AFTI	D DDII LING COI	MDI ETED	_
13. DEPT	H DRILLED INT	19'				b. DEPIH TO WATER		TH DHILLING COI	WPLETED	
14 TOTA	L DEPTH OF H	ni E			1		EL MEASUREMENTS (SP	ECIFY)		
		21'					(A			
18. GEOT	ECHNICAL SAM	MPLES	DISTURBED		ISTURBED	19. TOTAL NUM	BER OF CORE BOXES			
			Al La	M	IA	NIA				
20. SAMP	LES FOR CHE	MICAL ANALYSIS	VOC	METAL	LS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SI	PECIFY)	21. TOTAL CORI
		300	2	211	Δ	2 ( TOC)	AlA	11	A	RECOVERY
aa piene	OSITION OF HO	I E	BACKFILLED	MONITORING		OTHER (SPECIFY)	23. SIGNATURE OF IN			100 %
22. DISPL	JOHN OF HU			IVIONITONING	WLLL	OTHER (OF LOIFT)	1 1 1	<b>a</b>		
			X				Myly			
					FIELD SCR			BLOW		e activação
ELEV.	DEPTH b	DESC	CRIPTION OF MATERIALS	3	RESUI	OR CORE BO	OX NO.   SAMPLE NO.	COUNTS		REMARKS
		(LEMCSTON)  LEMCSTON  LEMCSTON  COMPT (ST)  COMPT (NS  COMPT (NS  MEATHERED	durate yellow	ich red is in finity when yellow woderately	0.0		\$8-06-1-		drille dia	t begins injul 4" bit & 4" double welled
	5				6.0			HOLE NO.		

MRK JUN 89 55

СТ	- 1	HTW DRILL	NSPECTOR				53-06 SHEET 2
	F07	100 Atlas 5-5		Bryant GEOTECH SAMPLE	ANALYTICAL	DI OW	OF 3 SHEETS
EV.	DEPTH b	DESCRIPTION OF MATERIALS	RESULTS d	OR CORE BOX NO.	ANALYTICAL SAMPLE NO. 1	BLOW COUNTS g	REMARKS h
	5 -4 -4 -3	INCSTONE, with chert, schools gray (54,811), light gray (NT) chert, strong, slight weathered	707 2			39	change & 5' bys
	اد الله الله الله الله الله الله الله ال	HALE, dusky 7+110w (54,614), closy, fresh	0.6				
	7		0.3				
	8						
			0.6				
	9 -		1-7				
	(0		0.0				
	<u>.</u>						
			0.0				
	12—31		0.2	1			
	13—		0. 2				
	14 =	PROJECT	0.4				

Forbes A	11 . 6-5	- Walledge.	OG			SB-06
EV. DEPTH	+193		Broant		2020	OF 3 SHEETS
	DESCRIPTION OF MATERIALS	RESULTS	OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	COUNTS	REMARKS h
18 - Janes 19 - Janes	DESCRIPTION OF MATERIALS  C  C  C  C  C  C  C  C  C  C  C  C  C	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			BLOW COUNTS	REMARKS  h  Change @ 14'  Stops @ 21' bys  Trant backfil  barchole wl  chips.  - No groundwate

			HTW	DRILL	ING L	OG			HOLE 51:	ENO. 3-07-
1. COMPAN	NY NAME	BURNS /	AND MCDON	WiLL 2.	DRILLING SUBC	ONTRACTOR			SHEE OF	T 1 SHEETS
3. PROJEC			LAS 5-5		4. LC	CATION	st of Coun	cit Grove		
5. NAME OF	C DDII I ED	- 0 / 271	7 10 7 10 10 10 10 10 10 10 10 10 10 10 10 10				DESIGNATION OF DRILL		1	
	NATI	STRIBB				URSA SON	11 V100			
	ND TYPES OF DR MPLING EQUIPME		" DIA BIT			DLE LOCATION				
AND SAN	VIPLING EQUIPIVIE	4"	DIA SINGLE			IRFACE ELEVATIO	Ň			
		1"	DIA BIT	CI SAMISE	5. St	THE FOLL ELECTRISTS				
			NIA CASIN	6		ATE STARTED		11. DATE COM	<b>IPLETED</b>	
						-18-15		5-18-	15	
12. OVERB	URDEN THICKNE	SS 2.517			100	EFTH GROUNDW	ATER ENCOUNTERED			
13. DEPTH	DRILLED INTO R	OCK			_	Carlo	AND ELAPSED TIME A	FTER DRILLING CO	OMPLETED	11
		27.5	FT		- 1		412			
14. TOTAL	DEPTH OF HOLE	30 8+			17. (	THER WATER LE	VEL MEASUREMENTS (	SPECIFY)		
18. GEOTE	CHNICAL SAMPL	-	DISTURBED	UND	ISTURBED	19. TOTAL NUM	MBER OF CORE BOXES			
J. GLUIL	San San San L		NIA	(2-0.00)	14	NA				
20. SAMPL	ES FOR CHEMIC	AL ANALYSIS	voc	METAL	LS 01	HER (SPECIFY)	OTHER (SPECIFY	OTHER (	SPECIFY)	21. TOTAL CORE
			6	210	4 /	-TOC	AIA	14	A	RECOVERY
22. DISPOS	SITION OF HOLE		BACKFILLED	MONITORING	-	THER (SPECIFY)	23. SIGNATURE OF	WSPECTOR-	1	1,5
		- 1	_				1 ////	11/10		
			X		FIELD SCREEN	ING GEOTECH S	AMPLE ANALYTICAL	y av	1	
ELEV.	DEPTH	DES	CRIPTION OF MATERIALS	S	RESULTS	OR CORE B		BLOW		REMARKS
	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	CLAY, TRA RROWN (I MESTONE NOULAR TAINING SHALY DREDOMIN HARSTON HARSTON HIGHTLY MESTON	AYISH BROWN ONLY STIFFINGS, LARD  ONLY STIFFINGS, DARANIES, LARD  ONE BROWN (SY INTERPRETED IN CATHER STONE AND INTERPRETED IN THE PROBLEM IN	YIELLOWISH  AMP,  S PRESENT  ON  TS  W/  NTS  LIGHT  S),  T GRAY	1		1530		drilli die I die s	t bugins ng wl 4" hit 4 4" single wall
	=				0.5					
	- =				0.00				1507	

		HTW DRIL	LING LO	G			HOLE NO. 53-07
ECT	For	has Atlas 5-5	INSPECTOR J.	3,700+			SHEET Z OF Y SHEETS
V.	DEPTH b	DESCRIPTION OF MATERIALS		GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	5 -	SHALL LIMESTONE, PREDOMINAMILY SHALE W/ LIMESTONE FRACHENTS THROUGHOUT SHALE IS LIGHT OLIVE BROWN (54 5/6), STIFF,	0.00				ORILLING FLOWS
		SUGHTLY WEATHERED.  LIMISTONE INCLUSIONS VERY LIGHT GRAY (NE) VERY HARD,  MODERATELY WEATHERED	0.00				
			v- 00				
	۶		0.00				
	9		0.00		1535 5B-07-9-10		1510 CONTINUES
	10 —	SHALE LIGHT OLIVE BROWN SYS/6) SLIGHTLY WEATHERED WEAK	0.30				DRILLING  1543 10'-14'  RECOVERED  DRILLIAR BEGINS  USING 6" CASING
	/ -		0.00				Osma o - ,
	/2 	SHALE HESIUM DAKE GRAY (NY) SWEHTLY WEATHERED, STIFF.	0.00		<u>/630</u> 58-07-12-13		
	·3 —	LIMESTONE HEBIUM GRAY, (NS) STRONG, FRESH, NO ENIDENT WEATHERING	0.00				

MRK JUN 89 55-2 For Las At las 5-5 SB-07

	HTW DRII		u			53-07
CT	Forbes Atlas 5-5	INSPECTOR	-Brant			SHEET 3 OF 4 SHEETS
V. DEPTH	DESCRIPTION OF MATERIALS	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO. f	BLOW COUNTS	REMARKS h
15— 15— 16— 17—	CIMESTONE MEDIUM GRAY  (NS) STRONG, NO EVIDENT  WEATHERING  LIMESTONE YELLOWISH GRAY  (SY/8/1) STRONG, CUIDENCE  OF SLIGHT WEATHERING,  DISSOLUTION HOLES, FEW DARK  GRAY (N3) CHERT INCLUSIONS  LIMESTONE ALTERATION  GETWEEN YELLOWISH GRA  (SY 8/1) AND MEDIUM  GRAY (NT). SHIGHTLY  WEATHERED, STRONG.	d C	e	The second section is a second second	9	7 44 4 CH C 10 10 10 10 10 10 10 10 10 10 10 10 10
2/_	LIMESTONE YELLOWISH GRAVEST SY 8/1), STILL ALTERNATING WITH MEDIUM GRAY (NS)  ABUNDANT BARK GRAVE GRAVE CHERT THROUGHOUT CHERT THROUGHOUT SHIGHTLY WEATHERED, STRONG LIMESTONE MEDIUM GRAY (NEATHERED, STRONG FOSSILIFIERDS)  PROJECT	5)			HOLE NO	DRILLER CHANGES  O-RING ON BOUGH WALL SAMPLER  1640 201-301  FELOVERED  DRILLING

OIFOT		HTW DR	_	The second second	G			\$5-07 SHEET 4
OJECT		Forbas Atlas 5-5	IN		3-7-4	Augumen.	Di Oiti	OF 4 SHEETS
ELEV.	DEPTH b	DESCRIPTION OF MATERIALS		RESULTS d	GEOTECH SAMPLE OR CORE BOX NO. e	ANALYTICAL SAMPLE NO. f	BLOW COUNTS g	REMARKS h
	23 	LIMESTONE MEDIUM GRAY (AS SLIGHTLY WEATHERED, STRON FOSSILIFEROUS, CRINOIS FRAG SPONGE SPICULES	nG,				X	
1	ا ا ا	SHALE MEDIUM GRAY (NS VERY SOFT, WEATHERED	-)					
a	,	SHALE MEDIUM DARK GRAY (A HIGHLY WEATHERED, VERY SOF			_	1645 58-07-26-d	7	
á	)7—	LIMESTONE MEDIUM GRAY ( STRONG, SLIGHTLY WEATHRAED. FOSSILIFEROUS, BRACHIOJOC FRAGME  SHALIL GREENISH GRAY	N 5)			-0.6		
2	1,	SGY 6/1) MUDSTONE FORM, STRONG MODERATELY WESTHERED WESTHERED PURTIONS ARE RELATIVELY WEAK.				1655 58-07-28-29		
a	19 —				١		·	
3		TD = 30' 595						RELIERS STOP DRILLERS STOP DRILLING  1715 TRAUT FINISHES GROUTING  Observed
	=	PROJECT					HOLE NO.	B-07

Monitoring Wel	I Construction	Diagram	
Project Number: 80447	Well Number:	MW-01D	
Project Name: Former Forbes Atlas S5	Site Name: Forme	er Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055491.8	
Drilling Company: Traut Drilling	Easting:	1939416.70	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
			J-plug
Drilling Method: Sonic Drilling		Lock Keyed to:	
Borehole Diameter: 7"		Protective Cover:	
		Material:	Steel
Elevations		Size:	4"
Top of Casing (TOC) 1422.75		Length:	5'
Ground Surface (GS) 1420.78 Reference Point (RP) 1422.75		Pea Gravel (Y/N):	Sand Y
Reference Form (RF) 1422.75		Weep Hole (Y/N): Guage Mark (Y/N):	<u>Y</u> Y
		<b>1</b>	_
Dates 5/40/45		Guage Mark (Y/N): Bollards (# and type):	4 - steel
Drilling Start 5/13/15 Drilling Complete 5/13/15		Surface Pad:	
Installation Start 5/13/15			3' x 3' x 6"
Installation Complete 5/14/15		Material:	3' x 3' x 6" Concrete
Development Start 5/16/15			_
Development Complete   5/18/15		Annular Seal:	F7.01 / Outlete Outlet
		Type & Size: Manufacturer:	EZ Seal / Quick Grout Haliburton
Depth to			4 - 50# bag / 0.7 - 50# bag
Annular Material Top Total Elevation		•	. com ang, em com ang
Measurements from GS Footage of Top		Bentonite Seal:	Dal Diug Pontonita Dallata
Annular Seal         3.0         44.0         1417.78           Bentonite Seal         47.0         4.0         1373.78		Type & Size: Manufacturer:	Pel-Plug Bentonite Pellets PDS
Bentonite Seal			2 - 5 gal buckets
Filter Pack 51.0 15.0 1369.78		, illiouni occur	
Backfill 66.0 4.0 1354.78		Secondary Filter Pack	
Bottom of Borehole 70.0 NA 1350.78	<u> </u>	Type & Size: Manufacturer:	NA NA
	$\bowtie$	Amount Used:	
Casing Materials   Total   Elevation		Amount Osea.	IVA
Measurements Footage of Top		Primary Filter Pack:	0111 0 1 00/40
Total Riser Installed 60.0 NA		Type & Size:	Silica Sand 20/40 Haliburton
Total Riser Cutoff         2.64         NA           Screen         10.04         1364.75		Manufacturer:	9 - 50# bags
End Cap 0.35 1354.71		Amount Osca.	o oon bago
Total Depth from TOC 67.75		Well Casing:	
		Type:	PVC 2"
Groundwater Levels		Diameter: Sch. or Weight:	SCH 40
Reference		Manufacturer:	Johnson Screens
Date & Time Depth Point		Screen Type:	PVC
7/26/15 46.72 TOC		Screen Slot Size: Bottom Cap Type:	0.01 Flat
		Bollom Cap Type:	rıat
		Centralizers (Y/N):	NA
		Material:	NA NA
		Number: Depth(s):	NA NA
Notes		Deptil(S).	INA
		Backfill Material:	0/01/ Darstonite Ot 1
		Type & Size:	3/8" Bentonite Chips
		Manufacturer: _ Amount Used:	Haliburton 1 - 50 lbs
		Amount Osed.	1 - 50 105

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-02D	
Project Name: Former Forbes Atlas S5	Site Name: Former	r Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055059.6	
Drilling Company: Traut Drilling	Easting:	1939681.9	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
		Cap Type:	J-plug
Drilling Method: Sonic Drilling Borehole Diameter: 7"  Elevations Top of Casing (TOC) 1422.70 Ground Surface (GS) 1419.47 Reference Point (RP) 1422.70		Lock Keyed to: Protective Cover: Material: Size: Length: Pea Gravel (Y/N): Weep Hole (Y/N):	Steel 4" 5' Sand
Dates Drilling Start 5/17/15 Drilling Complete 5/17/15		Weep Hole (Y/N): Guage Mark (Y/N): Bollards (# and type): Surface Pad:	
Installation Start 5/17/15 Installation Complete 5/18/15 Development Start 5/20/15 Development Complete 5/31/15		Dimensions: Material: Annular Seal:	3' x 3' x 6" Concrete
Depth to		Manufacturer:	EZ Seal / Quick Grout Haliburton 3-50# bag / 0.5-50# bag
Measurements         from GS         Footage         of Top           Annular Seal         3.0         39.0         1416.47           Bentonite Seal         42.0         4.0         1377.47           Secondary Filter Pack         NA         NA         NA		Bentonite Seal: Type & Size: Manufacturer: Amount Used:	Pel-Plug Bentonite Pellets PDS 1.5 - 5 gal bucket
Filter Pack         46.0         12.0         1373.47           Backfill         58.0         2.0         1361.47           Bottom of Borehole         60.0         NA         1359.47		Secondary Filter Pack Type & Size: Manufacturer: Amount Used:	NA NA
Casing Materials         Total         Elevation           Measurements         Footage         of Top           Total Riser Installed         53.29         NA           Total Riser Cutoff         0.0         NA           Screen         5.0         1369.30           Bottom Cap         0.25         1364.30		Primary Filter Pack: Type & Size: Manufacturer: Amount Used:	Silica Sand 20/40 Premier Silica
Total Depth from TOC 58.54		Well Casing: Type: Diameter:	PVC 2"
Reference   Date & Time   Depth   Point		Sch. or Weight: Manufacturer: Screen Type: Screen Slot Size: Bottom Cap Type:	SCH 40 Johnson Screens PVC 0.01 Flat
Notes		Centralizers (Y/N): Material: Number: Depth(s):	NA NA NA NA
		Backfill Material: Type & Size: Manufacturer: Amount Used:	3/8" Bentonite Chips Haliburton 1 - 50 lbs

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-02S	
Project Name: Former Forbes Atlas S5	Site Name: Forme	r Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055056.3	
Drilling Company: Traut Drilling	Easting:	1939686.3	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
		Cap Type:	J-plug
Drilling Method: Sonic Drilling Borehole Diameter: 7"  Elevations Top of Casing (TOC) 1421.97 Ground Surface (GS) 1419.42 Reference Point (RP) 1421.97		Lock Keyed to:  Protective Cover:  Material: Size: Length: Pea Gravel (Y/N): Weep Hole (Y/N):	Steel 4" 5' Sand
DatesDrilling Start5/19/15Drilling Complete5/27/15Installation Start5/27/15Installation Complete5/27/15Development Start5/31/15		Guage Mark (Y/N):  Bollards (# and type):  Surface Pad: Dimensions: Material:	
Development Complete 6/9/15  Depth to		Manufacturer:	EZ Seal / Quick Grout Haliburton 1.5-50# bag / 0.25-50# bag
Annular Material Measurements         Top from GS         Total Footage         Elevation of Top           Annular Seal         3.0         15.0         1416.42           Bentonite Seal         18.0         4.0         1401.42           Secondary Filter Pack         NA         NA         NA           Filter Pack         22.0         10.0         1397.42           Backfill         32.0         8.0         1387.42           Bottom of Borehole         40.0         NA         1379.42		Bentonite Seal:  Type & Size: Manufacturer: Amount Used:  Secondary Filter Pack Type & Size: Manufacturer:	NA
Casing Materials         Total         Elevation           Measurements         Footage         of Top           Total Riser Installed         30.0         NA           Total Riser Cutoff         0.93         NA           Screen         5.05         1392.83           End Cap         0.23         1387.78           Total Depth from TOC         34.35		Amount Used: Primary Filter Pack: Type & Size: Manufacturer: Amount Used: Well Casing:	NA Silica Sand 20/40 Premier Silica
Groundwater Levels		Type: Diameter: Sch. or Weight:	PVC 2" SCH 40
Date & Time Depth Point 7/26/15 21.18 TOC		Manufacturer: Screen Type: Screen Slot Size: End Cap Type: Centralizers (Y/N): Material: Number:	Johnson Screens PVC 0.01
Notes		Depth(s):  Backfill Material:  Type & Size: Manufacturer: Amount Used:	NA 3/8" Bentonite Chips Haliburton 2 - 50 lbs

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-03D	
Project Name: Former Forbes Atlas S5	Site Name: Form	er Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055408.3	
Drilling Company: Traut Drilling	Easting:	1939612.2	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
Time:	Carroy Datanii	Cap Type: J-plug	
Drilling Method: <u>Sonic Drilling</u> Borehole Diameter: 7"		Lock Keyed to:	
Borefiole Diameter.		Protective Cover:	
		Material: Steel	
Elevations	88 88	Size: 4"	
Top of Casing (TOC) 1418.65 Ground Surface (GS) 1416.10		Length: 5' Pea Gravel (Y/N): Sand	
Reference Point (RP) 1418.65		Weep Hole (Y/N):	
		Weep Hole (Y/N): Y Guage Mark (Y/N): Y	
Dates		Bollards (# and type): 4 - steel	
Drilling Start 6/2/15			
Drilling Complete 6/2/15		Surface Pad:	
Installation Start 6/2/15		Dimensions: 3' x 3' x 6"	
Installation Complete 6/2/15 Development Start 6/5/15		Material: Concrete	
Development Complete 6/9/15		Annular Seal:	
		Type & Size: EZ Seal / Quick Gro	ut
	_	Manufacturer: Haliburton	
Depth to		Amount Used: 3-50# bag / 0.3-50# b	ag
Annular Material Top Total Elevation			
Measurementsfrom GSFootageof TopAnnular Seal3.038.01413.1		Bentonite Seal:	olloto
Annular Seal   3.0   38.0   1413.1		Type & Size: Pel-Plug Bentonite Per Manufacturer: PDS	ellets
Secondary Filter Pack NA NA NA		Amount Used: 1.5 - 5 gal bucke	et
Filter Pack 45.0 11.0 1371.1			
Backfill 56.0 4.0 1360.1		Secondary Filter Pack:	
Bottom of Borehole 60.0 NA 1356.1	I	Type & Size: NA Manufacturer: NA	
		Amount Used: NA	
Casing Materials   Total   Elevation		Amount Oseu.	
Measurements Footage of Top		Primary Filter Pack:	
Total Riser Installed 60.0 NA		Type & Size: Silica Sand 20/4	
Total Riser Cutoff 8.05 NA		Manufacturer: Premier Silica	a
Screen         5.0         1366.56           End Cap         0.23         1361.56		Amount Used: 5 - 50# bags	
Total Depth from TOC 57.18		Well Casing:	
· · · · · ·		Type: PVC	
		Diameter: 2"	
Groundwater Levels I Reference		Sch. or Weight: SCH 40	
Date & Time Depth Point		Manufacturer: Johnson Screens Screen Type: PVC	S
7/26/15 42.57 TOC	// /// ///	Screen Slot Size: 0.01	
1720/10		End Cap Type: Flat	
		Controller of AVAD	
	<i>\//////////</i>	Centralizers (Y/N): NA  Material: NA	
		Number: NA	
		Depth(s): NA	
Notes		Packfill Matarial	
		Backfill Material:  Type & Size: 3/8" Bentonite C	hips
		Manufacturer: Wyo-Ben	
		Amount Used: 1.25 - 50# ba	igs

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-03S	
Project Name: Former Forbes Atlas S5	Site Name: Form	er Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055413.0	
Drilling Company: Traut Drilling	Easting:	1939610.7	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
Drilling Method: Sonic Drilling Borehole Diameter: 7"		Cap Type: J-plug Lock Keyed to:	
Boronoic Biameter.		Protective Cover:  Material: Steel	
Elevations		Size: 4"	
Top of Casing (TOC) 14.18.29		Length: 5'	
Ground Surface (GS) 1415.77		Pea Gravel (Y/N): Sand	
Reference Point (RP) 1418.29		Weep Hole (Y/N):  Guage Mark (Y/N):  Y  Y	
		Odage Mark (1/14).	
Drilling Start 6/9/15		Guage Mark (Y/N): Y  Bollards (# and type): 4 - steel	
Drilling Complete 6/9/15		Surface Pad:	
Installation Start 6/9/15 Installation Complete 6/9/15		Dimensions: 3' x 3' x 6"  Material: Concrete	
Development Start 6/11/15 Development Complete 6/17/15		Annular Seal:	
		Type & Size: EZ Seal / Quick Grout	
		Manufacturer: Haliburton	
Depth to		Amount Used: 2-50# bag / 0.2-50# bag	
Annular Material Top Total Elevation Measurements from GS Footage of Top		Bentonite Seal:	
Annular Seal 3.0 11.0 1412.77		Type & Size: Pel-Plug Bentonite Pellets Manufacturer: PDS	
Bentonite Seal 14.0 4.0 1401.77		Manufacturer: PDS	
Secondary Filter Pack NA NA NA		Amount Used: 1.5 - 5 gal bucket	
Filter Pack 18.0 12.0 1397.77		On and down Filter Books	
Backfill         NA         NA         NA           Bottom of Borehole         30.0         NA         1385.77		Secondary Filter Pack: Type & Size: NA	
Bottom of Borenole 30.0 NA 1303.77		Manufacturer: NA	
		Amount Used: NA	
Casing Materials Total Elevation			
Measurements Footage of Top		Primary Filter Pack: Silica Sand 20/40	
Total Riser Installed 27.09 NA		Type & Size.	
Total Riser Cutoff         1.93         NA           Screen         5.0         1393.06		Manufacturer: Premier Silica Amount Used: 5 - 50# bags	
End Cap 0.24 1388.06		7 thount obod.	
Total Depth from TOC 30.4		Well Casing:	
		Type: PVC	
Croundwater Lavala		Diameter: 2" Sch. or Weight: SCH 40	
Groundwater Levels Reference		Sch. or Weight: SCH 40  Manufacturer: Johnson Screens	
Date & Time Depth Point		Screen Type: PVC	
7/26/15 20.46 TOC	111111111111111111111111111111111111111	Screen Slot Size: 0.01	
		End Cap Type: Point	
	(/////	Controllinous (V/NI)	
		Centralizers (Y/N): NA Material: NA	
		Number: NA	
<u></u>		Depth(s): NA	
Notes		Backfill Material:	
		Type & Size: NA	
		Manufacturer: NA	
		Amount Used: NA	

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-04D	
Project Name: Former Forbes Atlas S5	Site Name: Forme	er Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055271.2	
Drilling Company: Traut Drilling	Easting:	1939320.4	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
		Cap Type: J-plu	ug
Drilling Method: Sonic Drilling Borehole Diameter: 7"  Elevations Top of Casing (TOC) 1427.94		Protective Cover:  Material: Size: 4"	
Ground Surface (GS) 1425.46 Reference Point (RP) 1427.94		Pea Gravel (Y/N):  Weep Hole (Y/N):  Guage Mark (Y/N):  Y	
Dates Drilling Start 5/31/15		Guage Mark (Y/N): Y  Bollards (# and type): 4 - st	eel
Drilling Complete 5/31/15 Installation Start 5/31/15 Installation Complete 6/1/15 Development Start 6/3/15		Surface Pad: Dimensions: Material: Conci	c 6" rete
Development Complete 6/8/15		Annular Seal:  Type & Size:  Manufacturer:  Halibu	
Depth to Annular Material Top Total Elevation		Amount Used: 3-50# bag / 0	
Measurements from GS Footage of Top		Bentonite Seal:	
Annular Seal 3.0 48.0 1422.46		Typę & Size: Pel-Plug Bento Manufacturer: PDS	onite Pellets
Bentonite Seal   51.0   4.0   1374.46		Amount Used: 1.5 - 5 ga	al bucket
Filter Pack 55.0 10.0 1370.46			
Backfill 65.0 5.0 NA		Secondary Filter Pack:	
Bottom of Borehole 70.0 NA 1355.46		Type & Size: NA Manufacturer: NA	
		Amount Used: NA	
Casing Materials   Total   Elevation		Amount Oseu.	1
Measurements Footage of Top		Primary Filter Pack: Type & Size: Silica Sar	nd 20/40
Total Riser Installed 66.0 NA Total Riser Cutoff 3.95 NA		Type & Size.	er Silica
Total Riser Cutoff         3.95         NA           Screen         5.0         1366.74		Amount Used: 6 - 507	
End Cap 0.37 1361.74		7 0 0 0 a	, sage
Total Depth from TOC 67.42		Well Casing:	•
		Type: PV0 Diameter: 2"	<u>U</u>
Groundwater Levels		Sch. or Weight: SCH	40
Reference		Manufacturer: Johnson S	
Date & Time Depth Point		Screen Type: PV	С
7/26/15 50.71 TOC		Screen Slot Size: 0.0 End Cap Type: Poir	
		Centralizers (Y/N): NA	
		Material: NA Number: NA	
		Number: NA Depth(s): NA	
Notes		1 ( )	
		Backfill Material: Type & Size: Pel-Plug Bento Manufacturer: PD\$	
		Amount Used: 0.5 - 5 ga	

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-04S	
Project Name: Former Forbes Atlas S5	Site Name: Former		
Geologist: Jeff Bryant	Northing:	2055265.7	
Drilling Company: Traut Drilling	Easting:	1939320.3	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
Printer: Prate etessins	Darroy Batanii	Cap Type:	J-plug
Drilling Method: <u>Sonic Drilling</u> Borehole Diameter: 7"		Lock Keyed to:	
		Protective Cover: Material:	Steel
Elevations		Size:	
Top of Casing (TOC) 1427.99		Length:	5'
Ground Surface (GS) 1425.50		Pea Gravel (Y/N):	Sand
Reference Point (RP) 1427.99		Weep Hole (Y/N): Guage Mark (Y/N):	<u>Y</u>
		Guage Mark (Y/N):	Y
Drilling Start 6/1/15		Bollards (# and type):	4 - steel
Drilling Complete 6/1/15		Surface Pad:	
Installation Start 6/1/15		Dimensions:	3' x 3' x 6"
Installation Complete 6/1/15		Material:	Concrete
Development Start 6/5/15			
Development Complete 6/9/15		Annular Seal:	F7 O al / O dala O acad
			EZ Seal / Quick Grout
Depth to		Manufacturer: Amount Used:	Haliburton
Annular Material Top Total Elevation		Amount Osea.	2-50# bag / 0.2-50# bag
Measurements from GS Footage of Top		Bentonite Seal:	
Annular Seal 3.0 18.0 1422.5		Tyne & Size:	Pel-Plug Bentonite Pellets PDS
Bentonite Seal 21.0 4.0 1404.5		Manufacturer:	PDS
Secondary Filter Pack NA NA NA		Amount Used:	1.5 - 5 gal bucket
Filter Pack         25.0         11.0         1400.5           Backfill         36.0         4.0         NA		Secondary Filter Pack	<i>,.</i>
Backfill   36.0   4.0   NA     Bottom of Borehole   40.0   NA   1385.5		Type & Size:	
2010 1010 1010 1010 1010 1000.0	₩ ₩	Manufacturer:	
	$\otimes$	Amount Used:	
Casing Materials Total Elevation			
Measurements Footage of Top		Primary Filter Pack:	Silica Sand 20/40
Total Riser Installed 40.0 NA		Type & Size:	
Total Riser Cutoff 8.62 NA Screen 5.0 1396.17		Manufacturer: Amount Used:	
End Cap 0.35 1391.17	#####################################	7 imodrit Good.	o oon bags
Total Depth from TOC 36.73	<u>\$</u> ≡\$1	Well Casing:	
		Type:	
0		Diameter:	2"
Groundwater Levels		Sch. or Weight: Manufacturer:	SCH 40 Johnson Screens
Date & Time Depth Point		Screen Type:	
7/26/15 29.11 TOC	7 777 777	Screen Slot Size:	
		End Cap Type:	
		0.000	NI:
<del>                                   </del>	/////////	Centralizers (Y/N): Material:	NA NA
		Number:	
		Depth(s):	
Notes			
		Backfill Material:	
			Pel-Plug Bentonite Pellets
		Manufacturer: Amount Used:	PDS 1.5 - 5 gal bucket
		Amount osed:	1.5 - 5 gai bucket

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number: MW-05D		
Project Name: Former Forbes Atlas St	Site Name: Former Forbes Atlas S5		
Geologist: Jeff Bryant	Northing: 2055071.0		
Drilling Company: Traut Drilling	Easting: 1939324.2		
Driller: Nate Stebbins	Survey Datum: NAVD 1988		
	Cap Type: J-plug		
Drilling Method: Sonic Drilling Borehole Diameter: 7"	Lock Keyed to:  Protective Cover:  Material:  Size:  4"		
Top of Casing (TOC) 1427.32	Length: 5'		
Ground Surface (GS) 1424.83	Pea Gravel (Y/N): Sand		
Reference Point (RP) 1427.32	Weep Hole (Y/N): Y Guage Mark (Y/N): Y		
	Guage Mark (17/14).		
Dates Drilling Start 5/30/15	Guage Mark (Y/N):    Guage Mark (Y/N):   State   State		
Drilling Complete 5/3015	Surface Pad:		
Installation Start 5/30/15	Dimensions: 3'x 3' x 6"		
Installation Complete 5/30/15 Development Start 6/3/15	Material: Concrete		
Development Complete 6/8/15	Annular Seal:		
	Type & Size: EZ Seal / Quick Grout		
	Manufacturer: Haliburton		
Depth to	Amount Used: 3-50# bag / 0.5-50# bag		
	vation		
	Bentonite Seal:		
10.0	21.83 Type & Size: Pel-Plug Bentonite Pellets Manufacturer: PDS		
Secondary Filter Pack NA NA	NA Amount Used: 1.5 - 5 gal bucket		
	72.83		
Backfill 63.0 7.0	NA Secondary Filter Pack:		
Bottom of Borehole 70.0 NA	Type & Size: NA  Manufacturer: NA		
	Amount Used: NA		
Casing Materials Total Elevation	7 tillodrik Oscu		
Measurements Footage of Top	Primary Filter Pack: Type & Size: Silica Sand 20/40		
Total Riser Installed 60.0 NA Total Riser Cutoff 0.89 NA	Type & Size: Silica Sand 20/40  Manufacturer: Premier Silica		
Total Riser Cutoff         0.89         NA           Screen         5.0         1368.18	Amount Used: 5.5 - 50# bags		
End Cap 0.23 1363.18	A Millounk Cooki — Sid Com Sago		
Total Depth from TOC 64.34	Well Casing:		
	Type: PVC Diameter: 2"		
Groundwater Levels	Diameter: 2" Sch. or Weight: SCH 40		
Reference	Manufacturer: Johnson Screens		
Date & Time Depth Point	Screen Type: PVC		
7/26/15 49.22 TOC	Screen Slot Size: 0.01		
	End Cap Type: Point		
	Centralizers (Y/N): NA		
	Material: NA		
	Number: NA		
Nation	Depth(s): NA		
Notes	Backfill Material:		
	Type & Size: Pel-Plug Bentonite Pellets		
	Manufacturer: PDS		
	Amount Used: 2.25 - 5 gal bucket		
	<u> </u>		

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-06D	
Project Name: Former Forbes Atlas S5	Site Name: Former	Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2054699.1	
Drilling Company: Traut Drilling	Easting:	1939457.4	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
		Cap Type:	J-plug
Drilling Method: Sonic Drilling  Borehole Diameter: 7"		Lock Keyed to:	
Borefiole Diameter. 1		Protective Cover:	
		Material:	Steel
Elevations   Top of Casing (TOC)   1415.65		Size:	4" 5'
Ground Surface (GS) 1413.13		Pea Gravel (Y/N):	Sand
Reference Point (RP) 1415.65		vveep Hole (Y/N):	Υ
		Guage Mark (Y/N):	Y
Dates Drilling Start 5/16/15		Bollards (# and type):	4- steel
Drilling Complete 5/1615		Surface Pad:	
Installation Start 5/16/15		Dimensions:	3' x 3' x 6" Concrete
Installation Complete 5/17/15 Development Start 5/19/15		Material:	Concrete
Development Complete 6/3/15		Annular Seal:	
		Type & Size:	EZ Seal / Quick Grout
		Manufacturer:	Haliburton
Depth to Annular Material Top Total Elevation		Amount Used:	3-50# bag / 0.3-50# bag
Measurements from GS Footage of Top		Bentonite Seal:	
Annular Seal 3.0 32.0 1410.13			Pel-Plug Bentonite Pellets
Bentonite Seal 35.0 3.0 1378.13		Manufacturer:	
Secondary Filter Pack   NA   NA   NA   Filter Pack   38   12.0   1375.13		Amount Used:	2.25 - 5 gal bucket
Backfill NA NA NA		Secondary Filter Pacl	
Bottom of Borehole 50.0 NA 1363.13	Щ Щ	Type & Size: Manufacturer:	NA NA
	lpha $lpha$	Amount Used:	
Casing Materials Total Elevation		Amount Osea.	INA
Measurements Footage of Top		Primary Filter Pack:	
Total Riser Installed 50.0 NA		Type & Size:	Silica Sand 20/40 Premier Silica
Total Riser Cutoff	ĕ <b>=</b> ĕ	Manufacturer: Amount Used:	5.0 - 50# bags
End Cap 0.23 1364.37			
Total Depth from TOC 50.69		Well Casing:	D)/C
ļ		Type: Diameter:	
Groundwater Levels		Sch. or Weight:	SCH 40
Reference		Manufacturer:	
Date & Time   Depth   Point		Screen Type Screen Slot Size	_
7720/13		End Cap Type	
		Orantes P. Arthur	
<del>                                   </del>		Centralizers (Y/N): Material:	
		Number:	_
[Nega-		Depth(s):	NA
Notes		Backfill Material:	
			Pel-Plug Bentonite Pellets
		Manufacturer:	PDS
		Amount Used:	2.25 - 5 gal bucket

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-06S	
Project Name: Former Forbes Atlas S5	Site Name: Forme	r Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2054688.7	
Drilling Company: Traut Drilling	Easting:	1939458.2	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
	1	Cap Type:	J-plug
Drilling Method: Sonic Drilling Borehole Diameter: 7"		Lock Keyed to: Protective Cover: Material: Size:	Steel
Top of Casing (TOC) 1415.34		Length:	5'
Ground Surface (GS) 1412.64		Pea Gravel (Y/N):	Sand
Reference Point (RP) 1415.34		U.— Weep Hole (Y/N):	Y
		Guage Mark (Y/N):	Y
Dates Drilling Start 5/29/15		Guage Mark (Y/N):  Bollards (# and type):	4 - steel
Drilling Complete 5/29/15		Surface Pad:	
Installation Start 5/29/15		Dimensions:	3' x 3' x 6" Concrete
Installation Complete 5/29/15 Development Start 5/31/15		Material:	Concrete
Development Complete 6/8/15		Annular Seal:	
		Type & Size:	3/8" Bentonite Chips
		Manufacturer:	Haliburton
Depth to		Amount Used:	1.75-50# bag
Annular Material Top Total Elevation  Measurements from GS Footage of Top		Bentonite Seal:	
Measurementsfrom GSFootageof TopAnnular Seal3.05.01409.64			Pel-Plug Bentonite Pellets
Bentonite Seal   8.0   4.0   1404.64		Manufacturer:	
Secondary Filter Pack NA NA NA		Amount Used:	1.5 - 5 gal bucket
Filter Pack 12.0 11.0 1400.64 Backfill 23.0 7.0 1389.64		Cocondon, Filtor Dool	,,
Backfill         23.0         7.0         1389.64           Bottom of Borehole         30.0         NA         1382.64		Secondary Filter Pacl Type & Size:	
20.0 101 1002.04	₩ ₩	Manufacturer:	
	$\boxtimes$	Amount Used:	NA
Casing Materials Total Elevation			
Measurements   Footage   of Top		Primary Filter Pack:	Silica Sand 20/40
Total Riser Installed 20.0 NA Total Riser Cutoff 0.75 NA		Type & Size: Manufacturer:	
Screen 5.0 1396.99		Amount Used:	
End Cap 0.22 1391.99			
Total Depth from TOC 24.47		Well Casing:	PVC
		Type: Diameter:	2"
Groundwater Levels		Sch. or Weight:	SCH 40
Reference		Manufacturer:	
Date & Time Depth Point		Screen Type	
7/26/15 13.04 TOC		Screen Slot Size End Cap Type	
		Life Oap Type	. i iut
		Centralizers (Y/N):	NA
		Material:	NA NA
		Number: Depth(s):	NA NA
Notes		Dopti1(3).	14/1
		Backfill Material:	
		Type & Size:	
		Manufacturer: Amount Used:	Haliburton 2.25 - 5 gal bucket
		Amount osea.	2.20 - 5 gal bucket

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-07S	
Project Name: Former Forbes Atlas S5	Site Name: Form	er Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2054899.7	
Drilling Company: Traut Drilling	Easting:	1939549.2	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
Drilling Method: Sonic Drilling Borehole Diameter: 7"		Cap Type: Lock Keyed to:	
		Protective Cover: Material:	Steel
Elevations	1 St. 1 St.	Size:	
Top of Casing (TOC) 1424.99		Length:	5'
Ground Surface (GS) 1422.42 Reference Point (RP) 1424.99		Pea Gravel (Y/N): Weep Hole (Y/N):	Sand Y
Reference Form (RF) 1424.99			Y
Dates Drilling Start 5/28/15		Guage Mark (Y/N): Bollards (# and type):	4 - steel
Drilling Complete 5/28/15		Surface Pad:	
Installation Start 5/28/15		Dimensions:	3' x 3' x 6"
Installation Complete 5/28/15 Development Start 5/30/15		Material:	Concrete
Development Complete 5/31/15		Annular Seal:	
		Type & Size:	EZ Seal / Quick Grout
		Manufacturer:	Haliburton
Depth to		Amount Used:	2.0-50# bag / 0.3 -50# bag
Annular Material Top Total Elevation		Dantanita Caali	
Measurements         from GS         Footage         of Top           Annular Seal         3.0         16.0         1419.42		Bentonite Seal:	Pel-Plug Bentonite Pellets
Hindia Seal   3.0   10.0   1419.42		Manufacturer:	PDS
Secondary Filter Pack NA NA NA		Amount Used:	1.5 - 5 gal bucket
Filter Pack 23.0 11.0 1399.42			
Backfill 34.0 6.0 1388.42		Secondary Filter Pack	
Bottom of Borehole 40.0 NA 1382.42		Type & Size: Manufacturer:	
	$\bowtie$	Amount Used:	
Casing Materials Total Elevation		Amount Usea.	INA
Measurements Footage of Top		Primary Filter Pack:	
Total Riser Installed 30.0 NA		Type & Size:	
Total Riser Cutoff 0.0 NA		Manufacturer:	
Screen         5.0         1394.92           End Cap         0.24         1389.92		Amount Used:	6.0 - 50# bags
Total Depth from TOC 35.24		Well Casing:	
		Type:	PVC
		Diameter:	2"
Groundwater Levels		Sch. or Weight:	SCH 40
Date & Time Depth Point		Manufacturer: Screen Type:	
7/26/15 23.92 TOC	77 777 777	Screen Slot Size:	
1120/10 20.02 100		End Cap Type:	
		Centralizers (Y/N):	NA NA
	<del>_</del>	Material:	NA NA
		Number: Depth(s):	
Notes		Dopui(s).	LWZ
		Backfill Material:	
		Type & Size:	
		Manufacturer:	Haliburton
		Amount Used:	2.0 - 5 gal bucket

Project Number: 80447	Monitoring Well Construction Diagram			
Geologist: Jeff Bryant Northing: 2055761.0  Drilling Company: Traut Drilling Easting: 11939858.0  Driller: Nate Stebbins Survey Datum: NAVD 1988  Cap Type: Lock Keyed to:	Project Number: 80447			
Drilling Company: Traut Drilling Driller: Nate Stebbins  Survey Datum: NAVD 1988  Drilling Method: Sonic Drilling Borehole Diameter: 77  Top of Casing (TOC) Ground Surface (S) Fed France (S) Fed France (S) Fed France (S) Fed France (S) Fed Gravel (Y/N): Sand Weep Holo (Y/N): Sand Weep Holo (Y/N): Sand Weep Holo (Y/N): Y Ground Surface (S) Fed Gravel (Y/N): Y Ground Surface (F) Fed Gravel (Y/N): Y Gravel (Y/	Project Name: Former Forbes Atlas S5	Site Name: Forme	r Forbes Atlas S5	
Drilling Company: Traut Drilling	Geologist: Jeff Bryant	Northing:	2055761.0	
Drilling Method: Sonic Drilling   Borehole Diameter: 7		Easting:	11939858.0	
Drilling Method: Sonic Drilling		Survey Datum:	NAVD 1988	
Elevations			Cap Type:	J-plug
Drilling Complete   6/3/16   Installation Start   6/3/16   Installation Complete   6/3/16   Development Start   6/3/16   Development Start   6/3/16   Development Start   6/3/16   Development Start   6/3/16   Development Complete   6/5/16   Development Complete   Co	Borehole Diameter: 7"  Elevations Top of Casing (TOC) 1407.62 Ground Surface (GS) 1405.42		Protective Cover:  Material: Size: Length: Pea Gravel (Y/N): Weep Hole (Y/N):	Steel 4" 5' Sand Y
Drilling Complete   6/3/16   Installation Start   6/3/16   Installation Complete   6/3/16   Development Start   6/3/16   Development Start   6/3/16   Development Start   6/3/16   Development Start   6/3/16   Development Complete   6/5/16   Development Complete   Co	Drilling Start 6/3/16		Ħ	4 - steel
Development Complete   6/5/16	Installation Start 6/3/16 Installation Complete 6/3/16		Dimensions:	3' x 3' x 6" Concrete
Namural current	Development Complete 6/5/16		Annular Seal:	
Annular Material			, i	
Resolution   Foodage   F	Double to			
Measurements			Amount Usea:	NA
Annular Seal			Bentonite Seal:	
Bentonite Seal   3.0   6.0   1402/42   Secondary Filter Pack   NA   NA   NA   NA   NA   NA   NA   N				EZ Seal / Quick Grout
Filter Pack	Bentonite Seal 3.0 6.0 1402.42			
Backfill			Amount Used:	2.0-50# bag / 0.3 -50# bag
Bottom of Borehole			Casandam, Filtar Daal	
Manufacturer: NA			Type & Size	C. NΔ
Amount Used:   NA     NA	BOROTTO BOTOTOLE 20.0 14A 1502.42	₩ ₩		
Casing Materials   Measurements   Footage   Footage   Of Top     Total Riser Installed   20.0   NA     Screen   5.0   1389.82     End Cap   0.22   1384.82     Total Depth from TOC   22.87     Sch or Weight   Sch 40     Groundwater Levels   Sch 27/16   16.43   TOC     Groundwater Levels   Screen Sch 27/16   16.43   TOC     Notes   Screen Sch 27/16   NA     Notes   Scalar Sch 20/40     Primary Filter Pack: Type & Size: Silica Sand 20/40     Type & Size: Premier Silica     Amount Used: 6.0 - 50# bags     Well Casing: Type: PVC     Diameter: 2"     Sch or Weight: Sch 40     Manufacturer: Johnson Screens     Screen Type: PVC     Screen Slot Size: 0.02     End Cap Type: Flat     Centralizers (Y/N): NA     Material: NA     Number: NA     Depth(s): NA		$\bowtie$		
Total Riser Installed   20.0	Casing Materials Total Elevation		7 0000	
Total Riser Cutoff   2.35				0:1: 0
Screen				
Type: PVC   Diameter: 2"   Sch. or Weight: Sch. 40   Manufacturer: Johnson Screens   Screen Type: PVC   Screen Slot Size: 0.02   End Cap Type: Flat   NA   Number: NA   Number: NA   Na   Number: NA   Na   Na   Na   Na   Na   Na   Na				
Total Depth from TOC   22.87			Amount Osea.	0.0 - 50# bags
Type: Diameter: 2"   Sch. or Weight: SCH 40   Johnson Screens   Screen Type: PVC   Screen Slot Size: 0.02   End Cap Type: Flat   NA   Number: NA   Depth(s): NA   Na   Na   Na   Na   Na   Na   Na			Well Casing:	
Groundwater Levels    Date & Time   Depth   Point			•	
Date & Time     Depth     Reference Point       6/27/16     16.43     TOC       Screen Type: Screen Slot Size: 0.02       End Cap Type: Flat       Centralizers (Y/N): NA Material: NA Number: NA Depth(s): NA       Notes     Backfill Material: Type & Size: MA Manufacturer: NA	<u></u>			
Date & Time		(表)		
Screen Slot Size: 0.02   End Cap Type: Flat				
End Cap Type:   Flat	•	····V····		
Centralizers (Y/N): NA   Material: NA   Number: NA   NA   Number: NA   NA   NA   NA   NA   NA   NA   NA	0/21/10 10.43 100			
Material: NA   Number: NA   Number: NA   Number: NA   Number: NA   Notes   NA			Lina Oap Type	. I idt
Number: NA   NA			Centralizers (Y/N):	NA NA
Depth(s):   NA		e e e e e e e e e e e e	Material:	NA
Notes  Backfill Material:  Type & Size:  MA  Manufacturer:  NA				
Backfill Material:  Type & Size:NA  Manufacturer:NA	Notes		Depth(s):	NA
Type & Size:NA Manufacturer:NA	INOIGO		Backfill Material:	
Manufacturer: NA				_ NA
Amount Used: NA				
			Amount Used:	NA

Monitoring Well Construction Diagram			
Project Number: 80447	Well Number:	MW-09S	
Project Name: Former Forbes Atlas S5	Site Name: Forme	er Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055592.1	
Drilling Company: Traut Drilling	Easting:	1939571.1	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
Drilling Method: Sonic Drilling		Cap Type: Lock Keyed to:	J-plug
Borehole Diameter: 7"  Elevations Top of Casing (TOC) 1412.19 Ground Surface (GS) 1410.11		Protective Cover:  Material: Size: Length: Pea Gravel (Y/N):	5' Sand
Reference Point (RP) 1412.19		Weep Hole (Y/N):	Y Y
Dates Drilling Start 6/2/16		Guage Mark (Y/N): Bollards (# and type):	4 - steel
Drilling Complete 6/2/16 Installation Start 6/2/16 Installation Complete 6/2/16 Development Start 6/4/16		Surface Pad: Dimensions: Material:	
Development Complete 6/4/16		Annular Seal: Type & Size:	NA
Depth to		Manufacturer: Amount Used:	NA NA
Annular Material Top Total Elevation  Measurements from GS Footage of Top  Annular Seal NA NA NA		Bentonite Seal:	3/8" Bentonite Chips
Bentonite Seal 3.0 11.0 1407.11 Secondary Filter Pack NA NA NA		Manufacturer: Amount Used:	Haliburton 6.0-50# bag
Filter Pack         14.0         11.0         1396.11           Backfill         NA         NA         NA           Bottom of Borehole         25.0         NA         1385.11		Secondary Filter Pack Type & Size:	
		Manufacturer: Amount Used:	
Casing Materials Measurements         Total Footage         Elevation of Top           Total Riser Installed         20.24         NA           Total Riser Cutoff         0.0         NA           Screen         5.04         1391.92           End Cap         0.23         1386.88		Primary Filter Pack: Type & Size: Manufacturer: Amount Used:	Silica Sand 20/40 Premier Silica 6.0 - 50# bags
Total Depth from TOC 25.51		Well Casing: Type:	PVC
Groundwater Levels		Diameter: Sch. or Weight:	2" SCH 40
Date & Time         Depth         Point           6/27/16         14.98         TOC		Manufacturer: Screen Type: Screen Slot Size:	Johnson Screens PVC 0.02
		End Cap Type: Centralizers (Y/N):	Flat NA
		Material: Number: Depth(s):	NA NA NA
Notes		Backfill Material:	
		Type & Size: Manufacturer: _ Amount Used:	NA NA NA

Monitoring Well	Construction	Diagram	
Project Number: 80447	Well Number:	MW-10S	
Project Name: Former Forbes Atlas S5	Site Name: Forme	r Forbes Atlas S5	
Geologist: Jeff Bryant	Northing:	2055350.3	
Drilling Company: Traut Drilling	Easting:	1939916.9	
Driller: Nate Stebbins	Survey Datum:	NAVD 1988	
Drilling Method: Sonic Drilling		Cap Type: Lock Keyed to:	J-plug
Borehole Diameter: 7"  Elevations Top of Casing (TOC) 1412.92 Ground Surface (GS) 1410.36 Reference Point (RP) 1412.92		Protective Cover:  Material: Size: Length: Pea Gravel (Y/N): Weep Hole (Y/N): Guage Mark (Y/N):	5' Sand
Dates		Guage Mark (Y/N): Bollards (# and type):	4 - steel
Drilling Start 5/24/16 Drilling Complete 5/24/16 Installation Start 5/24/16 Installation Complete 5/24/16 Development Start 5/26/16		Surface Pad: Dimensions: Material:	
Development Complete 6/5/16		Annular Seal: Type & Size: Manufacturer:	NA NA
Depth to   Total   Elevation   Measurements   Footage   Of Top		Manufacturer: Amount Used:	NA 3/8" Bentonite Chips Haliburton 4.5-50# bag
Backfill NA NA NA Bottom of Borehole 25.0 NA 1385.36		Secondary Filter Pack Type & Size: Manufacturer: Amount Used:	NA NA
Casing Materials         Total Footage         Elevation of Top           Total Riser Installed         20.10         NA           Total Riser Cutoff         0.48         NA           Screen         5.0         1393.24           End Cap         0.15         1388.24           Total Depth from TOC         24.77		Primary Filter Pack: Type & Size: Manufacturer: Amount Used: Well Casing:	Silica Sand 20/40 Premier Silica 5.0 - 50# bags
		Type: Diameter:	PVC 2"
Coundwater Levels		Sch. or Weight: Manufacturer: Screen Type: Screen Slot Size: End Cap Type:	SCH 40 Johnson Screens PVC 0.02 Flat
Notes		Centralizers (Y/N): Material: Number: Depth(s):	NA NA NA NA
INUIGS		Backfill Material: Type & Size: Manufacturer: Amount Used:	NA NA NA

Monitoring W	Monitoring Well Construction Diagram									
Project Number: 80447	Well Number:	MW-11S								
Project Name: Former Forbes Atlas S5	Site Name: Forn	ner Forbes Atlas S5								
Geologist: Jeff Bryant	Northing:	2055079.8								
Drilling Company: Traut Drilling	Easting:	1939892.4								
Driller: Nate Stebbins	Survey Datum:	NAVD 1988								
Drilling Method: Sonic Drilling Borehole Diameter: 7"		Cap Type: Lock Keyed to:								
		Protective Cover: Material:	Steel							
Elevations	88 88	Size:	4"							
Top of Casing (TOC) 1416.59 Ground Surface (GS) 1413.67		Length:	5' Sand							
Ground Surface (GS) 1413.67 Reference Point (RP) 1416.59		Pea Gravel (Y/N): Weep Hole (Y/N):	Y							
TKCIOICITEC I OIII (KI ) 14 10.55			Y							
Dates F/05/40		Guage Mark (Y/N): Bollards (# and type):	4 - steel							
Drilling Start 5/25/16 Drilling Complete 5/25/16		Surface Pad:								
Installation Start 5/25/16		Dimensions:	3' x 3' x 6"							
Installation Complete 5/25/16		Material:								
Development Start 6/1/16 Development Complete 6/5/16	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Annular Seal:								
Dovotopinon complete		Type & Size:	NA							
		Manufacturer:	NA							
Depth to	7	Amount Used:	NA NA							
Annular Material Top Total Elevation	·	•	17/							
Measurements from GS Footage of Top	<u> </u>	Bentonite Seal:								
Annular Seal NA NA NA NA	4		3/8" Bentonite Chips							
Bentonite Seal         2.0         12.0         1411.67           Secondary Filter Pack         NA         NA         NA	-	Manufacturer:	Haliburton							
Secondary Filter Pack         NA         NA         NA           Filter Pack         14.0         9.0         1399.67		Amount Used:	2.5-50# bag							
Backfill 23.0 7.0 1390.67		Secondary Filter Pack	•							
Bottom of Borehole 30.0 NA 1383.67		Type & Size:	NA							
		Manufacturer:								
		Amount Used:	NA							
Casing Materials Total Elevation		Drimon, Filtor Book								
MeasurementsFootageof TopTotal Riser Installed20.11NA		Primary Filter Pack: Type & Size:	Silica Sand 20/40							
Total Riser Cutoff 0.43 NA		Manufacturer:	Premier Silica							
Screen 5.0 1396.87		Amount Used:	6.0 - 50# bags							
End Cap         0.15         1391.87           Total Depth from TOC         24.83		Well Cooling:								
Total Depth from TOC 24.83		Well Casing: Type:	PVC							
		Diameter:	2"							
Groundwater Levels		Sch. or Weight:	SCH 40							
Reference		Manufacturer:	Johnson Screens							
Date & Time Depth Point		Screen Type:	PVC							
6/27/16 16.77 TOC		Screen Slot Size:	0.02							
		End Cap Type:	Flat							
		Centralizers (Y/N):	NA							
		Material:	NA							
		Number:	NA							
Notes		Depth(s):	NA							
Notes		Backfill Material:	0/01/ Danstar 11 - 01 1							
		Type & Size:	3/8" Bentonite Chips							
		Manufacturer:	Haliburton							
		Amount Used:	2.5 - 50# bag							

Monitoring Well Construction Diagram									
Project Number: 80447	Well Number:	MW-12S							
Project Name: Former Forbes Atlas S5	Site Name: Form	er Forbes Atlas S5							
Geologist: Jeff Bryant	Northing:	2054690.9							
Drilling Company: Traut Drilling	Easting:	1939813.2							
Driller: Nate Stebbins	Survey Datum:	NAVD 1988							
Drilling Method: Sonic Drilling Borehole Diameter: 7"		Cap Type: Lock Keyed to:	J-plug						
Elevations Top of Casing (TOC) 1418.05 Ground Surface (GS) 1416.14 Reference Point (RP) 1418.05		Protective Cover:  Material: Size: Length: Pea Gravel (Y/N): Weep Hole (Y/N):	4" 5' Sand						
Dates		Weep Hole (Y/N): Guage Mark (Y/N): Bollards (# and type):	_						
Drilling Start 5/26/16 Drilling Complete 5/26/16 Installation Start 5/26/16 Installation Complete 5/26/16 Development Start 6/1/16		Surface Pad: Dimensions: Material:	3' x 3' x 6" Concrete						
Development Complete 6/5/16    Depth to		Annular Seal: Type & Size: Manufacturer: Amount Used:	NA NA NA						
Annular Material MeasurementsTop from GSTotal FootageElevation of TopAnnular SealNANANABentonite Seal2.010.01414.14Secondary Filter PackNANANAFilter Pack12.013.01404.14		Manufacturer:	3/8" Bentonite Chips Haliburton 4-50# bag						
Backfill NA NA NA Bottom of Borehole 25.0 NA 1391.14  Casing Materials Total Elevation		Secondary Filter Pack Type & Size: Manufacturer: Amount Used:	NA NA						
Total   Casing Materials   Footage   Footage   Footage		Primary Filter Pack: Type & Size: Manufacturer: Amount Used:	Premier Silica						
Total Depth from TOC 27.03		Well Casing: Type: Diameter:	PVC 2"						
Coundwater Levels   Reference		Sch. or Weight: Manufacturer: Screen Type: Screen Slot Size: End Cap Type:	SCH 40 Johnson Screens PVC 0.02						
Notes		Centralizers (Y/N): Material: Number: Depth(s):	NA NA NA NA						
		Backfill Material: Type & Size: Manufacturer: Amount Used:	NA						

	Monitoring We	ell Construction	Diagram	
Project Number: 80447		Well Number:	MW-13S	
	r Forbes Atlas S5	Site Name: Forme		
Geologist: Jeff B	Bryant	Northing:	2054694.5	
Drilling Company: Traut		Easting:	1939287.6	
	Stebbins	Survey Datum:	NAVD 1988	
Dimeri I tate	CLOSSIIIC	Carroy Batariii		J-plug
Drilling Method: Sonic	Drilling		Lock Keyed to:	о р.ш <u>у</u>
Borehole Diameter: 7"			I	
			Protective Cover:  Material:	Steel
Elevations			Size:	
Top of Casing (TOC) 1412	2.70	赛 要	Length:	5'
Ground Surface (GS) 1410			rea Glavel (1/1N).	Sanu
Reference Point (RP) 1412	.70		Weep Hole (Y/N):	Y
			Guage Mark (Y/N):	Υ
Datas			Guage Mark (Y/N): Bollards (# and type):	4 staal
Dates Orilling Start 6/1/	6		Bollards (# and type):	4 - Steel
Drilling Complete 6/1/			Surface Pad:	
nstallation Start 6/1/	and the second of the second o			3' x 3' x 6"
nstallation Complete 6/1/			Material:	Concrete
Development Start 6/4/			•	
Development Complete 6/5/	6		Annular Seal:	
			Type & Size:	NA
		.	Manufacturer:	NA
Dept			Amount Used:	NA
Annular Material To	•			
Measurements from	The state of the s		Bentonite Seal:	2/01 Dantanita China
Annular Seal N Bentonite Seal 2			Type & Size: . Manufacturer:	3/8" Bentonite Chips
Secondary Filter Pack N			Amount Used:	
Filter Pack 5.			Amount Osea.	1-30# bag
Backfill N/			Secondary Filter Pack	:
Bottom of Borehole 20	.0 NA 1390.35		Type & Size:	
			Manufacturer:	
			Amount Used:	NA
Casing Materials _ To		<u> </u>		
Measurements Foot			Primary Filter Pack:	Silica Sand 20/40
Total Riser Installed 10 Total Riser Cutoff 0.5	.05 NA 57 NA		Type & Size: _ Manufacturer:	Premier Silica
Screen 10			Amount Used:	7.0 - 50# bags
End Cap 0.2			, 2 3 3 a	o oon wage
Total Depth from TOC 19.			Well Casing:	
			Type:	PVC
			Diameter:	2"
Groundwater Levels	Reference		Sch. or Weight:	SCH 40
Date & Time Dep		\$\ <b>\</b>	Manufacturer: Screen Type:	Johnson Screens PVC
6/27/16 10.		// /// ///	Screen Slot Size:	0.02
0/2//10	- 100		End Cap Type:	Flat
			=::: 2 %p . ) po.	
			Centralizers (Y/N):	NA
		and the same of th	Material:	NA
			Number:	NA NA
lata -	1		Depth(s):	NA
Notes			Backfill Material:	
			Type & Size:	NA
	ı		i ype a size:	1 1/7
			Manufacturer:	NA

		_	WWC-5		ision of Water ources App. No		MW-1D	
						_	Well ID	
		VATER WELL:	Fraction	1	tion Number	i		
	/: Lyon		SW 1/4 NE 1/4 SE 1/4		4	T 16 S	R 10 ■E □ W	
2 WELL		Last Name: <b>Engineers</b>	First:	Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here:				
	601 E 12			· · · · · · · · · · · · · · · · · · ·				
Address:	001 L 12		1	1/2 mi NW (	of RD 360th	& RD D		
City:	Kansas (	City State: M	O ZIP: 64106					
3 LOCAT		4 DEPTH OF CO	MPLETED WELL: .	<b>65</b> ft	. 5 Latitu	de· N 38.687	27(decimal degrees)	
WITH "			r Encountered: 1)				0307(decimal degrees)	
SECTIO N		2) ft.	3) ft., or 4) [	Dry Well	Horizo	ntal Datum: WGS 8	4 □ NAD 83 □ NAD 27	
	` <u> </u>		ATER LEVEL:		Source	for Latitude/Longitude	<u>:</u> :	
'	1		ce, measured on (mo-day-		C C C (CALLE MARKET MODELL)			
NW	NE		ce, measured on (mo-day- water was f		(			
w	H <sub>E</sub>		rs pumping		☐ Land Survey         ☐ Topographic Map           ☐ Online Mapper:			
'	'  -		water was 1			inic mapper		
SW	SE		ırs pumping	gpm	( E)			
		Estimated Yield:	gpm				. Ground Level TOC	
	S	Bore Hole Diameter:	7 in. to70	ft. and	Source		GPS  Topographic Map	
1 n			in. to	π.	_1		,	
7 WELL V		D BE USED AS:	Vater Supply: well ID		10 🗆 0:1	Field Water Supply: 1	ease	
☐ Housel			ing: how many wells?		10. 🗀 Oii	ole: well ID	sase	
☐ Lawn &			Recharge: well ID			sed Uncased		
Livesto			ing: well ID			ermal: how many bore		
2. 🔲 Irrigati			ntal Remediation: well II			sed Loop   Horizon		
3. Feedlo		☐ Air Spa		Extraction			ischarge	
4. 🔲 Industr		☐ Recover	· · · · · · · · · · · · · · · · · · ·					
Was a chemical/bacteriological sample submitted to KDHE?  Yes No If yes, date sample was submitted:								
Water well disinfected? ☐ Yes ■ No  8 TYPE OF CASING USED: ☐ Steel ■ PVC ☐ Other								
Casing diam	eter	in. to i	t., Diameterin. Weight	in. to	ft., Diame	eter in. to	It.	
		R PERFORATION M.		108./1t.	wan uncki	less of gauge No		
☐ Steel			erglass PVC		□ Oth	er (Specify)		
Brass	_	<del>-</del>	<b>-</b>	sed (open hole		(Spoonly)		
		RATION OPENINGS		` •	,		İ	
	nuous Slot							
Louve	red Shutter	☐ Key Punched ☐	Wire Wrapped   Sa	w Cut D	lone (Open Ho	ole)		
SCREEN-F	PERFORAT	ED INTERVALS: Fr	om .99 ft. to .99	ft., From .	ft. to	ft., From	ft. to ft.	
							ft. to ft.	
9 GROUT	MATERI.	AL: Neat cement	☐ Cement grout ■ Be ft., From	entonite ∐ (	Other	Α 40	Δ	
		i π. το	π., From	π. το	π., From .	π. το	π.	
Septic		☐ Lateral Li	nes 🔲 Pit Privy	П	Livestock Per	s 🗆 Insecti	cide Storage	
☐ Sewer		Cess Pool	☐ Sewage La	goon 🗌	Fuel Storage	Aband	oned Water Well	
	ight Sewer L				Fertilizer Stor	age 🔲 Oil We	ell/Gas Well	
Other (	Specify) .cc	ncrete bunker	TS* 4					
	om well?		Distance from w	FROM				
10 FROM 0	5		OGIC LOG	TROM	10	LITHO. LOG (CONI.) 0	r PLUGGING INTERVALS	
5		gray clay limestone						
9	24	yellow/grey shale						
24		limestone						
34	50	grayish shale	- MATTER SWEAT IN THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF					
50	65	limestone						
65	70	gray shale		Notes:				
11 CONT	RACTOR'	S OR LANDOWNER	S CERTIFICATION	This wate	r well was 🛚	constructed, rec	onstructed, or  plugged	
under my j	urisdiction	and was completed on	(mo-day-year) .5/.13/.1	and	this record is	s true to the best of m	ny knowledge and belief.	
Kansas Wa	uer well Co	ontractor's License No.	7.U. ≈ 1 his W	ater well Ked	ora was con	ipieted on (mo-day-y	vear) .6/23/.15	
Mail	1 white copy a	long with a fee of \$5.00 for	each constructed well to: Ka	nsas Department	of Health and I	Environment, Bureau of W	/ater, GWTS Section.	
1		-	as 66612-1367. Mail one to	-				
1		cs.gov/waterwell/index.html		KSA 82a-12	12		D 1 14/90/901#	

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	WELL E			WWC-5	Division of Water MW-02D					
	l Record [					Resources App. No. Well ID Section Number Township Number Range N				
		ATER WEI	L:	Fraction		ction Number				
	y: Lyon			SW 1/4 NE 1/4 SE 1/		4	T 16 S	R 10 ■E □ W		
	OWNER: 1 Corp of E			First:	Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here:					
Address:					· · · · · · · · · · · · · · · · · · ·					
Address:	001 2 12	ar Ou oot			1/2 Mi NW	of RD 360 &	RD D			
City:	Kansas C	city	State: MO	ZIP: <b>64106</b>						
3 LOCAT		4 DEPTH	OF COM	IPLETED WELL:	<b>55</b> fi	t. 5 Latitud	N 38.686	01 (decimal degrees)		
WITH "		Depth(s) Gr	oundwater l	Encountered: 1)	ft.	Longitu	de: W 096.3	0221(decimal degrees)		
SECTION	ON BOX:	2)	ft. 3	3) ft., or 4)	Dry Well			4 □ NAD 83 □ NAD 27		
	· — —			TER LEVEL: <b>4</b> 0		Source f	or Latitude/Longitude	<u>:</u>		
'				measured on (mo-day		(				
NW	NE			measured on (mo-day ater was		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
w	E			pumping		☐ Land Survey ☐ Topographic Map				
[ " ]	'			ater was		☐ Online Mapper:				
sw	SE			pumping	. gpm	6 El				
		Estimated Y	ield:	gpm				□ Ground Level □ TOC   GPS □ Topographic Map		
	S nile	Bore Hole Diameter: 7 in. to								
		D BE USED A		in. to	IL.					
1. Domestic				ter Supply: well ID		10 🗆 Oil F	ield Water Supply: 1	ease		
☐ Housel				g: how many wells?			le: well ID			
_	& Garden			echarge: well ID			d □ Uncased □			
☐ Livesto		8.	Monitorin	g: well ID			mal: how many bore			
2.  Irrigati				al Remediation: well I			ed Loop   Horizon			
3. Feedlo			Air Sparge		Extraction			ischarge 🔲 Inj. of Water		
4. 🔲 Industr			] Recovery	<b>~~</b>						
				itted to KDHE?	Yes No	If yes, date s	ample was submitte	ed:		
Water well	disinfected's	Yes	No							
8 TYPE C	OF CASING	USED: US	Steel PV	C ∐ Other	CASI	NG JOINTS:	☐ Glued ☐ Clamped	d □ Welded ■ Threaded		
Casing diam	teter <del>=</del> ht above land	III. 10	36 in	Diameter	. 111. 10 lhe/ft	II., Diamei Wall thickne	er In. 10	40		
		R PERFORA			103./10.	wan unekne	33 of gauge 140	· 7· 7· · · · · · · · · · · · · · · · ·		
☐ Steel		nless Steel	☐ Fiber			☐ Other	(Specify)			
☐ Brass	Gal	vanized Steel	☐ Conc	rete tile \( \square\) None	used (open hol		``			
I .		ATION OPE								
	nuous Slot	Mill Slot								
☐ Louve	ered Shutter	L Key Puncl	hed ∐ W	ire Wrapped	aw Cut ∐ I	None (Open Hol	e)	0.4		
SCREEN-	PAVEL DA	CK INTERV	ALS: From	1.99π. το .γ.γ 46 e.a. 52	π., From	π. το	π., From	ft. to ft. ft. to ft.		
				Cement grout B						
Grout Interv	als: From	1   Near o	46	. ft., From	fl to	ft From				
		le contaminati		it., i iom	. 11. 10	16., 1 10111				
☐ Septic			Lateral Line			Livestock Pens		cide Storage		
☐ Sewer			Cess Pool	☐ Sewage La		Fuel Storage		oned Water Well		
	ight Sewer Li		Seepage Pit	☐ Feedyard		Fertilizer Stora	ge □ Oil We	ell/Gas Well		
Direction from	opecity) .CO	rictete Dunk	<b>₩</b>	Distance from v	 vel19		A			
10 FROM	TO		ITHOLOG		FROM			r PLUGGING INTERVALS		
0	5	gray clay		JIO EUG	1 KOW			1 LOCOLIO INTERVALO		
5		gray/brown s	shale							
19	<del>  +</del>	limestone								
31	<del></del>	green/gray s	shale							
50		limestone								
55		gray shale								
					Notes:					
11 CONT	RACTOR'S	S OR LAND	UWNER'S	S CERTIFICATIO	N: This wate	er well was	constructed, [] reco	onstructed, or plugged		
Under my J	urisulction a iter Well Co	ntractor's Lie	ense No	This W	'⊶ and 'ater Well Re	uns record is to	itue io ine best of m deted on (mo-day-y	ny knowledge and belief. Year) .06/.27/15		
under the h	usiness nam	e of .Traut V	Vals			cora was comp	uay-y	car) .ookzki.to		
Mail	1 white copy al	ong with a fee of	\$5.00 for eac	ch constructed well to: Ka	ınsas Departmen	t of Health and En	vironment, Bureau of W	ater, GWTS Section,		
			-	66612-1367. Mail one to			for your records. Telepl			
Visit us at htt	p://www.kdhek	s.gov/waterwell/	index.html		KSA 82a-12	212	-	Revised 1/20/2015		

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		RECORD		WWC-5		ision of Water	l l	MW-02S		
		Correction				ources App. N		Well ID		
		VATER WEL	L:	Fraction		ction Number	, <u>.</u>			
	: Lyon	10		SE¼ NE¼ SE½		4	T 16 S	R 10 ■E□W		
2 WELL				First:				(if unknown, distance and		
		Engineers			direction from nearest town or intersection): If at owner's address, check here:					
Address:	601 E 12	ui Sueei			1/2 Mi NW	of RD 360 8	RD D			
City:	Kansas (	Citv	State: MO	ZIP: <b>64106</b>						
3 LOCAT			OFCOM	IPLETED WELL:	<b>31</b> a		. N 38 686	600 (decimal degrees)		
WITH "				Encountered: 1)		.   5 Latitu	de:	Q215 (decimal degrees)		
	N BOX:			3) ft., or 4) [						
N	N			TER LEVEL:16						
				measured on (mo-day	Double for Editade Dougland.					
NW	NE	☐ above l	and surface,	measured on (mo-day-	-yr)					
	i			rater was 1		☐ Land Survey ☐ Topographic Map				
w	E	after		pumping		Or	ıline Mapper:			
sw	SE			ater was						
		Estimated Y		pumping	gpin	6 Elevat	t <b>ion:</b> fi	🗌 Ground Level 🔲 TOC		
LL	S			<b>.7</b> in. to	ft. and	Source: ☐ Land Survey ■ GPS ☐ Topographic Ma				
1 n	_									
7 WELL	WATER T	O BE USED A								
1. Domestic:				ter Supply: well ID		10. 🔲 Oil	Field Water Supply: 1	ease		
☐ Housel	hold	6. □	] Dewatering	g: how many wells?			lole: well ID			
☐ Lawn &				echarge: well ID			sed 🗌 Uncased 🔲			
Livesto				g: well ID			ermal: how many bore			
2. Irrigati				Il Remediation: well II			osed Loop			
3. ☐ Feedlo 4. ☐ Industr			] Air Sparge ] Recovery	e ☐ Soil Vapor ☐ Injection	Extraction	D) Op	en Loop   Surface D	ischarge  Inj. of Water		
			<u> </u>							
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:										
Water well	disinfected	? Yes	No	. <b>.</b>	C + CT	NG IODITO		d □ Welded ■ Threaded		
8 TYPE O	of CASING	JUSED: □S	teel ■ PV	C U Other	CASI	NG JOINTS:	☐ Glued ☐ Clampe	d ∐ Welded ■ Threaded		
Casing diam	eter <del></del> et above land	surface	36 in	Diameter	III. to	Wall thick	ness or gauge No <b>sch</b>	π.		
		R PERFORA			103./10.	wan unce	less of gauge 140	.7.96		
☐ Steel		inless Steel	☐ Fiber			□ Oth	er (Specify)	***************************************		
☐ Brass	_	vanized Steel	☐ Conc	-	ised (open hol		DI (O <b>pco</b> II)			
		RATION OPE			(· <b>F</b>	-,				
☐ Contir	nuous Slot	■ Mill Slot		auze Wrapped 🔲 To	orch Cut 🔲 I	Orilled Holes	☐ Other (Specify)			
	red Shutter	☐ Key Puncl	hed 🔲 W	ire Wrapped 🔲 Sa	ıw Cut 🔲 l	None (Open He	ole)			
SCREEN-F	PERFORAT	ED INTERV	ALS: From	1.26 ft. to .31	ft., From .	ft. to	ft., From	ft. to ft.		
G	RAVEL PA	CK INTERV	ALS: From	1 22 ft. to 33	ft., From	ft. to	ft., From	ft. to ft.		
9 GROUT	MATERI	AL: 🔲 Neat o	cement $\square$	Cement grout Be	entonite 🔲 🤇	Other		• • • • • • • • • • • • • • • • • • • •		
				. ft., From	ft. to	ft., From .	ft. to	ft.		
		ole contaminati	on: Lateral Line	s 🔲 Pit Privy	_	Lissanta als Dan	🗖 [4]	-: 4- C4		
☐ Septic ☐ Sewer ☐			Cess Pool	Sewage La		Livestock Per Fuel Storage		cide Storage oned Water Well		
	ight Sewer L		Seepage Pit			Fertilizer Stor		ell/Gas Well		
Other (	Specify) .cc	ncrete bunke	эг	·····						
Direction fro	om well?			Distance from w	ell?					
10 FROM	TO		<b>ITHOLO</b>	GIC LOG	FROM	TO	LITHO. LOG (cont.) o	r PLUGGING INTERVALS		
0	5	gray clay								
5	19	gray/brown s	shale							
19	31	limestone								
31	40	green/gray s	hale							
					Notes:					
					4					
11 0037	D A COTO E	CODIAND	OM/AIRP-	CEDTIFICATION	Ma This					
III CONT	KACTUR'	5 UK LANDO	UWNER'S leted on (=	OCENTIFICATION	n: inis wate	this record is	■ constructed, \( \square \) rec	onstructed, or plugged		
Kansas Wa	arisaiction a iter Well Co	ntractor's Lie	icica on (III ense No	702 This W	ater Well Re	ans record is	o u ue to ute best of fi inleted on (mo-dav-v	ny knowledge and belief. Year) .06/19/15		
under the b	usiness nan	ne of .T <b>raut V</b>	V <b>≘</b> US							
Mail	l white copy a	long with a fee of	\$5.00 for eac	h constructed well to: Ka	nsas Departmen	t of Health and l	Environment, Bureau of V	/ater, GWTS Section,		
1				66612-1367. Mail one to			ne for your records. Telep			
Visit us at http	p://www.kdhel	s.gov/waterwell/i	index.html		KSA 82a-12	212		Revised 1/20/2015		

			WWC-5				MW-03D		
			ge in Well Use		urces App. No. tion Number		Well ID cer Range Number		
	Y: Lyon	VATER WELL:	Fraction SW 1/4 NE 1/4 SE 1/2		tion Number   Township Number   Range Number   4   T   16   S   R   10 ■ E □ W				
2 WELL		Last Name:	First:	Street or Rural Address where well is located (if unknown, distance and					
Business:	Corps of	Engineers					r's address, check here:		
Address: Address:	601 E 12	th Street		1/2 Mi NW d	/2 Mi NW of RD 360 & RD D				
City:	Kansas (	City State: MO	ZIP: <b>64106</b>						
3 LOCAT	E WELL	4 DEPTH OF CON		<b>54</b> n	5 Latitud	N 38.687	'02		
WITH "		Depth(s) Groundwater			ft. 5 Latitude: N 38.68702 (decimal degrees) Longitude: W 096.30238 (decimal degrees)				
	N BOX:	2) ft.	3) ft., or 4)	Dry Well			4 □ NAD 83 □ NAD 27		
	·	WELL'S STATIC WA	TER LEVEL:	.7.1 A.	Source f	or Latitude/Longitude	<u>:</u> .		
'	'	■ below land surface □ above land surface					qarmin)		
NW	NE	Pump test data: Well v				(WAAS enabled? ☐ d Survey ☐ Topogr			
w	E I		s pumping		Onl	ne Mapper:	арте мар		
' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	SE		vater was						
	I SE T		s pumping	. gpm	6 Elevation	on:fl	.  ☐ Ground Level ☐ TOC		
	S		Estimated Yield:gpm Bore Hole Diameter:ft. a. ft. a			Source: ☐ Land Survey ■ GPS ☐ Topographic Map			
1 r	_		in. to						
7 WELL	WATER T	O BE USED AS:							
1. Domestic			ater Supply: well ID		10. □ Oil H	ield Water Supply: le	ease		
☐ Housel			ig: how many wells?			le: well ID			
☐ Lawn o			echarge: well ID			d ☐ Uncased ☐ © mal: how many bores			
2. Irrigati			al Remediation: well I			ed Loop   Horizon			
3.  Feedlo	t	☐ Air Sparg	e 🔲 Soil Vapor		b) Open Loop				
4. 🔲 Industr		☐ Recovery	<del>-</del>						
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:									
Water well	disinfected	? ☐ Yes ■ No			10 100 100				
8 TYPE C	OF CASING	GUSED: ☐ Steel ■ PV	C U Other	CASIN	NG JOINTS:	☐ Glued ☐ Clamped	d □ Welded ■ Threaded		
Casing theigh	nt above land	in. to	Weight	. III. 10 lhs:/ft	II., Diamei Wall thickne	er in. to ess or gauge No. <b>SCh</b>	40		
TYPE OF	SCREEN O	R PERFORATION MA	TERIAL:		· · · · · · · · · · · · · · · · · · ·	oo or gaage riovaii			
☐ Steel	☐ Sta	inless Steel			☐ Other	(Specify)			
☐ Brass		Ivanized Steel		used (open hole	<del>:</del> )				
		RATION OPENINGS A		10.00	'11 1 TT 1 F	704 (0 :0)			
	nuous Slot ered Shutter	■ Mill Slot □ G □ Key Punched □ W	auze Wrapped ☐ T	oren Cut □ D aw Cut □ N	rillea Holes L	Utner (Specify)			
SCREEN-H	PERFORAT	ED INTERVALS: From	n .49 ft. to .54	ft From .	ft. to	ft From	ft. to ft.		
		CK INTERVALS: From							
9 GROUT	MATERI	AL: Neat cement 1 ft. to 45	Cement grout B	entonite 🔲 O	ther		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Grout Interv	als: From	1 ft. to	ft., From	. ft. to	ft., From	ft. to	ft.		
Nearest sou ☐ Septic		ole contamination:	es 🔲 Pit Privy		Livestock Pens	□ Incecti	cide Storage		
Sewer		☐ Cess Pool	Sewage L		Fuel Storage		oned Water Well		
☐ Watert	ight Sewer L	ines   Seepage Pit	☐ Feedyard		Fertilizer Stora		ell/Gas Well		
		oncrete bunker							
Direction from 10 FROM	om well?	LITHOLO		FROM			r PLUGGING INTERVALS		
0 FROM	2	brown clay	OIC LOG	LKOM	10 L	(cont.) 0	TLUGGING INTERVALS		
2	18	yellow shale							
18	49	green/ gray shale							
49	54	limestone							
54	60	gray shale							
	ļ			Notes:					
	ļ								
11 CONT	RACTOP'	S OR LANDOWNER'	S CERTIFICATIO	N: This water	r well was	constructed   rec	onstructed, or plugged		
under my j	urisdiction :	and was completed on (r.	06/02/10-day-year	<b>15</b> and	this record is	rue to the best of m	y knowledge and belief.		
Kansas Wa	ater Well Co	ontractor's License No	<b>4.0</b> This W	ater Well Rec	ord was comp	leted on (mo-day-y	ear) .06/.28/.15		
under the b	usiness nan	ne of .Traut Wellslong with a fee of \$5.00 for ea	ch constructed wall to: V	incae Dona-t	of Harlth and F	vironment Duran -633	Voter GWTS Section		
		St., Suite 420, Topeka, Kansas							
		ks.gov/waterwell/index.html	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	KSA 82a-12		your records. Telepi	Revised 1/20/2015		

€

WATER				WWC-5		vision of Water		MW-035	S
				e in Well Use		sources App. Nection Number	····	Well ID	
County		ATER WELL: Fraction SW 4 NE 4 SE 4 4			4	T 16 S	R 10 ■ E □ W		
2 WELL		act Name		First:		•		(if unknown, distance and	
		Engineers		1 1130.	direction from nearest town or intersection): If at owner's address, check here:				]
Address:	601 E 12				1/2 Mi N\A	of RD 360 8	RDD		
Address: City:	Kansas (	``.	State: MO	ZIP: <b>64106</b>	1/2 1011 1444	01 KD 300 C	KINDD		
3 LOCATE		Ι'			07		N 20 60	······································	
WITH "X		1		IPLETED WELL:				03 (decimal degree	
SECTIO				Encountered: 1) 3) ft., or 4 <u>)</u>				<b>0238</b> (decimal degree 4 □ NAD 83 □ NAD 2	
N		WELL'S S'	TATIC WA	TER LEVEL:17	.47 ft.		for Latitude/Longitude		۱ ۲
				, measured on (mo-day		<u>■ GI</u>	PS (unit make/model: .	garmin	)
NW	NE			, measured on (mo-day			(WAAS enabled?	Yes No)	
				vater wass pumping		La	and Survey Topogr	aphic Map	
W	E	anci		vater was			nine Mapper:		
sw	SWSE after hours pumping					( FI			_
	Estimated Yield:gpm							. □ Ground Level □ TC GPS □ Topographic Ma	
S   Bore Hole Diameter: in. to in. to						Source			- 1
		O BE USED.		III. 10	II.				
1. Domestic:	VAIEKI			ater Supply: well ID		10. □ Oil	Field Water Supply:	ease	
Househ	old			g: how many wells?.		. 11. Test H	Iole: well ID		
☐ Lawn &				echarge: well ID			sed Uncased 🗆		
Livesto				g: well ID			ermal: how many bore osed Loop   Horizon		
2. ☐ Irrigation 3. ☐ Feedlot			nvironment Air Sparge	al Remediation: well I e □ Soil Vapor				ischarge ☐ Inj. of Water	r
4. Industri			Recovery		DAG GOLON				
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:									
Water well disinfected? $\square$ Yes $\blacksquare$ No									
8 TYPE O	E CASINO	USED: DS	Steel PV	C 🗆 Other	CAS	ING JOINTS:	Glued Clampe	d 🗌 Welded 🔳 Threade	:d
Casing diame	eter <b>2</b>	in. to	<b>22</b> ft	Diameter	. in. to	ft., Diam	eter in. to .	ft.	
		surface			lbs./ft	. Wall thick	ness or gauge No <b>sct</b>	.4.0	
TYPE OF S  ☐ Steel		R PERFORA' inless Steel	TION MA ☐ Fiber			□ Oth	er (Specify)		
☐ Brass		vanized Steel	☐ Conc		used (open ho		ci (Specify)	***************************************	
		RATION OPE			(-1 -	,			
☐ Contin	uous Slot	■ Mill Slot	□G	auze Wrapped   T	orch Cut 🔲	Drilled Holes	☐ Other (Specify)		
Louve	red Shutter	☐ Key Punc	hed W	Vire Wrapped ☐ S	aw Cut 🔲	None (Open H	ole)	Δ. Δ	
SCREEN-P	EKFUKAI	ED INTERV	ALS: From	n. 44π. το .4.! - 18 θ to 30	π., From	IL. 10	e From	ft. to ft ft. to ft.	
9 CPOUT	MATERI	AI: Neat	cement C	Cement grout	entonite $\square$	Other	, It., 110III	It. to It.	
Grout Interva	als: From	1 ft. to	18	ft., From	. ft. to	ft., From	ft. to	ft.	
		le contaminat							
☐ Septic 1			Lateral Line			Livestock Per		cide Storage	
Sewer I		ines □	Cess Pool	☐ Sewage L. ☐ Feedyard	agoon L	☐ Fuel Storage ☐ Fertilizer Sto	rage □ Abano	oned Water Well ell/Gas Well	
Other (	Specify) .co	ncrete bunk	er				_		
Direction fro	m well?			Distance from v	vell?		<u>f</u>	•	
10 FROM	TO		LITHOLO	GIC LOG	FROM	ТО	LITHO. LOG (cont.)	r PLUGGING INTERVA	LS
	3	brown clay							
	19	yellow shale	)						
	27 30	limestone				<del></del>			
27	30	gray shale						and at mir t	
					Notes:				
11 CONT	RACTOR'	S OR LAND	OWNER'	S CERTIFICATIO	N: This wa	ter well was	constructed, rec	onstructed, or plugge	ed,
Kansas Wa	urisaiction : ter Well Ca	and was comp entractor's Lie	neteu on (r cense No	9.0.2 This W	ı⊶an ∕ater Well R	ecord was cor	s une to the best of t	ny knowledge and belie (ear) .6/29/.15	
under the b	usiness nar	neof. <b>Traut</b> !	. <b>∖\elis</b>						••
Mail	l white copy a	long with a fee o	f \$5.00 for ea	ch constructed well to: K	ansas Departme	nt of Health and	Environment, Bureau of V	Vater, GWTS Section,	
							ne for your records. Telep		<b>.</b>
Visit us at http	p://www.kdhe	ks.gov/waterwell	/index.html		KSA 82a-	1414	·· ··	Revised 1/20/2015	<u> </u>

WATER			WWC-5		ision of Water		MW-04D	
	Record [		ge in Well Use		ources App. No.		Well ID	
		ATER WELL:	Fraction SW 1/4 NE 1/4 SE 1/2		tion Number 4	Township Number	er Range Number R 10 ■ E □ W	
County					•		(if unknown, distance and	
2 WELL	Corps of		First:				's address, check here:	
	601 E 12			1/2 Mi NW of RD 360 & RD D				
Address:				1/2 Mi NW (	of RD 360 & I	ע טא		
City:	Kansas C	State: MO	ZIP: <b>64106</b>					
3 LOCATI		4 DEPTH OF COM	MPLETED WELL:	<b>64</b> ft	5 Latitud	e: N 38.6866	63(decimal degrees)	
WITH "X SECTIO		Depth(s) Groundwater	Encountered: 1)	ft.	Longitu		343(decimal degrees)	
SECTION N		2) ft.	3) ft., or 4)	Dry Well	4		☐ NAD 83 ☐ NAD 27	
<del></del>		WELL'S STATIC WA			DOMEST TOT DURING THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF			
.'			e, measured on (mo-day e, measured on (mo-day			(WAAS enabled?		
NW	NE	Pump test data: Well v				i Survey ☐ Topogra		
w	<del></del>		s pumping		Onli	ne Mapper:		
1 1 1	CE	I	water was					
SW	SE		s pumping	. gpm	6 Elevatio	n: ft	☐ Ground Level ☐ TOC	
	S	Estimated Yield: Bore Hole Diameter:		ft and			GPS  Topographic Map	
1 m			in. to					
		D BE USED AS:			1			
1. Domestic:			ater Supply: well ID		10. 🔲 Oil F	ield Water Supply: lea	ase	
☐ Housel	nold	<ol><li>Dewatering</li></ol>	ng: how many wells?		11. Test Ho	le: well ID		
☐ Lawn &			kecharge: well ID			d □ Uncased □ G		
Livesto			ng: well ID			mal: how many bores		
2.  Irrigation		9. Environment  Air Sparg	tal Remediation: well I ge		a) Close	ed Loop	ai	
3. ☐ Feedlor 4. ☐ Industr		☐ Recovery		Extraction				
		riological sample subn	_ •	I Van E Na				
		riological sample subn ?   Yes  No	nitted to KDHE?	res <b>n</b> o	If yes, date s	ampie was submitted		
e Type o	E CASINO	USED: Steel DV	IC D Other	CASI	NG IOINTS: I	☐ Glued ☐ Clamped	☐ Welded ■ Threaded	
Casing diam	<sub>eter</sub> 2	in to 59 ft.	Diameter	. in. to	ft Diamete	er in. to	ft.	
Casing heigh	t above land	surface 36 in	n. Weight	lbs./ft.	Wall thickne	ss or gauge Nosch.	4.Q	
		R PERFORATION MA						
☐ Steel	_	inless Steel				(Specify)		
Brass		vanized Steel Con		used (open hol	e)			
		RATION OPENINGS A		Samuela Couta III I	Duillard IIIalaa - F	7 Othor (Smoolfs)	1	
	nuous Slot	■ Mill Slot □ G □ Key Punched □ V	vire Wrapped ☐ 1	oren Cut III	Jone (Onen Hol	J Omer (Specify)		
SCREEN-P	FREORAT	ED INTERVALS: From	m <b>59</b> ft to <b>64</b>	ft From	ff to	f From	ft toft	
		CK INTERVALS: From						
		AL: Neat cement						
Grout Interv	als: From	1 ft. to 55	ft., From	. ft. to	ft., From	ft. to	ft.	
		le contamination:		_				
☐ Septic		☐ Lateral Lin		_	Livestock Pens	_	ide Storage	
Sewer	Lines ight Sewer Li	☐ Cess Pool ines ☐ Seepage Pi	☐ Sewage L t ☐ Feedyard		Fuel Storage Fertilizer Stora	_	oned Water Well	
Other (	Specify) .co	ncrete bunker			Terunzer Stora	ge 🗆 On we	J/Gas Well	
Direction fro	om well?		Distance from v	well?	<u></u>	ft.		
10 FROM	TO	LITHOLO		FROM	TO L	ITHO. LOG (cont.) or	PLUGGING INTERVALS	
0		gray						
4		yellow shale			ļ			
10		limestone			<b></b>			
13		sand				Providence		
17	26	gray shale		_	<del> </del>			
26		limestone		Notes:	L			
34		gray shale		- Notes:				
60 64		limestone shale						
11 CONT	RACTOR'	S OR LANDOWNER	S CERTIFICATIO	N: This water	er well was	constructed. Treco	onstructed, or  plugged	
under my i	urisdiction a	and was completed on (	mo-dav₌vear) . <b>05/31</b>	/.15 and	this record is	true to the best of m	y knowledge and belief.	
Kansas Wa	ıter Well Co	ntractor's License No.	<b>.9.0</b> This W	/ater Well Re	cord was comp	oleted on (mo-day-ye	ear) .06/.28/.15	
under the b	usiness nan	ne of .Traut.Wells		. <b></b> .				
		long with a fee of \$5.00 for east., Suite 420, Topeka, Kansa						
I.		st., Suite 420, Topeka, Kansa ks.gov/waterwell/index.html	s 00012-130/. Mail one to	KSA 82a-1		tor your records. Teleph	Revised 1/20/2015	
T TOTAL AND ALTERE								

E

		RECORD		WWC-5		vision of Water		MW-045	S
		cord Correction Change in Well Use NOF WATER WELL: Fraction				ources App. No. ction Number	Township Numb	Well ID cer Range Number	
	ty: Lyon	VAIEK WEL	ıL:	SW 1/4 NE 1/4 SE 1/		4	T 16 S	R 10 ■ E □ W	
	OWNER:	I act Name:		First:		' <del>-</del> '		(if unknown, distance and	<u>.                                    </u>
	Corps of			T II St.				r's address, check here:	7
Address	601 E 12				1/2 Mi NW of RD 360 & RD D				_
Address City:	Kansas (	∩th./	State: MN	ZIP: <b>64106</b>	1/2	01 ND 300 & 1	(0.0		
3 LOCA					24		N 20 606		
WITH				IPLETED WELL:		t. 5 Latitud	N 00.000	61 (decimal degree	es)
l	ON BOX:			Encountered: 1) 3) ft., or 4)		Longitu	de:VX.V.9Q.3	<b>0343</b> (decimal degree 4 □ NAD 83 □ NAD 3	es)
	N	WELL'S ST	TATIC WA	TER LEVEL: 24	.52 ft.		or Latitude/Longitude		21
		below l	and surface,	, measured on (mo-day	-уг)	·· ■ GPS		qarmin	)
NW -	NE			, measured on (mo-day			(WAAS enabled? □		
	Pump test data: Well water washours pumping						l Survey 🔲 Topogr	aphic Map	
W	'	anci		vater was			ne Mapper:	***************************************	••••
sw-	- SE			pumping	gpm	( Flavotic	0	П С 1 П ТС	
Estimated Yield:gpm  Bore Hole Diameter:7in. to					0 1			. □ Ground Level □ TC GPS □ Topographic Ma	
l1	S mile	Bore Hole L		in. to				GI 3	
<u> </u>	<u>-</u>	O BE USED A		III. to	10.				
1. Domesti				ter Supply: well ID		10. 🔲 Oil F	ield Water Supply: 10	ease	
☐ House	ehold	6. □	] Dewaterin	g: how many wells?		<ol><li>Test Ho</li></ol>	le: well ID		
_	& Garden			echarge: well ID			d □ Uncased □		
☐ Lives 2. ☐ Irriga				g: well ID al Remediation: well I			mal: how many bore: ed Loop   Horizon		
3. ☐ Feedl			l Air Sparge					scharge  Inj. of Water	. !
4. Indus		_	Recovery	☐ Injection					
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:									
Water well disinfected? ☐ Yes ■ No  8 TYPE OF CASING USED: ☐ Steel ■ PVC ☐ Other									
8 TYPE	OF CASING	G USED: □ S	teel PV	C Other	CASI	NG JOINTS: I	☐ Glued ☐ Clamped	I ☐ Welded ■ Threader	:d
Casing diar	neter	surface	. <del>1.</del> π., 36 in	Weight	in. to	II., Diamete Wall thickne	er in. to ss or gauge No <b>\$Ch</b>	40	
		R PERFORAT				,, an anomi	oo or gaage riovaii		
☐ Steel		inless Steel	☐ Fiber	glass PVC			(Specify)	••••••	
☐ Brass		Ivanized Steel	Conc		used (open ho	le)			
	OR PERFO	RATION OPE  Mill Slot			arah Cut 🗖 l	Drillad Halas - F	Other (Specify)		
				ire Wrapped S				••••••	
SCREEN-	<b>PERFORA</b>	ED INTERVA	ALS: From	1 . <b>29</b> ft. to . <b>34</b>	ft., From	ft. to	ft., From	ft. to ft.	
	GRAVEL PA	CK INTERV	ALS: From	1 <b>25</b> ft. to <b>36</b>	ft., From	ft. to	ft., From	ft. to ft.	
9 GROU	T MATERI	AL: Neat	cement 🗆	Cement grout B ft., From	entonite 🔲	Other			
				ft., From	ft. to	ft., From	ft. to	ft.	
Nearest so   □ Seption		ole contaminati □ □	on: Lateral Line	s 🔲 Pit Privy	Г	Livestock Pens	□ Insecti	cide Storage	
Sewer			Cess Pool	☐ Sewage La		Fuel Storage		oned Water Well	
	tight Sewer L		Seepage Pit			Fertilizer Storag	ge □ Oil We	ell/Gas Well	
Other	(Specify) .co	oncrete bunke	er	Distance from v	 119		Δ		
10 FROM			ITHOLOG		FROM			PLUGGING INTERVAI	ĪS
0	4	gray clay							<u>~</u>
4	10	yellow shale							
10	13	limestone							
13	17	sand							
17	27	gray shale			_				
27	34	limestone			Notes:	<u> </u>			
34	40	gray shale			- rotes:				
					-				
11 CON	TRACTOR'	S OR LAND	OWNER'S	S CERTIFICATIO	N: This wat	er well was	constructed, 🗌 rece	onstructed, or 🔲 plugge	ed
under my	jurisdiction	and was comp	leted on (n	06/01/. (no.day-year	15 and	this record is	rue to the best of m	y knowledge and belief ear) .06/28/15	f.
Kansas W	ater Well Co	ontractor's Lice	ense No <b>Velis</b>	This W	ater Well Re	cora was comp	ieied on (mo-day-y	ear) .UD/.28/15	•
Mai	l 1 white copy a	long with a fee of	\$5.00 for eac	ch constructed well to: Ka	nsas Departmer	t of Health and En	vironment, Bureau of W	ater, GWTS Section,	•
				66612-1367. Mail one to			for your records. Telepl		_
Visit us at h	tp://www.kdhe	ks.gov/waterwell/i	index.html		KSA 82a-1	212		Revised 1/20/2015	,

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WATER WELL R		WWC-5		ision of Water			MW-05D	
Original Record		e in Well Use		ources App. No.	T 1' N 1	Well ID	N	
1 LOCATION OF W.	ATER WELL:	Fraction SW 1/4 NE 1/4 SE 1/4		tion Number 4	Township Numb		e Number ■ E □ W	
County: Lyon  2 WELL OWNER: La	ant Names				ere well is located			
Business: Corps of E		rust,			ersection): If at owne			
Address: 601 E 12th					-			
Address:			1/2 MI NVV	of RD 360 & F	ט ט			
City: Kansas C	1			T				
3 LOCATE WELL WITH "X" IN	4 DEPTH OF COM				N 38.686			
SECTION BOX:	Depth(s) Groundwater				ie: <u>W</u> 096.3			
N	WELL'S STATIC WA	3) ft., or 4) [	Dry Well		<del>l Datum:</del> DWGS 8		□ NAD 27	
		, measured on (mo-day-			r Latitude/Longitude (unit make/model:		,	
NW NE		, measured on (mo-day-			(WAAS enabled?			
	Pump test data: Well w			☐ Land	Survey  Topogr	aphic Map		
W		s pumping		☐ Onlir	ne Mapper:			
SW SE	1	vater was f s pumping f						
	Estimated Yield:		6PIII	6 Elevation:ft. Ground Level TOC				
S	Bore Hole Diameter:	<b>.7</b> in. to			Land Survey			
mile		in. to	ft.		Other		•••••	
7 WELL WATER TO				10 🗖 0'' F'	1177 . 6 . 1 . 1			
1. Domestic:		ter Supply: well ID g: how many wells?			eld Water Supply: lee: well ID			
☐ Lawn & Garden		echarge: well ID			Uncased		••	
Livestock		g: well ID			nal: how many bore			
2. Irrigation		al Remediation: well II			d Loop   Horizon			
3. Feedlot		Soil Vapor I	Extraction	b) Open	Loop Surface Di	ischarge	nj. of Water	
4. Industrial	Recovery				(specify):			
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:								
Water well disinfected? ☐ Yes ■ No								
Casing diameter 2	8 TYPE OF CASING USED: ☐ Steel ☐ PVC ☐ Other							
Casing trialleterCasing height above land s	surface 36 in	. Weight	lbs./ft.	Wall thicknes	s or gauge No. <b>SCh</b>	40		
TYPE OF SCREEN OR					88			
	nless Steel	glass PVC			(Specify)			
	anized Steel Conc		sed (open hole	e)				
SCREEN OR PERFOR			-1 C-+ -		1 04 (6			
☐ Continuous Slot☐ Louvered Shutter		auze Wrapped To	w Cut III	Jone (Onen Hole	Other (Specify)	•••••	•••••	
SCREEN-PERFORATE	ED INTERVALS: From	1.56 ft. to .61	ft From .	ft. to	, ft From	ft. to	ft.	
GRAVEL PAG	CK INTERVALS: From	52 ft. to 63	ft., From .	ft. to	ft., From	ft. to	ft.	
9 GROUT MATERIA	L: Neat cement	Cement grout Be	ntonite $\square$ (	Other				
Grout Intervals: From	1 ft. to .52	ft., From	ft. to	ft., From	ft. to	ft.		
Nearest source of possible	e contamination:   Lateral Line	Die Daien.		I increte als Dame	□ Inet	a: d = C4=====		
☐ Septic Tank☐ Sewer Lines	☐ Cess Pool	es		Livestock Pens Fuel Storage		cide Storage oned Water Wo	ell	
☐ Watertight Sewer Lin				Fertilizer Storag		ell/Gas Well		
Other (Specify) .cor	crete bunker			-				
Direction from well?							Dimension	
10 FROM TO	LITHOLOG	GIC LOG	FROM	TO LI	THO. LOG (cont.) o	r PLUGGING	INTERVALS	
	orown clay							
	/ellow shale imestone							
	green/red/gray shale							
	imestone		1					
	gray shale							
	imestone		Notes:					
	gray shale							
11 CONTRACTOR'S	OR LANDOWNER'S	S CERTIFICATION	: This wate	r well was 🔳 c	onstructed, rec	onstructed, or	r 🔲 plugged	
under my jurisdiction at Kansas Water Well Cor	nd was completed on (n	no-day-year) . <b>5/3U/.1</b>	ater Well De	this record is to	te to the best of m	y knowledge (ear) 06/30/1	and belief.	
under the business name	e of .Traut Wells	11115 W	WEII KE	was compi	d on (mo-day-y	·····		
under the business name Mail 1 white copy alo	ong with a fee of \$5.00 for each	ch constructed well to: Kar	nsas Department	of Health and Env	rironment, Bureau of W	ater, GWTS Sec	ction,	
1000 SW Jackson St	t., Suite 420, Topeka, Kansas	66612-1367. Mail one to	Water Well Ow	ner and retain one f	or your records. Telepl	hone 785-296-55	524.	
Visit us at http://www.kdheks	s.gov/waterwell/index.html		KSA 82a-12	212		Revised	1/20/2015	

	WELL E			WWC-5		vision of Water		MW-06D	
	l Record		<u>v</u>	ge in Well Use		ources App. No		Well ID	
		ATER WEI	L:	Fraction		ction Number			
	<sub>/:</sub> Lyon			SW ¼ NE ¼ SE		4	T 16 S		
	OWNER: 1			First:				(if unknown, distance and	
Business: Address:	Corps of 601 E 12				direction from	nearest town or i	ntersection): If at owner	er's address, check here:	
Address	001 E 12	ui Su <del>ee</del> t			1/2 Mi NW	of RD 360 &	RD D		
City:	Kansas C	itv	State: MO	ZIP: <b>64106</b>					
3 LOCAT	E WELL	4 DEPTH		1PLETED WELL:	. 48 f	5 Latitus	N 38.68	505 (decimal degrees)	
WITH "		Denth(s) G	oundwater	Encountered: 1)	fi			10298 (decimal degrees)	
SECTIO				3) ft., or <u>4)</u>				34 $\square$ NAD 83 $\square$ NAD 27	
N	<u> </u>	WELL'S S	TATIC WA	TER LEVEL: 2	9.48 ft.	i i	for Latitude/Longitud		
				, measured on (mo-da		<b>■ GP</b>		garmin )	
							(WAAS enabled?		
		1 .		vater was			d Survey  Topog		
W	E	aner		s pumpingvater was		□ □ On	line Mapper:		
SW	SE	after		s pumping		- "			
		Estimated Y			<b>6</b> F			t. Ground Level TOC	
	S			<b>7</b> in. to		Source:		GPS  Topographic Map	
1 r				in. to	ft.		Uther		
		BE USED				10 🗖 00	P. 11377		
1. Domestic				iter Supply: well ID				lease	
☐ Housel☐ Lawn &				ig: how many wells? . echarge: well ID			ole: well ID ed □ Uncased □		
Livesto				g: well ID			rmal: how many bore		
2. Irrigati				al Remediation: well			sed Loop    Horizor		
3. Feedlo			Air Sparge			b) Ope	n Loop 🔲 Surface D	ischarge	
4. 🔲 Industr	rial		] Recovery	☐ Injection		13. 🔲 Oth	er (specify):		
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:									
	Water well disinfected? ☐ Yes ■ No								
8 TYPE O	F CASING	USED: S	teel PV	C Other	CASI	NG JOINTS:	☐ Glued ☐ Clampe	ed □ Welded ■ Threaded	
Casing diam	eter <b>.2</b>	in. to	.43 ft.,	Diameter	in. to	ft., Diame	ter in. to .	ft.	
				. Weight	lbs./ft.	Wall thickn	ess or gauge No	1. <del>5</del> .Q	
		R PERFORA'					- (C:C-)		
☐ Steel ☐ Brass	_	nless Steel vanized Steel	☐ Fiber ☐ Conc	-	used (open hol		r (Specify)	••••••	
		ATION OPE			used (open no	(C)			
	nuous Slot	■ Mill Slot			Forch Cut 🔲 1	Drilled Holes	Other (Specify)	•••••	
Louve	ered Shutter	☐ Key Punc	hed 🔲 W	ire Wrapped 🔲 S	Saw Cut 🔲 🗆	None (Open Ho	le)		
SCREEN-F	PERFORAT	ED INTERV.	ALS: Fron	n . <b>43</b> ft. to . <b>48</b>	ft., From	ft. to	ft., From	ft. to ft.	
G	RAVEL PA	CK INTERV	ALS: From	n <b>39</b> ft. to <b>5</b> .	Q ft., From	ft. to	ft., From	ft. to ft.	
9 GROUT	MATERIA	AL: Neat	cement [	Cement grout 🔳 I	Bentonite 🔲	Other			
Grout Interv	als: From	ft. to	39	ft., From	ft. to	ft., From	ft. to	ft.	
		le contaminati	i <b>on:</b> Lateral Line	□ n:₄ n	_	l I irranta ala Dam		:-:4- 64	
☐ Septic			Laterai Line Cess Pool	es ☐ Pit Privy ☐ Sewage I	agoon C	] Livestock Pen ] Fuel Storage		icide Storage loned Water Well	
	ight Sewer Li		Seepage Pit			Fertilizer Stora		ell/Gas Well	
Other (	(Specify) .co	ncrete bunk	er				•		
Direction fro	om well?			Distance from	well?				
10 FROM	TO		LITHOLO	GIC LOG	FROM	TO I	ITHO. LOG (cont.)	or PLUGGING INTERVALS	
0		brown clay				<b></b>			
2		limestone				<b> </b>			
21		gray shale		· · · · · · · · · · · · · · · · · · ·					
25		gray/red/gre	en						
40	1 = 2	limestone				<del>                                     </del>			
48	50	gray			NT _ 4	<u> </u>			
		•			Notes:				
11 CONT	DACTOR	CODIAND	OWNED	SCEPTIFICATIO	N. This wat	er well was	constructed Tree	constructed, or plugged	
under my i	urisdiction a	nd was comp	leted on (n	no-day-year) .05/16	3/15 and	this record is	true to the best of r	ny knowledge and belief	
Kansas Wa	ter Well Co	ntractor's Lic	ense No	.90.2 This V	Vater Well Re	cord was com	pleted on (mo-day-	ny knowledge and belief. year) .06/29/15	
under the b	ousiness nam	ne of .imautx	&U <b>&amp;</b> Y						
	• •	_		ch constructed well to: K	_				
				66612-1367. Mail one t			e for your records. Telep		
Visit us at htt	p://www.kdhek	s.gov/waterwell/	ındex.html		KSA 82a-1	<u> </u>		Revised 1/20/2015	

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			orm WV				ion of Water			MW-06S
		Correction	Change in	Well Use		Resou	rces App. N		Well ID	
		VATER WELL:		action		Secti	on Number			ge Number
Count	<sub>y:</sub> Lyon		SI	W¼ NE¼ SE⅓			4	T 16 S		$\mathbf{E} \square \mathbf{W}$
	OWNER:		F	irst:				where well is located		
		Engineers			direction f	rom ne	arest town or	intersection): If at owner	er's address, c	heck here: 🗌
Address:	601 E 12	rtn S I			1/2 Mi N	IW of	RD 360 8	RDD		
City:	Kansas (	City State	e: MO Z	<sup>ZIP:</sup> <b>64106</b>						
3 LOCAT					24			N 20 60		
WITH "		4 DEPTH OF	COMPL	ETED WELL:	<b>4</b> J	ft.	5 Latitu	de: N 38.685	(	decimal degrees)
SECTION BOX:         Depth(s) Groundwater Encountered: 1)									decimal degrees)	
]	N					111				3 □ NAD 27
WELL'S STATIC WATER LEVEL:								,		
NW	NE			easured on (mo-day			■ O1	(WAAS enabled?		
				r was			□La	nd Survey  Topogi		•)
w <del>                                   </del>	E			mping				line Mapper:		
SW	SE			r was						
3,	13E			mping	. gpm		6 Flevat	i <b>on:</b> fi	Ground	Level TTOC
<u> </u>	S	Estimated Yield		gpm in. to	Δ 1			: ☐ Land Survey		
	S mile			in. to			Bource	Other		
		O BE USED AS:	******	III. W	11.		1			
1. Domestic			olic Water :	Supply: well ID			10 🗀 Oil	Field Water Supply: 1	ease	
☐ House				now many wells?				ole: well ID		
	& Garden	7. 🗆 Ag	uifer Recha	arge: well ID				sed 🔲 Uncased 🔲		
Livest	ock	8. Mo	nitoring: v	well ID				ermal: how many bore		
2.   Irrigat				emediation: well I				sed Loop 🔲 Horizon		
3.  Feedle			Sparge	☐ Soil Vapor	Extraction		b) Op	en Loop 🔲 Surface D	ischarge 🔲 🛚	Inj. of Water
4. 🔲 Indust	rial	☐ Red	covery	☐ Injection			13. □ Otł	ner (specify):	• • • • • • • • • • • • • • • • • • • •	
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:										
		? ☐ Yes ■ No								
8 TYPE C	F CASING	G USED: ☐ Steel	■ PVC	☐ Other	CA	ASINO	G JOINTS:	☐ Glued ☐ Clampe	d 🔲 Welded	Threaded
Casing diam	eter	in. to 16	ft., Di	ameter	in. to		ft., Diam	eter in. to . ness or gauge No <b>sch</b>	ft.	
					lbs.	/ft.	Wall thicks	ness or gauge No <b>\$Ç</b> h	.40	
		R PERFORATIO						(0 10)		
☐ Steel			Fiberglas			L - 1-X		er (Specify)	•••••	•••••
☐ Brass		vanized Steel   RATION OPENIN			used (open	noie				
	nuous Slot	Mill Slot			orch Cut	□ D#i	lled Holes	☐ Other (Specify)		
		☐ Key Punched		Wrapped	aw Cut		ne (Open Ho	ole)	• • • • • • • • • • • • • • • • • • • •	•••••
								ft., From	ft. to .	ft.
								ft., From		
Grout Interv	als: From	1 ft. to12	2 ft.	, From	ft. to	<u> </u>	ft., From .	ft. to	ft.	
		le contamination:					•			
☐ Septic			al Lines	☐ Pit Privy			ivestock Per		cide Storage	
☐ Sewer		☐ Cess		Sewage L	agoon		uel Storage	☐ Aband	oned Water V	Vell
	ight Sewer L			☐ Feedyard		□ F	ertilizer Stor	age □ Oil Wo	ell/Gas Well	
		ncrete bunker						ft		
10 FROM	TO		IOLOGIC		FRON			LITHO, LOG (cont.) o		INTEDUALS
0	2	brown clay	IOLOGIC	LOG	TROP	**	10	Li i i i o i cont.) 0	LILUUUINC	THITKAMES
2	8	shale				$\dashv$	+			
8	21	limestone			1	$\dashv$				
21	25	gray shale				$\dashv$	+			
25	26	limestone								
26	31	gray shale			-					
	, .	gray silaic			Notes	<u>.                                      </u>				
					- 1.00cs	•				
					$\dashv$					
11 CONT	RACTOR'	S OR LANDOW	NER'S C	ERTIFICATIO	N: This v	vater	well was	constructed, rec	onstructed.	or plugged
under my i	urisdiction a	and was completed	l on (mo-c	lav-vear) . <b>05/28</b> /	/15	and th	is record is	true to the best of n	ıv knowledg	e and belief
Kansas Wa	ater Well Co	ntractor's License	No9.	This W. برنجاناً ل	ater Well	Reco	rd was com	pleted on (mo-day-y	ear) .06/.287	15
under the t	Kansas Water Well Contractor's License No									
				12-1367. Mail one to				e for your records. Telep		
visit us at htt	p.//www.kanel	ks.gov/waterwell/index	.uuni		KSA 82	a=141.	4		Kevised	1 1/20/2015

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		RECORD		WWC-5		ision of Water		W-II ID	MW-07S	
		Correction		ge in Well Use		urces App. No.		Well ID	and Niversham	
		VATER WEI	LL:	Fraction		tion Number 4	Township Numb		nge Number	
	: Lyon			SW ¼ NE ¼ SE ½			T 16 S		0 ■ E □ W	
2 WELL				First:			nere well is located			
		Engineers			direction from r	nearest town or in	tersection): If at owne	r's address,	check here:	
Address: Address:	601 E 12	an St			1/2 Mi NW o	of RD 360 & I	RD D			
City:	Kansas (	City	State: MO	ZIP: <b>64103</b>						
3 LOCAT		1			20 0		N 20 C0	550		
WITH "				APLETED WELL:		5 Latitud	e: N 38.68	229	(decimal degrees)	
SECTIO				Encountered: 1)			ide: W 096.3			
N	1	2)	II.	3) ft., or 4)	BO A		al Datum: WGS 8		83 ⊔ NAD 27	
l (				TER LEVEL:18		Source for	or Latitude/Longitude	: comin		
'	'			e, measured on (mo-day e, measured on (mo-day		■ GPS	(unit make/model:			
NW	NE			vater was		1	(WAAS enabled?		10)	
				s pumping			d Survey   Topogr  The Mapper:			
W	E	41107.1		water was			пе маррет			
SW	SE	after		s pumping						
			Yield:		C.		on:ft			
	S		Diameter:	7 in. to			Land Survey			
1 n	nile			in. to	ft.		Other			
7 WELL	WATER T	O BE USED	AS:							
1. Domestic:	:			ater Supply: well ID			ield Water Supply: 1			
☐ Housel				ng: how many wells?			le: well ID			
☐ Lawn &				echarge: well ID			d □ Uncased □			
☐ Livesto				ng: well ID			mal: how many bore			
2. Irrigati				al Remediation: well I		a) Close	ed Loop   Horizon	tal   Verti	ical	
3.  Feedlo			Air Sparg		Extraction	b) Oper	Loop Surface D	ischarge 📙	Inj. of Water	
4. 🔲 Industr			Recovery				r (specify):			
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:										
		? 🗌 Yes 🔳								
8 TYPE O	F CASING	G USED: 🗆 S	Steel PV	C Other	CASIN	NG JOINTS:	☐ Glued ☐ Clampe	d 🔲 Welder	d Threaded	
Casing diam	eter2	in. to	ft.,	, Diameter	. in. to	ft., Diamet	er in. to .	ft.		
		surface			lbs./ft.	Wall thickne	ss or gauge No <b>sch</b>	.4.0		
		R PERFORA	_	_		_				
☐ Steel	_	inless Steel	☐ Fibe				(Specify)			
☐ Brass		Ivanized Steel			used (open hole	<del>:</del> )				
		RATION OPE					<b>3</b> 01 (0 10)			
	nuous Slot	Mill Slot					Other (Specify)			
	ered Shutter					lone (Open Hole		0. 4-	0	
SCREEN-P	EKFUKAI	EDINIERV	ALS: From	n . 27 ft. to .32	π., From .	π. το	n., From	n. to	n.	
G	RAVELPA	CKINIERV	ALS: From	n 23 ft. to 35	π., From .	π. το	π., From	n. to	π.	
9 GROUT	MATERI	AL:   Neat	cement L	Cement grout B	entonite 🔲 C	ther	Α 4-			
				π., From	. π. το	π., From	n. to	π.		
		ble contaminat	n <b>on:</b> Lateral Line	es		Livestock Pens	□ Insecti	cide Storage	•	
☐ Septic			Cess Pool	Sewage L		Fuel Storage		loned Water		
		ines 📙				Fertilizer Stora		ell/Gas Well		
Other (	Specify) .ca	oncrete bunk	er							
Direction fro	om well?			Distance from v	vell?		fl			
10 FROM	ТО		LITHOLO		FROM		ITHO. LOG (cont.) o		<b>GINTERVALS</b>	
0	5	brown clay								
5	22	brown shale	)							
22	32	limestone								
32	40	gray shale								
		<i>J J</i>								
					Notes:					
11 CONT	RACTOR	S OR LAND	OWNER'	S CERTIFICATIO	N: This wate	r well was	constructed.   rec	onstructed.	or plugged	
under my i	urisdiction	and was comr	oleted on (r	morday-year) .05/29	/15 and	this record is	true to the best of n	ny knowled	ge and belief.	
Kansas Wa	under my jurisdiction and was completed on (mo-day-year) .05/29/15 and this record is true to the best of my knowledge and belief.  Kansas Water Well Contractor's License No									
under the b	ousiness nar	ne of .T <b>raut</b> !	<b>₩eils</b>							
				ch constructed well to: Ka						
1			-	s 66612-1367. Mail one to						
Visit us at htt	p://www.kdhe	ks.gov/waterwell	/index.html		KSA 82a-12	.12		Revise	ed 1/20/2015	

	inal Record		WWC-5 ge in Well Use		Division of Water		MW-08S
		WATER WELL:	Fraction		esources App. N ection Number		Well ID ber Range Number
	nty: Lyon C	WATER WELL.	SW 1/4 NE 1/4 SE 1/4		4	T 16 S	R 10 E W
	L OWNER:	Last Name:	First:		Rural Address v		(if unknown, distance and
		Corp of Engineers	i iist.				er's address, check here:
Addres	ss: 601 E 12						a s address, effect fiere.
Addres		a. MC		3622 Roa	d D, Allen Ka	nsas, 66833	
City:	Kansas	State: MC	ZIP: 64106				
	ATE WELL I "X" IN	4 DEPTH OF CO	MPLETED WELL: .	19.5	ft. 5 Latitu	de: 38° 41.1′	17'N (decimal degrees
	ION BOX:	Depth(s) Groundwater	Encountered: 1)	ft.	Longia	ude 96° 18.0	92'W(decimal degrees
BECI	N	2) ft.	3) ft., or 4) [	Dry Well	Horizo	ntal Datum: WGS 8	4 □ NAD 83 □ NAD 23
-	1	WELL'S STATIC WA	ATER LEVEL:10	.5 ft.	Source	for Latitude/Longitude	
	1 - 1		e, measured on (mo-day-		□ GF	S (unit make/model:	Garmen
NW	NE		e, measured on (mo-day-			(WAAS enabled?   □	
77/			water was firs pumping f			nd Survey 🔲 Topogr	
W	E		water was f		☐ ☐ Or	lline Mapper:	
SW	SE		rs pumping				
	1	Estimated Yield:	gpm	bp	6 Elevat	ion: 1420ft	. I Ground Level TOC
	S	Bore Hole Diameter: .	6.5/8 in to 23	. ft. and	Source	□ Land Survey □	GPS Topographic Map
	1 mile		in. to			☐ Other	
7 WELI	L WATER T	O BE USED AS:					
1. Domest		5. 🗌 Public W	ater Supply: well ID		, 10. 🗆 Oil	Field Water Supply: 1	ease
Hou		6. 🔲 Dewaterii	ng: how many wells?	***********	. 11. Test H	ole: well ID	
_	m & Garden	7. Aquifer R	Recharge: well ID ng: well ID MW-	N06	🔲 Cas	ed Uncased	
Live		8. Monitorii	ng: well ID	000		ermal: how many bore	
2. ☐ Irrig 3. ☐ Feed			tal Remediation: well ID			sed Loop   Horizon	
4. ☐ Indu		☐ Air Sparg ☐ Recovery		xtraction	b) Op(	en Loop   Surface Di	ischarge  Inj. of Water
		eriological sample subm	nitted to KDHE?	Yes No	If yes, date	sample was submitte	ed:
		? ☐ Yes ■ No	=				
O ITTE	OF CASING	JUSED: Steel PV	C U Other	CAS	ING JOINTS:	☐ Glued ☐ Clamped	d Welded Threaded
Casing dia	ineter	, in. to 14.5 ft. surface 24 in	, Diameter 0.60	m. to	tt., Diame	eter in. to	ft.
TVDE OF	SCREEN O	R PERFORATION MA	TEDIAL	lbs./1t	. wall thickn	less or gauge No. Sch	
☐ Stee		inless Steel  Fiber			□ Otha	r (Specify)	
☐ Bras				sed (open ho		i (Specify)	
		RATION OPENINGS A	RE:	open in	,,,,,		
	tinuous Slot			ch Cut $\square$	Drilled Holes	Other (Specify)	
☐ Lou	vered Shutter	☐ Key Punched ☐ W	Vire Wrapped Say	v Cut ☐	None (Open Ho	le)	
<b>SCREEN</b>	-PERFORAT	ED INTERVALS: From	n .14.5 ft. to .19.5	ft., From	ft. to	ft., From	ft. to ft.
	GRAVEL PA	CK INTERVALS: From	n 10 ft to 23	ft From	ft. to	ft. From	ft to
9 GROU	T MATERI	AL: Neat cement 0 ft. to .10	Cement grout 🔳 Bei	ntonite 🔲	Other		
Grout Inte	rvals: From	0 ft. to10	ft., From	t. to	ft., From	ft. to	ft.
Nearest so	ource of possib	le contamination:					
Septi		☐ Lateral Line			Livestock Pen	_	eide Storage
Sewe		Cess Pool	Sewage Lag		Fuel Storage		oned Water Well
		ines		L	Fertilizer Stora	age ∐ Oil We	II/Gas Well
Direction 1	from well?		Distance from we	119		Α	
10 FROM	TO	LITHOLO	GIC LOG	FROM			PLUGGING INTERVALS
0	_	Top Soil - Black	515 200	1 110171	10	ATTIO. DOG (cont.) Of	LEGGING INTERVALS
1		Clay - Brown					
3		Shale - Tan					
7		Limestone - Tan					
19		Shale - Gray					
		aio olay					
				Notes:	1		
				1	staative Carina	ith Looking Cor 0.4.1	sh Quennes Deete
				o-inch Pro	nective Casing w	rith Locking Cap & 4-inc	in bumper Posts
11 CON	TRACTOR'S	S OR LANDOWNER'S	S CERTIFICATION	This wat	er well was	constructed T reco	nstructed, or plugged
under my	jurisdiction a	nd was completed on (n	10-dav-vear) .6-4-16.	and	I this record is	true to the best of my	v knowledge and helief
Kansas W	ater Well Co	ntractor's License No	902 This Wat	er Well Re	cord was com	oleted on (mo-day-ve	ar) 8/14/16
under the	business nam	e of Iraut Companies	S	S	ignature	wel trust	
Mai	i i white copy ale	ong with a fee of \$5.00 for each	ch constructed well to Kans	as Departmer	nt of Health and En	vironment, Bureau of Wa	iter, GWTS Section,
Vicit up at h	JU SW Jackson S	t, Suite 420, Topeka, Kansas				for your records. Telepho	
visit us at h	np://www.kdnek	s gov/waterwell/index.html		(SA 82a-1	212		Revised 7/10/2015

			WWC-5			n of Water			MW-09S
		Correction Chang	e in Well Use			es App. No.	T 1: N 1	Well ID	>1 1
	Lyon C	VAIER WELL:	Fraction SW ¼ NE ¼ SE ½		Section	Number 4	Township Numb		ige Number
2 WELL		t and			D1				D E D W
		Corp of Engineers	First				re well is located rsection): If at owner		
Address:	601 E 12							s address,	check fiere.
Address:				3622 Roa	ad D, A	Allen Kansa	as, 66833		
City:	Kansas	State: MO	ZIP: 64106						
3 LOCATI		4 DEPTH OF COM	IPLETED WELL:	23	. ft.	5 Latitude	38° 41.25	0'N	(decimal degrees)
WITH "Y		Depth(s) Groundwater l				Longitud	e: 96° 18.1	55'W	(decimal degrees)
SECTIO N		2) ft. 3	3) ft., or 4) [	Dry Well	t	Horizontal	Datum: WGS 84	I □ NAD	83 D NAD 27
-		WELL'S STATIC WA			.		Latitude/Longitude		05 = 11115 27
	1-11	below land surface,	, measured on (mo-day	yr)6-2-1	.b	☐ GPS (	unit make/model:	Garmen	
NW	NE	☐ above land surface, Pump test data: Well w	measured on (mo-day-	-yr)			WAAS enabled?		lo)
w	$ +$ $ \epsilon$	after hours	numning	anm			Survey  Topogra		
Well water was ft							• • • • • • • • • • • • • • • • • • • •		
SW	SE		pumping				4444	15.5	_
		Estimated Yield:	gpm		- 1	6 Elevation	: 1414ft.	<b>Ground</b>	Level 🗌 TOC
S		Bore Hole Diameter:	6.5/8 in to 25	ft. and	- 1		Land Survey		
1 m			in. to	ft.			Other		***********
	VATER T	O BE USED AS:							
<ol> <li>Domestic:</li> <li>Househ</li> </ol>	أملم		ter Supply: well ID				ld Water Supply: le		
☐ Housen		6. ☐ Dewaterin	g: how many wells?	***************************************	***		well ID		
☐ Livesto		8 Monitorine	echarge: well IDg: well ID	-09S			☐ Uncased ☐ 0 al: how many bores		
2. Irrigatio		9. Environmenta	al Remediation: well II	)			Loop   Horizont		
3. Feedlot		☐ Air Sparge					Loop Surface Dis		
4. 🗌 Industri	al	☐ Recovery	☐ Injection		1		specify):		
Was a chen	nical/bacte	riological sample subm	itted to KDHE? □	Yes N	o If	ves, date sar	nple was submitte	d. 62:35	
		? ☐ Yes ■ No	_			,,		and the same	
8 TYPE O	F CASINO	USED:   Steel   PV	C 🔲 Other	CA	SING.	JOINTS: $\square$	Glued   Clamped	□ Welded	1 Threaded
Casing diame	ter 2	in. to 18 ft	Diameter	in. to		ft., Diameter	in. to	ft.	-
Casing height	t above land	surfacein.	. Weight 0.60	0 lbs./1	ft. V	Vall thickness	or gauge No. Sch.	40	
		R PERFORATION MAT							
☐ Steel		inless Steel				Other (8	Specify)	,	**********
☐ Brass	_	vanized Steel		ised (open h	iole)				
Continu		RATION OPENINGS AF  Mill Slot  Ga		and Cut [	مالنستا ا	411-1	Other (Specify)		
_		☐ Key Punched ☐ W	ire Wrapped Sa	w Cut	] Drille ] None	(Open Hole)	Other (Specify)	**********	**********
SCREEN-P	ERFORAT	ED INTERVALS: From	18 ft to 23	ft From	n Notice	ft to	ft From	ft to	ft
GR	AVEL PA	CK INTERVALS: From	14 ft to 25	ft From	m	ft to	ft From	ft to	Α.
9 GROUT	MATERI	AL: Neat cement	Cement grout	ntonite [	7 Other	1/2	Value of the second	A. //A	reaction II.
Grout Interva	ls: From	0 ft. to 14	. ft., From	ft. to	f	t From	ft. to	ft.	
Nearest sour	ce of possib	le contamination:	,			,	. 1000000000000000000000000000000000000	3334333031	
Septic T		☐ Lateral Lines			_	stock Pens	☐ Insectic	ide Storage	
☐ Sewer L		Cess Pool	☐ Sewage La			Storage		ned Water \	Well
☐ Watertig		nes			∐ Fert	ilizer Storage	🗌 Oil Wel	l/Gas Well	
10 FROM	TO	LITHOLOG		FROM			HO. LOG (cont.) or	PLUGGING	FINTERVALS
		Top Soil - Black		T ROW		. U	tto. Dog (cont.) of	LECCOM	THILKYALS
		Clay - Brown			-				
		Shale - Tan							
		Limestone - Tan							
		Shale - Gray							
				Notes:					
				7	rotective	Casing with	Locking Cap with 4-i	nch Rumner	Poete
				1 0-1000 PI	OLECTIVE	- Casing With	Locking Cap with 4-I	non bumper	r บรเช
11 CONTR	ACTOR'S	OR LANDOWNER'S	CERTIFICATION	: This wa	iter we	II was 🔳 co	nstructed. Treco	nstructed.	or nlugged
under my jui	risdiction a	nd was completed on (mo	o-dav-vear) .6-2-16.	ar	nd this	record is tru	e to the best of my	knowledg	e and belief
Kansas Wate	er Well Co	ntractor's License No9	UZ This Wa	ter Well R	ecord	was complet	ed, on (mo-day-ye	ar) 8/14/1	6
. 1 .4 4	CINACC NAM	a at I ralif L AMAGNIAC			Securet.	1140	1 11 4-171 1		
under the bu	white come	e of Traut Companies	represented mall c. P	ene D	Signati	are	ru	CIVEO S	
under the bu Mail 1	white copy al-	ong with a fee of \$5.00 for each t, Suite 420, Topeka, Kansas 6	constructed well to: Kan	sas Departme	ent of He	ealth and Envir	onment, Bureau of Wa	ter, GWTS S	ection,

			WWC-5 ge in Well Use		Division of Wa			Well ID	MW-10S
		WATER WELL:	Fraction		esources App. Section Numb		Township Number		Number
	ty: Lyon C	WATER WELL.	SW 1/4 NE 1/4 SE 1/4		4	)61	T 16 S		■ E □ W
	OWNER:	Last Name:	First	Street or I	Rural Address	s wher	e well is located (i		
Busines	s: US Army	Corp of Engineers					section): If at owner's		
Address		th St					•	,	
Address		State MO		3022 R08	ad D, Allen K	ansa	S, 00033		
City:	Kansas FE WELL	State: MO	ZIP: 64106		_	_			
WITH		4 DEPTH OF COM	PLETED WELL: .	22		tude:	38° 41.208'	N(dec	cimal degrees)
	ON BOX:		Encountered: 1)		Long	gitude	96° 18.080	)'W(dec	cimal degrees)
, DECT	N		3) ft., or 4) [				Datum: WGS 84		
T-T-			TER LEVEL:1.1				Latitude/Longitude:		
1	Total Control		, measured on (mo-day-				nit make/model:G		)
NW -	NE		, measured on (mo-day- vater was f				VAAS enabled? 🔲 Y		
w	H E		s pumping				urvey   Topograpi		
			vater was f		U'	Unline	Mapper:	• • • • • • • • • • • • • • • • • • • •	•••••
SW -	SE		s pumping				4440	C.	
	1	Estimated Yield:	gpm		6 Elev	ation:	1413ft. [	Ground Le	vel 🔲 TOC
	S	Bore Hole Diameter:	6.5/8 in to25	ft. and	Sour		Land Survey GP		
	mile		in. to	ft.			Other	**********	****************
		O BE USED AS:							
1. Domesti		5. Public Wa	ter Supply: well ID	*************	10. 🗆 0		d Water Supply: leas		
House		6. ☐ Dewaterin	g: how many wells?		11. Test		well ID		
☐ Lawn	& Garden	/. Aquiler R	echarge: well ID g: well IDMW	-108	📙 🕻		☐ Uncased ☐ Ge		
2. Irriga			g: well ID				l: how many bores? . Loop   Horizontal		
3. Feedle		☐ Air Sparge					oop Surface Discl		of Water
4. Indus		Recovery		Attaction			pecify):		
		riological sample subm		V. DI					
		?  Yes No	inted to KDHE!	Yes IN	o 11 yes, da	te sam	ple was submitted:	*************	
O TVDE	OF CASING	LICED. Com DV	C El Other	CAG	CINIC IOINIT	c. 🗖	Class I II Classes I I	T 337 1.1 1.	1 1
Casina dian	neter 2	in to 17	Diameter	in to	A Dia	5: ∐ '	Glued [ Clamped [	_ welded	Inreaded
Casing trial	ht above land	G USED: ☐ Steel ■ PV	Weight 0.60	) lhe/f	Wall thic	meter . Ivnece i	or gauge No. Sch 4	II.	
TYPE OF	SCREEN O	R PERFORATION MA	TERIAL:		wan and	MIC33	or gauge 110. 14.mm	T	
☐ Steel		inless Steel			□ 01	her (Si	oecify)		
☐ Brass	_	vanized Steel	S	sed (open h		(0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
SCREEN	OR PERFOR	RATION OPENINGS A		, ,	,				
☐ Conti	inuous Slot						Other (Specify)		
☐ Louv	ered Shutter	☐ Key Punched ☐ W	ire Wrapped   Sa	w Cut 🗆	] None (Open 1	Hole)			
SCREEN-	PERFORAT	ED INTERVALS: From	117 ft. to .22	ft., Fron	n ft. (	to	ft., From	ft. to	ft.
(	RAVEL PA	CK INTERVALS: From	114ft. to25	ft., Fron	n ., ft.	to	ft., From	ft. to	ft.
9 GROU	T MATERI	AL: Neat cement 0 ft. to .14	Cement grout 📕 Be	ntonite [	Other				*******
Grout Inter	vals: From		. ft., From	ft. to	ft., From		ft. to	ft.	
		le contamination:	□ n: n :						
☐ Septic		☐ Lateral Line ☐ Cess Pool	s ☐ Pit Privy ☐ Sewage La		Livestock P		☐ Insecticide		1
		nes Seepage Pit	☐ Sewage Lag		☐ Fuel Storage ☐ Fertilizer St		☐ Abandone ☐ Oil Well/0		I
		🗀 Beepuge i ii				orage	LI OII WEIIA	Jas WCII	
Direction fr	om well?		Distance from we	:11?			ft.		
10 FROM	TO	LITHOLOG		FROM			IO. LOG (cont.) or PI	LUGGING IN	JTERVALS
0	1	Top Soil - Black							
1	2	Clay - Brown		1					
2		Shale - Tan							
13		Limestone - Tan							
				Notes:		t-			
					ntective Casino	with I	ocking Cap & 4-inch E	Rumner Posto	
				J OPINOTI PI	orective Casilif	y WILLI L	outling Cap at 4-IIICN t	ramper rosts	
11 CONT	RACTOR'S	OR LANDOWNER'S	CERTIFICATION	: This wa	ter well was f	con	structed. Trecons	tructed, or F	plugged
under my i	urisdiction a	nd was completed on (m	o-day-year) .6-1-16.	an	d this record	is true	to the best of my k	nowledge a	nd belief
Kansas Wa	ater Well Co	ntractor's License No9	02 This Wa	ter Well R	ecord was co	mplete	ed on (mo-day-year	8/14/16.	
under the b	usiness nam	e of .Traut Companies			Signature	pan	a trop		
		ong with a fee of \$5.00 for eac							
		t., Suite 420, Topeka, Kansas of gov/waterwell/index html				one for			
visit us at nu	national state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of	s gov/waterweil/index nimi		KSA 82a-	1414			Revised 7/11	0/2015

		man and a second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second	rm WWC-5 Change in Well Use			sion of Wat			Well ID	MW-11S
		VATER WELL:	Fraction			irces App. I ion Numbe		o Number		nge Number
	y: Lyon C	VALER WEEE.	SW 1/4 NE 1/4 SE	1/4 1/4	Beet	4		16 S		0 ■ E □ W
	601 E 12	Corp of Enginee th St		direction	from ne	earest town o	where well is rintersection): If ansas, 66833	at owner's		
City:	Kansas	State:	MO ZIP: 64106			1				
NW W SW		Depth(s) Grounds 2)	completed well:  water Encountered: 1)	ft gpm ft. and ft. and ft. and ft. and ft. and ft. and ft. and ft. and ft. and ft. and	ell 5/16	Long Horiz Source  G  G  G  6 Eleva	itude:	S° 18.085 WGS 84 □ congitude: nodel: Ga coled? □ Y Topographft. ■	'W NAD  Irmen es □ t nic Map  Ground S ■ T	.(decimal degrees) .(decimal degrees) .83  NAD 27
7 WELL	WATER TO	O BE USED AS:								
1. Domestic:       5. ☐ Public Water Supply: well ID       10. ☐ Oil Field Water Supply: lease         ☐ Household       6. ☐ Dewatering: how many wells?       11. Test Hole: well ID         ☐ Lawn & Garden       7. ☐ Aquifer Recharge: well ID       ☐ Cased ☐ Uncased ☐ Geotechnical         ☐ Livestock       8. ☐ Monitoring: well ID       12. Geothermal: how many bores?         2. ☐ Irrigation       9. Environmental Remediation: well ID       a) Closed Loop ☐ Horizontal ☐ Vertical         3. ☐ Feedlot       ☐ Air Sparge ☐ Soil Vapor Extraction       b) Open Loop ☐ Surface Discharge ☐ Inj. of Water         4. ☐ Industrial       ☐ Recovery ☐ Injection       13. ☐ Other (specify):									al ical ] Inj. of Water	
			submitted to KDHE?	Yes 🔳	No	If yes, date	sample was s	ubmitted;		
8 TYPE ( Casing dian Casing heig TYPE OF Steel Brass SCREEN ( Conti	DF CASING neter	R PERFORATION inless Steel	Fiberglass  Concrete tile  S ARE:  Gauze Wrapped  Wire Wrapped  From17 ft. to .22.  From14 ft. to23	used (oper Forch Cut Saw Cut ft., Fr 3 ft., Fr	hole) Dri No om	Oth	☐ Other (Specify) ☐ Other (Specification) ft., F	rify)	ft. to	
Grout Interv	MATERIA Pals: From	AL: ☐ Neat cemen 0 fto 14	t Cement grout <b>E</b> E ft., From .23	Bentonite ft to	Oti	ner	A 6		Α	
Nearest sou Septic Sewer Watert	rce of possib Tank Lines ight Sewer Li (Specify)	le contamination:  Lateral Cess P nes Seepag	l Lines ☐ Pit Privy ool ☐ Sewage L	agoon	□ L □ F	ivestock Pe uel Storage ertilizer Sto	ns 🗆	Insecticide Abandone Oil Well/C	: Storage d Water	Well
10 FROM	ТО	LITH(	DLOGIC LOG	FRO					UGGIN	GINTERVALS
0	1	Top Soil - Black								
1		Clay - Brown								
4		Shale - Brown								
14		Limestone - Tan				- 1				
22	30	Shale - Gray								
				Notes 6-inch		tive Casing	with Locking Ca	o & 4-inch E	Bumper P	osts
under my ju Kansas Wa under the b	urisdiction a ter Well Cor usiness nam	nd was completed on tractor's License Ne of Traut Compa	ER'S CERTIFICATIO on (mo-day-year) 5-25- No. 902 This Wanies	16 ater Well	and the Record Sign	is record i rd was con ature	s true to the be	st of my k -day-year)	8/14/.	ge and belief. 16
Mail	1 white copy alo	ong with a fee of \$5.00 f	or each constructed well to Ka	ansas Depart	ment of	f Health and	Environment, Bure	eau of Water,	GWTS S	Section,
Visit us at http	SW Jackson S ://www.kdheks	t, Suite 420, Topeka, K sgov/waterwell/index.ht	ansas 66612-1367. Mail one to	Water Well KSA 82			ne for your records			-5524 <b>7/10/2015</b>

1 LOCATION OF WATER WELL: County: Lyon C  2 WELL OWNER: Last Name: Business: US Army Corp of Engineers Address: 601 E 12th St Address: City: Kansas  3 LOCATE WELL WITH "X" IN SECTION BOX: N  4 DEPTH OF COMPLETED WELL: 25 ft. Depth(s) Groundwater Encountered: 1) ft. 2)	R 10 E W  f unknown, distance and s address, check here:   N(decimal degrees)  W(decimal degrees)
County: Lyon C  WELL OWNER: Last Name: Business: US Army Corp of Engineers Address: 601 E 12th St Address: City: Kansas  State: MO ZIP: 64106  MELL WITH "X" IN SECTION BOX: N  WELL'S STATIC WATER LEVEL: WELL'S STATIC WATER LEVEL: WHITH "STATIC WATER LEVEL: WELL'S STATIC WATER LEVEL: WHITH "STATIC WATER LEVEL: WELL'S STATIC WATER LEVEL: WELL'S	R 10 E W  f unknown, distance and s address, check here:   N(decimal degrees)  W(decimal degrees)
2 WELL OWNER: Last Name:       First       Street or Rural Address where well is located (i direction from nearest town or intersection): If at owner's address:         Business:       G01 E 12th St       3622 Road D, Allen Kansas, 66833         City:       Kansas       State: MO ZIP: 64106         3 LOCATE WELL WITH "X" IN SECTION BOX:       Depth(s) Groundwater Encountered: 1)	f unknown, distance and s address, check here:
Business: US Army Corp of Engineers Address: 601 E 12th St Address: City: Kansas  State: MO ZIP: 64106  3 LOCATE WELL WITH "X" IN SECTION BOX: N  4 DEPTH OF COMPLETED WELL: 25 ft. Depth(s) Groundwater Encountered: 1) ft. 2) ft. 3) ft., or 4) Dry Well WELL'S STATIC WATER LEVEL: 9.8. ft. below land surface, measured on (mo-day-yr). 5-26-16. Depth(s) Groundwater Encountered: 1) ft. 2) ft. 3) ft. below land surface, measured on (mo-day-yr). 5-26-16. Depth(s) Groundwater Encountered: 1) ft. Congitude: 96° 18.103 Horizontal Datum: WGS 84 Source for Latitude/Longitude: GPS (unit make/model: 96° (WAAS enabled? Yellow) WAAS enabled? Yellow after hours pumping ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountered: 1) ft. Depth(s) Groundwater Encountere	s address, check here:
Address: City: Kansas  State: MO ZIP: 64106  3 LOCATE WELL WITH "X" IN SECTION BOX: N  4 DEPTH OF COMPLETED WELL:	'N(decimal degrees) 3'W(decimal degrees)
Address: City: Kansas  State: MO ZIP: 64106  3 LOCATE WELL WITH "X" IN SECTION BOX: N  4 DEPTH OF COMPLETED WELL:	3.W(decimal degrees)
3 LOCATE WELL WITH "X" IN SECTION BOX: N  4 DEPTH OF COMPLETED WELL:	3.W(decimal degrees)
WITH "X" IN SECTION BOX:  N  4 DEPTH OF COMPLETED WELL:	3.W(decimal degrees)
SECTION BOX: N  Depth(s) Groundwater Encountered: 1)	3.W(decimal degrees)
2)	*(decimal degrees)
WELL'S STATIC WATER LEVEL: 9.8 ft.   Source for Latitude/Longitude:   GPS (unit make/model: 9.6   WAAS enabled?   Yemp test data: Well water was	□ NAD 83 □ NAD 27
below land surface, measured on (mo-day-yr)5-26-16    GPS (unit make/model:Geta)   GPS (u	_ 1015 05 1015 1
Pump test data: Well water was	armen )
W E after hours pumping gpm	
	hic Map
Well water was ft	
SW SE   after hours numning and	
Estimated Yield:gpm 6 Elevation:1410ft.	■ Ground Level □ TOC
S Bore Hole Diameter:6.5/8 in. to25 ft. and Source: Land Survey GP	
1 mile  Other	
7 WELL WATER TO BE USED AS:	
1. Domestic: 5. ☐ Public Water Supply: well ID	se
☐ Household 6. ☐ Dewatering: how many wells? 11. Test Hole: well ID	
□ Lawn & Garden       7. □ Aquifer Recharge: well ID       □ Cased □ Uncased □ Ge         □ Livestock       8. ■ Monitoring: well ID       MW-12S       12. Geothermal: how many bores?	
☐ Livestock  8. Monitoring: well ID MW-12S 12. Geothermal: how many bores?	
2. ☐ Irrigation       9. Environmental Remediation: well ID	
4. Industrial Recovery Injection 13. Other (specify):	
Was a chemical/bacteriological sample submitted to KDHE? ☐ Yes ■ No If yes, date sample was submitted:	
Water well disinfected? ☐ Yes ■ No  8 TYPE OF CASING USED: ☐ Steel ■ PVC ☐ Other	
Casing diameter	_ Welded ■ Threaded
Casing height above land surface	IL. O
TYPE OF SCREEN OR PERFORATION MATERIAL:	7
☐ Steel ☐ Stainless Steel ☐ Fiberglass ■ PVC ☐ Other (Specify)	19171110000110001200110111111
☐ Brass ☐ Galvanized Steel ☐ Concrete tile ☐ None used (open hole)	
SCREEN OR PERFORATION OPENINGS ARE:	
☐ Continuous Slot ☐ Mill Slot ☐ Gauze Wrapped ☐ Torch Cut ☐ Drilled Holes ☐ Other (Specify)	********
☐ Louvered Shutter ☐ Key Punched ☐ Wire Wrapped ☐ Saw Cut ☐ None (Open Hole)	
SCREEN-PERFORATED INTERVALS: From ft. to ft., From ft., From ft., From	ft. to ft.
GRAVEL PACK INTERVALS: From	ft. to ft.
9 GROUT MATERIAL: ☐ Neat cement ☐ Cement grout ☐ Bentonite ☐ Other	***********
	. , ft.
Nearest source of possible contamination:	C.
☐ Septic Tank     ☐ Lateral Lines     ☐ Pit Privy     ☐ Livestock Pens     ☐ Insecticid       ☐ Sewer Lines     ☐ Cess Pool     ☐ Sewage Lagoon     ☐ Fuel Storage     ☐ Abandone	ed Water Well
☐ Watertight Sewer Lines ☐ Seepage Pit ☐ Feedyard ☐ Fertilizer Storage ☐ Oil Well/0	
Other (Specify)	Jus Well
Direction from well?	
10 FROM TO LITHOLOGIC LOG FROM TO LITHO. LOG (cont.) or PI	LUGGING INTERVALS
0 1 Top Soil - Black	
1 6 Clay - Brown	
6 14 Shale - Brown	
14 25 Limestone - Tan	
Notes:	
6-inch Protective Casing with Locking Cap & 4-inch I	Bumper Posts
To-inch Projective Lasino with Locking Lab & Alinon i	
11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed.  recons	tructed, or l plugged
11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, recons under my jurisdiction and was completed on (mo-day-year) .5-26-16	cnowledge and belief.
11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, recons under my jurisdiction and was completed on (mo-day-year) .5-26-16	cnowledge and belief.
11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, recons under my jurisdiction and was completed on (mo-day-year) .5-26-16	cnowledge and belief. ) 8/14/16
11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was constructed, recons under my jurisdiction and was completed on (mo-day-year) .5-26-16	cnowledge and belief. ) 8/14/16 r, GWTS Section,

escuria.	R WELL I		WWC-5 ge in Well Use		Division of Watersources App.		Well ID MW-13S
		VATER WELL:	Fraction		ection Numl		
	ty: Lyon C	VATER WEEE,	SW 1/4 NE 1/4 SE 1/		4	T 16	
	OWNER:		First:	Street or F	Rural Addres		ted (if unknown, distance and
		Corp of Engineers					wner's address, check here:
Address: Address:		th St		3622 Roa	d D. Allen k	Kansas, 66833	
City:	Kansas	State: MC	ZIP: 64106	0022 1100	G B, 7 (IICIT I	(ansas, 00000	
3 LOCAT				40	. 1	200.44	10001
WITH			MPLETED WELL:		ft. 5 Lati	tude: 38° 41	.103'N(decimal degrees)
SECTION	ON BOX:		Encountered: 1)				8.215'W (decimal degrees)
	N		3) ft., or 4) [ ATER LEVEL: 9				S 84 □ NAD 83 □ NAD 27
		below land surface	e, measured on (mo-day	-vr) 6-3-16		ce for Latitude/Longit	ude: I: Garmen
NW -	NE		e, measured on (mo-day			(WAAS enabled?	? ☐ Yes ☐ No)
	Park.		water was			Land Survey  Top	
W	Е		rs pumping				
sw	SE		water was				Total Control
		Estimated Yield:	s pumping	gpm	6 Elev	ation: 1412	ft. 🔳 Ground Level 🔲 TOC
	S	Bore Hole Diameter	6.5/8 in to 20	ft and			☐ GPS ☐ Topographic Map
j1	mile		in. to				
7 WELL	WATER TO	D BE USED AS:					
1. Domestic	o:		ater Supply: well ID		. 10. 🔲 (	Dil Field Water Supply	: lease
☐ House			ng: how many wells?		. 11. Test	Hole: well ID	444
_	& Garden	7. Aquifer R	Recharge: well ID	120	. 🗆 (	Cased 🗌 Uncased	
Livest		8. Monitorir	ig: well IDIVIVY	-135		thermal: how many be	
2. ☐ Irrigat 3. ☐ Feedlo		9. Environment	tal Remediation: well II e			Closed Loop	
4. Indust		☐ Recovery		Extraction			Discharge  Inj. of Water
		<u> </u>		37 - 37			
		riological sample subn '□ Yes 🔳 No	mitted to KDHE?	Yes No	ii yes, da	te sample was subm	itted:
			C C Other	CAS	ING IOINT	S. D. Charl D. Clare	ped  Welded Threaded
Casing dian	neter 2	in. to 8 ft	Diameter	in to	ft Dia	o. ∐ Glueu ∐ Clam meter in to	ped   welded   Inreaded
Casing heig	ht above land	surface 24 ir	1. Weight 0.60	0lbs./ft	Wall this	kness or gauge No\$	ich 40
		R PERFORATION MA				BB	
☐ Steel		nless Steel	rglass PVC		□ O	ther (Specify)	
☐ Brass		_		ised (open ho	ole)		
		ATION OPENINGS A					
	nuous Slot	Mill Slot ☐ G ☐ Key Punched ☐ W	auze Wrapped To	orch Cut 📙	Drilled Holes	☐ Other (Specify)	
SCREEN	DEDEUD VI.	ED INTED VALCE From	n 8 etc 18	W Cut	None (Open	Hole)	ft. to ft.
G	RAVEL PA	CK INTERVALS. From	n 8 ft 20	II., FIOIII	IL.	to ft. From	ft. to ft.
Grout Interv	als: From	0 ft. to 8	. ft. From	ff to	fl From	A to	0
Nearest sou	rce of possib	e contamination:	,				
☐ Septic		☐ Lateral Line			Livestock P	ens 🗌 Inse	ecticide Storage
☐ Sewer		Cess Pool	☐ Sewage La		Fuel Storag		ndoned Water Well
		nes			] Fertilizer St	orage	Well/Gas Well
Direction from	om well?		Distance from w	el12			Đ.
10 FROM	TO	LITHOLO	GIC LOG	FROM	ТО		or PLUGGING INTERVALS
0		Fop Soil - Black	2.2.2.00	1 KOIVE	10	ECTIO, EOU (COIII.	TO TECOGOING INTERVALS
1		Shale - Tan					
7		imestone - Tan					
18		Shale - Gray					
				1			
				Notes:			
				6-inch Pro	tective Casing	with Locking Cap & 4	-inch Bumper Posts
11 CONT	RACTOR'S	OR LANDOWNER'S	S CERTIFICATION	I: This wat	er well was	constructed, 🗌 re	econstructed, or plugged
Kapage Wa	urisdiction at	id was completed on (m	10-day-year) .0-3-16.	tor Wall B	this record	is true to the best of	my knowledge and belief.
under the b	uci well Cor	of Traut Companies	ME Inis Wa	ier Well Re	cord was co	impleted on (mo-day	-year) 8/14/16
Mail	I white copy ale	ng with a fee of \$5,00 for each	ch constructed well to Kan	sas Departmer	it of Health and	Environment Bureau of	Water, GWTS Section
		, Suite 420, Topeka, Kansas					
Visit us at http	://www.kdheks	gov/waterwell/index.html		KSA 82a-1		, <del>.</del>	Revised 7/10/2015