

GEO!	OGIC	BORIN	JG/W	ELL	LOG
~ ~ ~ ~ ~			7		

Project #: DHBR	Project Name Parcel (121	Boring/Well #: TM(0.30		
Geologist: Makkeine	Driller/Company: USGS			
Drilling Equip.: (-)	Date Start: [1]	08/09 Date Completed: 11/09/09		
Surface Elev. Top of C	asing Elev.:Total Deptn:	Well Depth:		
Method of Drilling	Casing/Riser Type _ See Two	Speen Renional Wallort -		
MUD Rotary Tright Auger Hole Diameter: WYPE (Market Auger)	Stee: Threaded Height above below surface Galv Wedec below surface	Material PVC Diameter 3" Length 10 (t.) Sot between 35 ft are 45 ft Slot size 0.025		
Filter Pack	Annulus Seal	Grout		
Size farm. Mejnod of Install 5/100 pour from	21	Used? Yos No Volume		
Volume Used 110 165. Depth to top of f.p. 99 30.5 4.	Method of Instal. 6100 pour trevul. Depth: from 30.5 ft. toft.	Method of Instal		
Well Head Completion	Development	Static Water Level (365)		
☐ Fiushmount: [\$ Stand Up Cap Type Lock # Volume Used	Date 108 - 11/09	Initialft Developmentft. 24 hrft.		
2. 32.	collected GEOLOGIC LOG			
Depth PiD Reacing (ppm) Sample Type Sample 10 0 6*	18-24* Riscovery (ML) (+ USCS Class Contact-Depth (+	Descriptions and Comments		
0-2 <u>2.5</u> 22.5- <u>24.5</u> 24.5- <u>31.5</u> 31.5-41.5 41.5-46.5	6.4 Interval 37.1 fault- 38.4 reman 3.5 45 65- COT blue Recover	ium 35 - surface caying 8" set to 25 ft. Hed red 8 white 35.7-38.4 was a substituted relative = clay charces idue in base of benrel clay charces idue in base of benrel clay interval pand thus unterpe and interval pand thus unterpe mustone grading with depth into		

Page 1 of **2**

	88		7.45			3.0	FW)	71.7		The state of the s			
Project #: }	DHBRK				Pr	oject Nar	me XtX		2	Boring/Well#: 1-1 TMW31			
Geologist:	AM Har	herr	Ų.		_	: Driller/	Company:	45	65	dual completion			
Drilling Equ	in: Gax	Jwe v	De	M.V.C	cl	cma	<u> </u>	Da	te Start: \\\	3/09 Date Completed: 1/18/09			
Surface ≣le	v.6738	(t:	Top	ot Ca	sino !	Elev.;	1955 4	10	tal Depth: (()	5 Well Depth: 60 /10 7			
Method of E	Drilling	1			Ce	ising/Ris	er Type 🛭	see:	Tustalla	Signed Poryages (vel)			
Air Flotar	tem De Bu y Bu tary A = II	ickei Au	iger		4	Galv _PVC SS	☐ Thread ☐ Welded ☐ Solvent ☐ Welded	: [-2 : :	Heigh anove polow surface 2 1 - 5 0	Material PU Length D 30 Set between 13 ft and 10 7 ft & Stot size 0.0			
Filter Pack		(A)	W. W.	-	nulus Se		505,51	20 286	Grout:				
Size Method of Ins Composition Volume Used	san			Vol	ume Used		246	ags/Shay	Used? Yes No Volume				
	of t.p.			ڪ-	1		stal. <u>† ro</u>		V Page	Method ct instal			
	aconeur se		Ø 60			11.	to	ft.	Depth: from ft. to ft.				
Weli Head (Veli Head Completion						nt		1-1-1	Static Water Level			
Cac Type						lons Evac 11/26 12			h Pump 102.25	Initia: 33, 71/34; 25 Developmentft. 24 htft.			
DRILLING	SAM	PLE -	cor	e bed	ina	alluvi	WM GE	OLOGIC	CLOG				
100	PtD Reading (ppm) Sample Type	Sample ID	.9-0		12-18: 	Ý,	USCS Class	Sonlact-Depth		Descriptions and Comments			
6-5	j			3]	er-6	24	gulysilti	y sandy chay			
5-10 10-15 15-20 20-25			I.				silt- fur fur cu-f	mh 14	goly san	sand that could be			
25.30 30 35 35.40		!	!				دا- (مالد	gui Gui	Stiff che	clayery gol			
40.45			3		Í		a-fi	71	" 0	04.0			
ts <u>50</u>							i.		n M				
50-55						T.	13		ų				
55 60			Į.			į l	1 11	30		\neg			

values: S/D shallow/ deop.

Project #: Seologist:			(la .#	2	- 1			any:			BorlngA	Vel! #: 1 - \	TMW 31	5/
Orilling Equi	p.:GD	Cme			!					Start: (V 1	3/09	Date Compl	eted. [V [8/	Ol.
Surface Elev	v.: 67	38 4 Ampûe	Του δ	f Casi	ing 🖽	ev.:		GEÓI	Total OGIC		1	′ Well Dep	th: 60/10	} t
		Alvir Dat		Blow (Count								**********	
Depth	PID Reading (ppm)	Sample ID	0-8"	6-12"	12-18"	18-24"	Recovery-(MCF)	USCS Class	Contact-Depth			ons and Comm		
K-(. J .	<u>a</u>		0-	÷	31		2.6 9.15 5.2 4.9 4.4	21-fly	66	GD-wire Possible f 35 fenes 38,5 40 Coarger: Change to	Chight who bother to bothe	neur bade cl m. Besband narrow cl glomers c	eylyr nr. 1 eylyr nr. 10 eylyr nr. 60 aylyr erolipsein eritiz clay	bortog iden <u>u</u>

S Property Sec.

				_	1					0/			
Project #: 777	1W3	32			Pro	ject N	lame:	FI	VDA	Panel U	Boring/Well #: 7MW 3Z(1-3)		
Geologist: A7	y M	am	677	re	- 1		er/Comp		uso				
Drilling Equip.:	Fug	ht	Au	95	1.	200	- 0		Data	Start: 11/14	9/09 Date Completed: 12/01/09		
Surface Elev.: (,					lev.: 6	6709.	301/	. Total	Depth: /3	94. Well Depth: 137,544.		
Method of Drillin							dser Ty				Screen Portion of Well		
Hollow Stem Air Rotary MUD Rotery Hole Diameter:	□ Bu	ect Rota cket Aug tht Auge	j e r		<u>-</u>		D w	olvent /elded	_	ight above/ low surface 1.47ft	Material Sovicut Diameter 2/2" Length 20ff. Set between //7 It and 137 It Slot size 0, 0/0		
Filter Pack		•			Алг	nulue	Seal	1			Grout		
Size Method of Install Composition S Votume Used S Depth to top of f.p.	and)		1		U, Volt Met	Volume Used? (35) Method of Instal. Fremy Slaw pow. Depth: from O & 1. to 32.5 ft. 645					Used? Yes No Volume Neal Cement Bentonite Method of Instal Saw jow Depth: from 10 ft. to 96 ft.		
Well Head Com			Dev	velop	ment				Static Water Level				
							vacuate	2	40.ga	pump Usns 1 12/12/09	Initial 57.6. # Development 5/.6 #. 24 hr. 37.8 #.		
DRILLING	SAM	PLE	0.00	75			ja, se	GEC	DLOGIC	LOG			
Depth +	Sample Type	Sample ID	380	Prow	-Si-St	18-24	Recovery-(USCS Class	Contact-Depth		Descriptions and Comments		
64-73			100000000000000000000000000000000000000		1000000		7.6		63	Topot			
73-78 78-87 87-9 <u>3</u> 93-10 ³ 103-113							4.75		10.5	Claysi Claysi trader maker	tone to sst - ssl/Bunded begin ng waker		
113-123							10.3			(12+15'	clay parings most		

Project #: 🛮 💆	110	KC.	775		l Pro	ject N	lame:	4/1	24_	Boring/Well #: 7MW 32	/-3
Geologist:					SS (0) 50 a	Drille	er/Comp	any:	T		
Drilling Equip.:	ŧ	. 1							Date	te Start: 11/19/39 Date Completed:	
Surface Elev.:			Topio	Cas	ing E	iev.:			Tota	at Depth: Well Depth:	
DRILLING	SAM	PLE					····	GEO	LOGIC	2 LOG	
Depth (1)	Sample Type	Sample ID	.9-0	6-12"	12-18"	18-24"	Recovery-(In)	USCS Class	Comact-Depth	Descriptions and Comments	
34-31							48			unconsolidated clayey sith sona with pebbles and grave yellowsh-readish brown slighly moist, lost 4 6 both	11 _
88- <u>42</u> —							55		37	very tight silty clay w/Ca inclusions, dork brown, slice Break @ 48' mon 13" slough, lost 6"@ Bo Hz	co3
42-46							48		100 110 110 110 110 110 110 110 110 110	bown, slightly clay, dans bown, slightly moist, lost of to bottom squeezing the 42-45; to bottom of hole @ 44.9'	19950 3" — 19950 3"sli
14- <u>47</u> 2			at	(0)		:	48			clay, friable, dk red-bre min green clay inclusions slightly moist, no loss. Suspected refusal @ 45 But going to try again.	mn _ - 4'-
19-53				***			49			Friable, silty clay, dark no stightly moith Thed buts topped a	ed,
						18				45' cored to 49', but got little recovery 16" STOPPING @ 48.4'	
15-50 15-60 15-60	0000000		110	m	n	90				Cuttings show more more 59' possible Caliche lay- was nighter, broke Thru, the but getting tigher - Sheared Bit Start Coving	

Proteot#: Z	DHBK	RC.	5 35	Pro	iect N	Jame:	FN	DA .	Penery	BoringWel #: TMW32 (1-3)		
Geologist /		RAI	VK						scos.			
······································			1994					\$6 19F	e Start: 11/1	19/19 First Completon 13/1-1/29		
		Name of the		V/10-20/20/20/2					T.			
Surface Elev.: 🍎 Method of Drillin		14 Too	oi Cas	- 17 X		<i>lo [0]</i> Riser Ty		T. Tot	al Denth: /	59.0 H. Well Depth / 37.5		
				1		-				No. 200 April 1920		
☐ Holtow Stem	☐ Direct I			933	Stee:		hreadei	d 1-	leight (above)	Material Sawcut 2004		
Air Rotary MUD Rotary	☐ Bucket	- 1		•	Gale PVC		/eidec olvent	18	1.474	Diameter 21/2 Length 20f4		
	₩	l mees			SS		/eded		Diameter	Set between 1/7 t; and 137 ft		
Hote Diameter:					340	e? □ Y		No.	7 1/2"	Slot size O O O		
Filter Pack	2000		-	And	nulus	Seal				Grout		
Size		142		32	Bentr	onite Pel	lets	CI	ios	Used? Ves 🗆 No Volume		
Method of Install	tremy	SIAND	W				155500	30,000		Noat Cement Benjonite		
Composition S			"L	125	3	sed (3	5)	48		a — standerstander — III N.T. Cold T. M.T. Si		
Volume Used (5	100		10,000	VOI	ne e	Jacks!	100-	14/2	slowpour	Method of Instat. Sow pour & Frency		
Deptro to top of f.p.		L. BG	<u>رح</u> .′	nviet	aluc o	m/0	6	13	25.	Depth: from 10 It to 96 It.		
			8.			805	TL	0	- - 16.			
Well Head Comp	pienon			Dev	relopi	neni	GPM hash owne Initia 57.6 It					
Cap Type	ment SAMPLE	28 - NYAVUWI	bags	Sal	e <u>/2</u>	vacuate / <u>5/09</u>	, 12/		9.12/1409	Development <u>5/-6</u> ft. 24 nr. 3.7 e.8 ft.		
	Orales, Ca	5: 	Blow	Count			ب در	1				
Depth K	Sample Type	Definition of the second	0-12"	12-18"	18-24-	Recovery-(in)	USCS CIRSS	Contact Depth		Descriptions and Comments		
0-4 4-8 8-10 10-14 14-18 18-22 12-26 26-30					v	34 36 38 41 36 52 50 44 46			Silly cla Silly cla Silly Cla Silly Clai Sandy sill dry	It-lt-red-br, dry, lost 14 @ to he clay It-red br, dry, lost 12 to be any It-red br, dry, lost 12 to be any, Lt. Brown, Dry, tight, 17:-12' by, brown, slightly moist, tight, lost y, Brown, slightly moist, tight, lost the Bottom, triable, U.Br, unconsoint slongh, Lost 40-486 bottom, pebbly, silty sand, clay no Robby, silty sand, clay no Bottom.		

Project Name: FWDA Pacel Boring/Well #: 7mw 32 (1-3) Project# DHBRC Geologist: Dale Runkin Driller/Company: Drilling Equip.: Geopope / Might Anger 19/09 Date Completed: 12/01 Date Start: 1// Surface Elev.: 6707.83/ff Top of Casing Elev.: 6709.30/ff Total Depth: Well Depth: DRILLING GEOLOGIC LOG **Blow Count** Contact Depth Sample Type Recovery-(In) JSCS Class Sample ID Descriptions and Comments 18-24 6-12 b sst into conglomentic clay blue clay last 1ft. 130 contact sot/claystone_ 123-133 7.6 Claystone 5.0 D:138.

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Page	O:	4

Project #: DHBRC	Project Name: FWDA	Parcel II Boring/Wel #: P112MW 1-
Geologist: DALE RAWKIN	Driller/Company:	(by old gas station)
Orilling Equic.: Orarcher Den	VGV Da	ite Start: 11 /19/09 Date Completed: 11/26/09
10 50 50		ta Depte Woll Depth: 65
Method of Drilling	Casing/Riser Typ∈	Screen Parkon of Well
☐ Hallow Stem ☐ Direct Rotary ☐ Air Rotary ☐ Bucket Auger ☐ MUD Rotary ☐ Flight Auger Hole Diameter: 5"	☐ Stee: ☐ Threadec ☐ Galv ☐ Weidec ☐ PVC ☐ Servent ☐ SS ☐ Weided Drive Snoe? ☐ Yes ☐ No	Height-above: Material
Filter Pack	Annulus Sea	Grou:
Size Method of Install Composition	□ Bentonite Pellets □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Thips: Used': _ Yes _ No Voyame
Volume Used	Method of Install	Method of Instat.
Depth to top of f.p.	Depth: from !:. to	
Well Head Completion	Development	Static Water Leve
☐ Frushmount ☐ Stand Up Cap Type Lock # Voiume Used	Gallons Evacuated Date	Initia' ft
ORMEING SAMPLE	GEOLOGI	CLOG
Depth PID Reading (ppm) Sample Type Sample ID 6-6" 99	12-18" gred 18-24" Alecovery-(in) USGS Class	Descriptions and Comments
0-4 4-8 8-12 12-16	36 32 32 32 29	clay, Ok red-Br, moist lost 12 from both clay, DK. red-Br, moist, lost 16 from both clay, DK. Red-Br, moist, lost 16 from both clayey, scride bottom, yellowish-aca moist, lost 17 from bottom brown
16-20 1.9	29	Mayey, sendy silt @ bottom, yell-red-
25- <u>30</u>	33 25 29	Silty, clay @ bottom, dk brown moist, lost 29" from bo
30-34	39	Silly Sandy Clay Bottom DK Brown

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Proced # DHBRC	Project Naπie:	WDA/PU	Boring/Well #: TMW33
Geo:opisi: AM MaHari	Driller/Con	pany: 14565	The state of the s
Drilling Equip.: (MS	550 is	Date Start: \2/	03/09 Date Completed: 12/03/09
Surface Elev.:	Top of Casing Elev.:	Total Depth:	7.5 Well Depth: 57
Method of Drilling	TOTAL CARROLLAND CONTRACTOR CONTR	ro=see Instalkhicu	
☐ Hollow Sterr ☐ Direct Air Air Rotary ☐ Bucket A ☐ MUD Polary ☐ Flight Au Hole Diameter: 3	uger 🖂 Gal 🗇 🖂	rinreader Height above below surface 2914. Veided Diameter See Diameter	Material <u>SAWCW</u> Diameter <u>212</u> Length <u>20</u> Set between <u>37</u> It are <u>57</u> It: Slot size <u>0,010</u>
Filter Pack	Annuius Sea!	as a more of the	Grout
Size	volume Used? Metnod of Insta.	onle 5 bookers _ 11. to 11.	Used? Pyes No Volume Neat Cement Bentonite Hopping Method of Instal. 16 bag 5 Depth: from 11.
Well Head Completion	Development		Static Water Level
Cap Type	Date 12/6 /	- 152	Development 42 tl. 24 hr. 41./6 ft.
Depth PID Reading (spin) Sample Type	0-6" 6-12" 8-12" 12-18' 18-24' Hecovery (iii)	USCS Class Contact-Depth	Descriptions and Comments
09 0 4-14 0 14-14 0 14-24 0 24-24 0 24-34 0 34-34 0 34-34 0 34-49 0 14-54 0 54-54 0			Geoprobe redords

Project #:	DA	BR	C			Pro	ject N	Vame:	Fh	DA	1 Boring Well #: P112 MW
Geologist	DA	LE	RA	NK	IN		Drille	er/Comp	any:	US	45
Drilling Ea	uip.:	(T	wa	her	De	nve	4			Date	Start: ///9/89 Date Completed:
Surface E	ev.:		10) *3(1) -0.3 ⁽⁴⁾	Top g	· Cas	ino E	lev			Total	Depth: Well Depth: 65
DRILLING		SAM	PLE			•		1000	GEO	LOGIC I	
Depth	PID Reading (ppm)	Sample Type	Sample ID	.9-0	6:12*	12-18/	18-24*	Racovery (In)	USCS Class	Confact-Depth	Descriptions and Comments
34-38 38-42 47-46 	5				12.7			29 50 58 30			Silhy clay & Bottom, ak brown Very moist, wet inside tube. - Had 10" more receivery than It should, may be seraping side as Barrell goes down hole? Silty Clay/minor Egnile Ak brown, wet OI frichty extracting cre carnot measure recovery, Sample bagged - Going 12 STOP/PIN PROCEDURE Silty clay @ Bottom OR brown TOP: Uncorisoliclated de tor: moist clay entity tight dry red friable clay.
=		;			2.222.7000						

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Project#: DHBRO	2	Project Name:	FNDA	Boring/Well #: TMW 24
Geologist: Dalc	Rankin	Driller/Comp	Deny: USES.	•
Orilling Equip.:		0.000	Date Start: 1/2	2/02/09 Date Completed:
Surface Elev.: 4684	5730 Ton of Cas	ing Flev : (#687		59.9214 Well Depth: 57.2574
Method of Drilling	11 100 01 022	Casing/Riser Ty		Screen Portion of Well
	ect Rolary dkat Auger ght Auger	Steel	olvent Diameter	# Diameter 2/2 Length 20# Set between 37 ft and 57 ft
Filter Pack	1.000 (0.	Annulus Seal	- 10	Grout
Size	a sond 920	Volume Used? (4	es)/4" chips —— 4) Sgal brets to Slow pow 2 n. to 2 L. n.	Used? Yes No Volume Nest Cement Bentonite (19)(5016)bag_ChiPS (3/8") Method of instal. 3/1/2 par/ Depth: from 10 ft. to 27 ft.
Well Head Completion		Development		Static Water Level
☐ Flushmount ☐ Sta Cap Type Lock # N/A Volume Used Con C	nt(4)94/6	Gallons Evacuated	n toushpuonp. 107 Us. 2/4/10	Initial 39.6 ft Development 39.6 ft. 24 hr. 39.6 ft.
DRILLING SAM	PLE '		GEOLOGIC LOG	
PID Reading (ppm)	Semple 10 0-6" 6-12"	12-18" 5	USCS Class Contact-Depth	Descriptions and Comments
6-5 5-10 10-15 15-20 8,1 (a+1-1) 20-24 24-28 24-28 24-34 24-40 40-40 40-40	744)	52447 1246 124 12 13 18 18 18 18 18 18 18 18 18 18 18 18 18	TOP: SILLY C	lay, Dk. Brown, Dry Ily clay, Ok. Brown Is sardy clay, Lt. Brown Dry and y clay, Lt. Brown Stightly It clay, Ok. Brown, Is clay, Ok. Brown, Is clayey SANDW/LIGHNITE, Lt. Br. D ISAND, CT. BROWN, NOVSH Is you sond, Dk. Brown > mighty Is you clay, Dk. Br. Slightly maist Is you chay, Dk. Br. Slightly maist Is you bottom, Ok. Br. Slightly maist

Project #: DHBRC Boring/Well #: TMW 34 FWOA Project Name: Geologist: Date Rankin 45105 Orifler/Company: Date Start: 12/2/09 | Date Completed: 12/04/09 Drilling Equip.: Surface Elev.: 6684. 57344 Top of Casing Elev.: 6687, \$23 H Total Depth: 59. 9244 Well Depth: 57, 2544 GEOLOGIC LOG DRILLING SAMPLE Blow Count Contact-Depth Sample Type JSCS Claus Descriptions and Comments Sample 18-54 4 Siltyclay, DK Reddish - Br, Wet 52-56 54 46 56 60-64 Clayeysilly scool, Dk-reddish Br. Wet 56 Coase Grained Unconsolidated 57 Sand, w/Gravel, Brown, wet UTD Clayey coarse BT. Unconsolidated sity peoply sand wivery minor red clay and lignite, Br-Red 76-79: Wet, 179-80-DRY. Silly sand with very tight red clay store Lignite Br-Rd wiggen clay noctules contact @ 79' BEVROCK < allowalness

Project #: DH	BRO	2	100100		Pro	ject f	Varne:	Fiv	DA		Boring/Well # 7MW 35
Geologist: DA	LER	PAN	Kin			Drille	er/Comp	eny:	US	G5.	
Drilling Equip.:	44				45.5				Dat	e Start: /2/c	05/09 Date Completed: 1Z/68/09
	684.1	174	Top o	of Cas	sina E	lev.:	6686	537		8	7.34f4. Well Depth: 55f4
Method of Drilling	201				1.50	CV 1755	daer Ty				Screen Portion of Well
Hollow Stem Air Rotery MUD Rotery Hole Diameter.	☐ Din	cket Au	ger			Steel Genv PVC SS	□ w	olvent /alded	b -	elight above/ elow surface 2.34ff Diameter 2V,1	Material Saw Cut Diameter 21/2 Length 204. Set between 35 ft and 55. ft Slot size 0, 0/0
Filter Pack					-	V	Seel				Grout
Size Method of Install _ Composition _/9/ Votume Used2 Depth to top of f.p.	20 SI	lica 016	son		Voli	ume C	onite fel	(1) S (1) S (1)	gal i	buckete V	Used? Pes No Volume 1656/4 Neat Cament Bentonite chips (16) 52/b bacs (3/8") Method of Instal Depth: from 10 ft. to 25 ft.
Well Head Comp	letion		382		Der	velop	ment	19			Static Water Level
☐ Flushmount Cap Type Lock # Volume Used	/A.	n+.	,		Gast	lone E	Vacuate	d	12/		Initial 4/.02 tt Development 4/.02 tt. 24 hr. 4/.02. tt.
DRILLING	SAME	PLE	1	blow	^	83		GEO	LOGIC	LOG	
Depth +	Sample Type	Sample ID	.90	6-12"	-81-21	18-24	Recovery-(in)	USCS Class	Contact-Depth		Descriptions and Comments
0-5 5-10 0.7 10-15 0.4 15-20 0.3 20-25 0.4 25-30 0.6 35-40 0.5 40-45 0.5 40-45 0.5 45-55 0.7							32 8 43 5 43 65 55 58 58 58 58 58 58 58 58 58 58 58 58			Red B SI Hy BOTTOM BOTTOM BOTTOM SILTY CL T: CLA E: SILN	SILTYSAND, Rd-Br, Dry Clay rd-Br, Moist/Dry Clay rd-Br, Moist/Dry Clay rd-Br, Moist/Dry Clay rd-Br, Moist Coase Gr. Silty Sand, Rd-Br Coase Gr. Clayay silty Sand & Br Lay, red-Br, vey moist - we yey wetsilt Red Br, top is well yesilt rd-br, wet

Project #:				_	<u> </u>	Pr	o je ct i	Name:	Fu	109	Percel (Some 1-2) TMW36
Geologist.	Po	7Le	Ra	nk	in	(a)	Drill	ler/Comp			US65.
Orllling Equi	ilp.:									Date	Start: 11/08/09 Date Completed:
Surface Ele				Торс	of Car	sing E	elev	62	10.94	Tota	al Depth: 158.68++ Well Depth: 157++
DRILLING		SAMP		20. 121			1000000	To the second		LOGIC	
Dept	PID Reading (ppm)	Sample Type	Semple ID	0-6"	8-12*	Count		Recovery (in)	USCS Class	Correct-Depth	 Descriptions and Comments
3231 4445 53 54564 65 15 72 82 42 132 132 15 15 15 15 15 15 15 15 15 15 15 15 15	,							\$859448 50 90 948 50		53° 57.5	Sity Clay + & B: RB 6/4 7" Slough DRY-TI LIRE 6/4 B: P 7/4 2 Slough DRY-TIPTY B: P7/4 7" Slough DRYT: P7/4 B: LTB 6/4 11" Slough DRYT: P7/4 B: LTB 6/4 11" Slough B: PERMY Sity Clay with gravel— Friable SS DX RB 3/3

Project #: DH	BRC				Pro	jeci l	leme:	Fu	ÀΑ	Penelly (Source 1-2) TMW 36
Geologist: D	ak	Rox	ok!	2_	45 17 10 36 8	Drille	er/Comp	any:	- 10	Section 1 Control and the section of
oriting Equip.:							3000		Date	te Start: 11/08/09 Date Completed:
jurface Elev.: 6	699;	2717	Тор	of Cas	ing E	lev.:	6700	,457	Tota	tal Depth: /58.68// Well Depth: /57//
Method of Drilling					10000		Riser Ty			Screen Portion of Well
☐ Hollow Stern ☐ Air Robery ☐ MUD Robery Hole Diameter:/	□ Bu		ger er			Steel Gulv PVC SS re Sho	□ W	/elded	0-	Height above) Material below surface 1884 Diameter 2/2* Length 204- Set between 32 ft and 152 ft Skot size 0.010
ilter Pack					Anı	nulue	Seal .	20.00	9 10	Grout
Nethod of Install/ Composition/ Column Used/ Depth to top of f.p.	9/20 (75):	5016	bay		Vol. Mei	ume L		9)5 51	gal	Need? Yes No Volume
Vell Head Comp								- 141		Static Water Level
Flushmount Cap Typeock # /otume Used_CC	nen	ARREST	94/6	ing	Gast Dart	ione E		6		1000 1000 1000 1000 1000 1000 1000 100
RILLING	SAM	PLE	r					GEO	LOGIC	CLOG
Depth +	Sample Type	Sample ID	.97	Bkow/	12-16*	18.24	Recovery-(in)	USCS Class	Contact-Depth	Descriptions and Comments
)-4_ -8_ 3-12_ 2-16							33933			Sithy clay T: RB4/4 B: RY6/6 12 Sithy clay TO clay T: RY6/6 13 - SHIP Clay T: RB 9/4 B: RB4/4 POF SITHY CLAY TO RB 9/4 B: LTRB 6/4 3" - and
6-20 70-24							45 54			Silly clay - clay .T: LT RB 4/4 9" sough, DRY - B: DK RB 3/4 Silly clay T: DK RB 3/4 - 9" Slow 5 LT RB 6/4 - DRY
2-26							42			-2'slough - Silly clay T. LT-REGI -DRY BLURBG

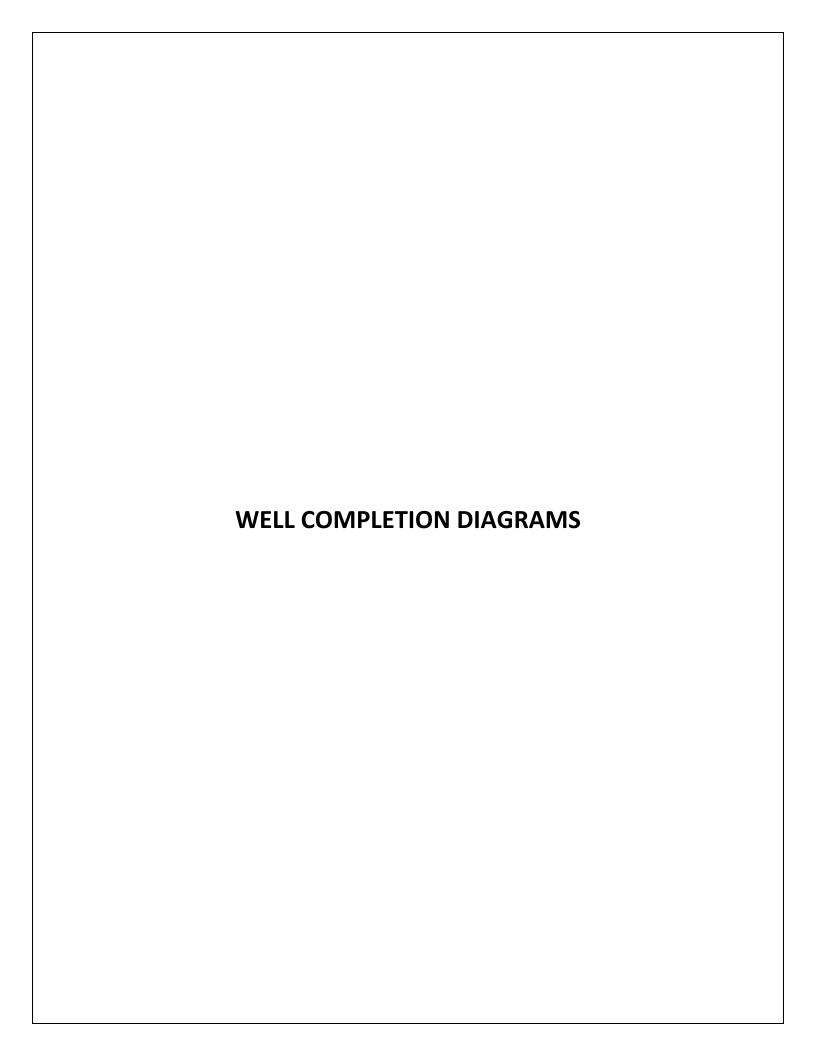
	2/1	n n	o	-	5,00	1388	1000 11 1000		C 200 1 C	216	Stord (Some (-2)				
Project #: L				/			Project Name: FWDA PARCA SSWELL TMW 36 Drillen/Company: USGS								
Geologist:	Geologist: Date Rentin Drillen										65				
Drilling Equi		1 10/2	25		12			/ 2	101	Date	Start: // 08/09 Date Completed:				
Surface Ele	v.: 6			Торо	f Cas	ing El	ev.: *	6/0							
DRILLING	400 3	SAMI	PLE		Blow	Count	× 3		GEO	LOGIC (LOG				
×	PfD Reading (ppm)	Sample Type	Sample (D	.90	8-12	12-18*	18-24"	Recovery-(in)	USCS Clease	Contact-Depth	Descriptions and Comments				
/52 ·53										152	Claystone SS/CS(ONTACT (149-152 transhonal) SS Interal IS 130-152: (20'S(reen in interal)				

Project #:	ect #: DHPRC Project Name: F								FW	DA	Parzel
Geologisl	A	Robe	1/30	W		5055	Drill	er/Comt	any:	us	565. Spesihan
Drilling E	quip.:	072	7/6	ME	-					Date	Start: 12/1/09 Date Completed: 12/11/09
Surface E	lev:6	710.	8/4	Торк	of Cas	ing E	iev.:	6713	3./+	4Tota	Depth: III FF Well Depth: 108 FF
DRILLING		SAM			14000					LOGIC	
Depth モン	PID Reading (ppin)	Sample Type	Sample ID	.9-0	6-12°	.81-S1	18-24"	Recovery Affi FT	USCS Class	Contact-Depth 77	Descriptions and Comments
20-25)	-	4.7			~6" Slutt, easy push * Dry
75-3 <u>0</u> — —	-		28			_		5.0			~6"Slutt, easy pash * Dry -Tel 3.51 Seame as above -More Sit, Birm 1-2 sill, with blackstain ~6"slutt, birm 3" 4 really hard to 1. -top 315, the Sand, vinable grainsize Fine > Cookse, well sovied, Black staying Birm 21 sandy clay, 10/5 of Calus, Pebbi menting shoe i Calus cemencansis
30- 34 						ر		5.0		7/4-4%	- Relatively Hard - Top I stuff est red blockyplate y Lay - Some rust staining
34- <u>38</u> 	<u> </u>			\$ [5.0			- Top I sluft - Brm I varked clay Lots of Caloson - Blm 1-2'1013 of Calos
38-42 42- <u>40</u>				829		***************************************		5.0 50			Top 1'sloff Brm 4'same as above
46-4 <u>9</u> 5			,	nu	121	R		5,0			-Brm 4' same as above. -Brm 0.5 very strong dark red clay with Co Clay - Resisame as above - top 1' stoff
30-3 <u>5</u> 			SI - 31								strong Hell yan Anguage Sibilian to
55-loc — —	<u>j</u>							1970	in .		otherise Silty Clay to 351 tighter, less Pilt, more Clay in cuttings a 150 coor change from Lt. Br > dk nother, Isactually 54-59

			ji	i		-	W <u>(0)</u>	16255 2		700.120.120.120.120.170
Project #: DH E	KC.	67.5		Pro	ject N	iame: (FW	DAI	MECEL 32	Boring/Well #: TMW 37 (5-4)
Geologist: A	OBER	130N	<u>r</u>	ļ	Drille	ar/Comp	oany:	NS.	565	new position
Drilling Equip.:	617/6	ME						Date	e Start: /2//	1/09 Date Completed:/2/1/09
Surface Elev.:6	710.84	Top o	i Casi	ίης Εί	lev.:	671	3.14	7 Tota	l Depth: //	IFA. Well Depth: 108ft
Method of Driffing						lise: Ty			iac	Screen Partion of Well
Hollow Stem Air Rotary MIJD Rotary Hole Diameter:	☐ Direct F ☐ Bucket ☐ Fiight A	Auger	000	១ ១ ១		⊃ w ⊒ sa	eided	- -	eight above provided a	Material <u>Sawcut</u> Diameter <u>2121</u> Length <u>20f4</u> Set between: <u>88</u> ft and <u>108</u> ft
Filter Pack				Ann	าเปนร	Sea?				Grout
Size	/	X			Bento	onito Pell	lets 1/4	ir — Ch	ipe	Used? Tyes No Volume 34)5014 Nea: Cement Heartenite Chips
Composition $\frac{10}{5}$. Volume Used $\frac{5}{5}$. Depth to top of f.p.		11 bay	<u>دم</u> ط دع	Meti	ha d a l	Instal	Slav	x pa		Method of Instal. You perv
	41 h	6)	_			m <u>8</u>	r. ta		∠ ĸ	Depth: from 10 11, to 6/11.
Well Head Comp	ietion			Dev	relopr	ment			· · · · · <u>· · · · · · · · · · · · · ·</u>	Static Water Level
Cap Type Look #		- 54 - 541 543,004	bag	Gall Date	ons E	vacualed // <u>4/</u> /••,	2/4/	64	1100 S.	Development <u>5067</u> ft. 24 tar <u>50.87</u> ft.
DRILLING	SAMPLE	<u> </u>	Blow (Spiant			GEUI		100	
Depth (1)	Sample Type		6-12"		19.24*	Recovery # CF	USCS Class	Conflact-Depth $(\mathcal{F}_{\mathcal{T}})$		Descriptions and Comments
0-54		2%				3.5			A-HOR -DRY, PR	SILTY SAND BAM 75tr. Dry 170 N TOP 1.5 FT. Dry 18 ES COLO3 1 COAL INE SOME LOUISER, SUB-ROUNCE DOTED DAY
5-10 <u>fr</u> 10-15 <u>H</u>						5.0	ą.		REDDISH -Blm I FS	SAMOY SILT-MORE CLAYS THAN DAY BLKY, PLATEY LLAY, SIME ROUTLE (INCVISIBLE COLOSY-SIGLES FRANCE)
						5.0		I.	in in	se grain, well socker, round Submission, well social
/5-2 <u>0</u>	59 29							<u> </u>	PRENY EA Same as	isy Pushing *Dry Brown 2' aktore Mek staining — added Grain 51265 —

Page ____ of ___

Project#: DH	IBR.C.		Pro	ject N	eumi o ;	FU	DA	Porce!	(Srme 5-4) Boring/Well #: TMN 37
Geologist: A.	Robbert	500		Drille	r/Com	pany: L	1.5 G	15.	1.000
Orliling Equip.:	75 75			504	SIGNAY.		•		1/09 Date Completed:/2/11/09
Surface Elev.:6	710.84	Top of Ca	eing E	lev,:	6715	5.194			11/f/ Well Depth: 108/
DRILLING	SAMPLE		200000				OGIC I		5000 g 100 100 100 100 100 100 100 100 10
Depth PtD Reading (ppm)	Sample Type Sample ID	6-12"	12-18"	18-24"	Recovery-(in)	USCS Class	Contact-Depth	125 127	Descriptions and Comments
59-652 66-72 100-106 106-111							T	Minus Clay! Divo C Silty Minos In Sa CON 83.6- SST NECT	sh claystone unth I introducted biveish gre Slight HCI van, and I stragers. CS (673-71ft *Singuston I gravel conspicion Incly claystone. MCT (S/SS. 92 to -Coarest wicovoricions bandin bottom. - 24' of 5S Sacen 88-108. MC III.



Installation Report

Monitoring Well 5-41MW30

Project BREDH-DHBRC	Job No Date_ <u>iy</u> 09/09
Location Parcel 21 X 109°35'11.76" W Y 35°30'17.84"/	HC Observer Matheme Driller Wolf Crant
Type of Well (Observation, Samp	oling, Vapor Extraction) manifestury
Depth of Soil Log Components in Feet	Stick up in Feet 2.25 Relative to Approximate Ground Surface Elevation in Feet 6712.313
10/4.	Type of Monument 10" Steel w/ lock Type of Surface Seal Portland Comment
√ 36.5	Diameter and Type of Casing/Riser Pipe
	Type of Grout Bentonie Chips - 4011s.
30,5	· Type of Plug Relletonite - 7 buckets
-35 -35	Diameter of Borchoie 5 "
	Screen Diameter, ZV8" ID Slot Size, and Type. D. D. D. Sawcut, 10 ft Sengl
45	Type of Filter Material - Filled
4 5 .5	Type of End Cap/Toil Pipe hosemp/willplug
<u> </u>	= 7 luckets lendonkering
Remarks: 10 51.5 (t. Plug	with pelletonte to 45 ft. (contact with
Moterials Tary:	Monument 10 steel
Sand <u>(1015</u> Cernent <u>3 h4CS</u>	The state of the s
Bentonite 40 x 65 4	7 Vukets Other

Install	lation Report	Monitoring Well Thus 1-D
-		Job No Date_1\(\sigma_1\B\/\oq_\\)
Location_	I V agas I s a all a	HC Observer Matheme Driller WSGS
Type of V	We! (Observation, Samp	ling, Vapor Extraction) montoving
Soì! Log	Depth of Components	I. — Stick up in East 1, 50
————	in Feet	Relative to
		Approximate Ground Surface Elevation in Feet 6788.98
		Type of Monument 10" Steel of lark
	10	Type of Surface Seal Cement
	▽ 33.71	Diameter and Type of Casing/Riser Pipe 272 PUC
	63	- Type of GOOT Begin second completion
	- N	Type of Plug ventopite
	74 11	
	1.4	—Diameter of Borenole_ <u>5</u> "
	,	Screen Diameter
ļ		Siot Size, and Type 0,010, saw cut
İ		Type of Filter Material
8	103	Type of End Cap/Tail Pipe 10 SUMP Well point
20	ـــا≥.نىد	Bentonite
Remarks:	Deep well of dua	l completion
		1
CASP.	-24 42 <u>42</u> 10	
Materials	Taily:	
	Sand 6 bass	Monument <u>10 5 tcs </u>
	Cement	PVC 80/30 screen, 2 48" ID
	Bentonite 5 Gast	Other
	4	

Installation R	eport	Monitoring Well <u>エロロスにら</u>
	P27	Job No Date
Location X 108° 35'11.43" W Y	35° 30' 25.08" N	HC Observer Matheme Driller USOS , Vapor Extraction) wowldowy
Depth of Soil Log Components in Feet	10	Type of Scourt Stick up in Feet Relative to Approximate Ground Surface Elevation in Feet 6788.98 Type of Monument 10 black Cock Type of Surface Seal Cerronal Type of Cosing/Riser Pipe 212 PUC Type of Grout
t	45 -50	Type of Plug Bentmite Diameter of Borehole 8 inches Screen Diameter, Slot Size, and Type 0.01, 500 (ut. 10 ft.
	60	Type of End Cap/Tail Pipe Well point/110 Sump
Remarks: Shallow we	11 of dual con	npletion.
9-2-340		
Materials Tally: Sand <u>\b</u> Cement Bentonite_	3 bags	Monument 10" 5700 (ft) PVC 60 pipe / 10 Screen (ft) Other
	0	<u> </u>

Installation Report

Monitoring Well 1-3/mw32

Project DHBRC	Job No
Location FWDA PZL X 109° 35' 15.97"W Type of Well (Observat	HC Observer Malkerne Driller 11565/Grant on, Sampling, Vapor Extraction) monitoring
Depth of Soil Log Components in Feet _	Relative to Approximate Ground Surface Elevation in Feet 6707, 487
- √ 51.6	Type of Monument 10" Steel of Oock Type of Surfice Sea: Parland concurt Diameter and Type of Casing/Riser Pipe 2 18 ID PV C
	Type of Casing/Riser Pipe 19 10 10 C
11 11	Type of Plug (Rationate) Type of Plug (Rationate) Diameter of Borenole_476
	Screen Diameter, Sipt Size, and Type O. DIO Amount Type of Filter Material Saint Type of End Cap/Tail Pipe 6 Will play
1 S	.5
Materials Tally:	
Sand <u>5</u> Cement <u>4</u> Beritonite <u>3</u>	Monument 10"5 teal PVC 20ft Screen 120ft. pipe, 2% ID Other_

Installation Report	Monitoring Well tmws3
Project DHBRC	Job No Date_17403/04
Location FWDA/PIL 4 X log 35' 19.33" W Y 35° 30' 58.12" A	C Observer Matherne Driller M565/Graw Vapor Extraction)
Soil Log Components in Feet	-Stick up in Feet Relative to Approximate Ground Surface Elevation in Feet
Remarks:	
*	

Materials Tally: Morument 10 4 cel · Sord _ 25 bags PVC 20 ft school, 40 ft pipe

C:

Cement 4 bags

Bertonite 5 buckets, Other.

Installation Report	Monitoring Well TMW 34
Profest FWDA	Proj. # 1000 86360HBPI 000 12/10/09
X 109° 35' 22.83" W Y 35° 30' 57.69"	HC Observer Driller USGS
Type of Wall (Observation, Sampling	g, Vapor Extraction) observation and sampling
Depth of Soil Log Components	——Stick up in Feet
in feet of	Relative to Approximate Ground Surface Elevation in Feet <u>6684,645</u>
	Type of Monument USGS Brass Cap
10, —— 🔀 🔀	Type of Surfice Seci Portland Cement
	Diameter and Type of Casing/Riser Pipe 2.5" sch 50 PVC
27'	- Type of Grout Bentonite Chips (3/8")
	- Type of Plug Bentonite Pellets (1/4")
31'	— Diameter of Borehole 10 ³ 4" — Screen Diameter, Slot Size, and Type 2.5"; .01"; saw cut
57' 57.25'	Type of Filter Moterio <u>19/20 Silica Sand</u> Type of End Cap/Tair Ppe <u>PVC well point</u>
Remarks:	<u> </u>
i santa de la companya della companya della companya de la companya de la companya della company	
Meterials Tally: Send <u>22 - 5016. bags</u>	Monument l
Coment 4-94 lb bags	PVC 2 10 screens, 4 10 visers
Benjarite chips - 14 50 Pellets - 4 5.	16 bags Cther

.

Project <u>f</u>	EWINA	froj #	
X 10% 35	5'17.66"W 7 35°30	54/28"N JOE No. 16360HBP1	
Location	Parcel 11	HC Observer	Drillar WSG 5
	+ Wingare Depot Activity	J. NM	50 200 P 100
Abe of a	We (Observation, Sc	mpling, Vapor Extraction <u>) Observa</u>	tion and Sumpling
•	Depth of		24
Soi Leg	Components in Feet 1	, cock up a ras.	2.34
1	o'	Relative to Approximate Ground	
	Ž.	Surface Elevation in Fost_	(0684 26)
6: 2×	- S	2 2本	30249 99
İ	K.	Type of Monument <u>USGS</u>	Brass Cap
	<u> </u>		Hand Cement
	101		
	7 41.62	• Type of Casing/Riser Pipe	2.5" sch 80 PVC
5		Type of Grout Bentanite	chins (3/8")
	25'	1 -	
	n n		
	*	Type of Plug Bentoning	Pellets (4")
	10000 - 14		3.
8	28'		
100	351		35 K
:	. 1	D'ameter of Borehole 16	<u> </u>
69		Serans Diameter	
22	á	Screen Diameter, Sict Size, and Type 2:5	". Ol" saw cut
	i		
Ì		1	20 - 11-
	55'	Type of Filter Waterial 10/	
	551 ——	Type of End Ocp/Tail Pipe	PVC well point
!	55'	<u> </u>	
	5.5		
Remarks;		402	
S .			9,50005
	12		
50	19 9001775	100 M 100 M	
	192		2
Vaterials	13 Y 74 KOIL	ha	1
	Sono <u>24 - 50 (b.</u>		
8 - 8	Cement		ens, 4 10' risers
	Bentonite <u>chips - 10</u> perlets 2 c	6 50 16 bugs Other,	1/2009/2010 N
	perlets_ L	1 Sgul bricke+s	

	Installation	Report		Monitorir	ng We.	11 TMW 36
	Project FWDA X 108° 35'10.08" W	V 35°40124	Syral	project # lot No 863	60H8P1	Date 12/5/09
	Lossian Parcel 22 Ft. Wingare	De Bar Activity		Observer		Driller USGS
	Type of Well (Obs	ervation, San	npling, V	apor Extraction	Observat	ion and sumpling
	Soll Loc Compare	nts -	-	-Stick up in Feet	1	.68
	ir Feet	0, —		Relative to Approximate Gra Surface Elevation	und in Feet	6699.323
	.18			Type of Monume		64 8102 9.4
103/4		10,		-Type of Surface	Sea <u>Rocal</u>	and Cement
	_ ▽ 3	38.79	\ <u>-</u>			2.5" sch 80 PVC
	- X 64'	G4'		-Type of Grout <u>√</u>	<u>Bentanite</u>	Chips (1/8")
<u> </u>			-	-Type of Pluc <u>_B</u>	entonite (Pellers (1/4")
	18	50'				
5"	<u> </u>	32'	▋ ፟	-Diameter of Bor	chole_10 ³ 4	" -> 5"
				-Screen Diameter Slot Sizs, and 1	ype2.5''	; . 01"; saw cut
	•a 80		▋.	Type of Filter M	ateria <u>187</u>	20 Silica Sand
89	41	52' 57' 57'		-Type of End Cap	r/Tai Pipe.	PVC well point
18	Remarks:	31				
				7800 24	5555	- 15 W. 5
18						0 000 000 000 000 000 000 000 000 000
	Motorials Taly:	1999/254 199				
<u>-</u>		3.75 - 50 16	bags	Monur	ment	
		4-94 (6 b	3	PVC_	2 10° scre	ens, 4 10' risers

Other ____

Benjorite chips - 32 50 lb bags
pellets - 9 5 gal buckets

	Install	ation	Repo	rt	Moni	itoring	Well_	TMW 37
	Project F	NOA IF 161	V 25	30'24.63" N	eroject Jab (10	86360	HBPI -	Jote <u> (2/12/09</u> _
	-Location <u>-R</u>	arcel 22				r	5 [,]	rilier_USGS
	Type of W	Vin gare. iei (Ob	Depor Auriai servation,	1+4, N/M				and samplina
	Soil Log (Depth Composi		Con the Assessed	←Stick up		2 2.8	,
		n Fee			Relative :	to		·—
		25			Surface B	ate Ground Elevation in	Fect <u>G</u>	710.876
103/4	,,				—lype_of′	Monument_	usgs br	ass Cap
įσ.			10,		— Type of S	Surface Sac	Portlar	d Cemen+
		<u> </u>	50.37		Diameter Type of (land Casing/Rise	r Pibe <u>ll2.S</u>	" sch 80 PVC
	- * 59°	25	61'——					ips (3/8")
			W 1					
y=	İ				-Type of F	Plug <u>Bentor</u>	ilte Pellet	(/4 ")
ŭ			921					
5"			₹ ₹ ′———		– Diamoter	of Bareha	e_/034" -	<u>→</u> .5"
					-Screen Di Sipt Size,	ismeter, and type.	2.5", 0.	oll ; saw cut
	i i				−Tvpa of F	Tilter Moler	ial 10/20	Silica Sand
0.8+	i		(08'					C Well poin+
25	\		m'	272				
	Remarks:	42	-0.01				8 B	
	0 		·	4.			-27	
								<u></u>
	Materials 1	—— Гау:					- 1669	
c				16 bags.		Monumen	ŧ	1
				lb bags		5V0_ 2 _1	0° screens	4 10 risers
		Benton	ite <u>-Chips</u> Pellets	- 34 50 16 - 3 5 gal b	bags ouckets	Other		27-7-0-7-
				2010 CHINA (400)	427000 100000 0 00			