

Richard Powals

From: Vittorie, Roseann <rvittorie@envirocorpinc.com>
Sent: Monday, August 12, 2013 9:15 AM
To: tathans@heliconholdings.com; 'batka.allan@epa.gov'
Cc: 'rpowals@envgeotech.com'; 'jfrost@envgeotech.com'; Schildhouse, Richard W.
Subject: EGT - Packer Sketch
Attachments: EGT - Packer Sketch.pdf

Being sent on behalf of Rich Schildhouse

Roseann Vittorie
Office Manager

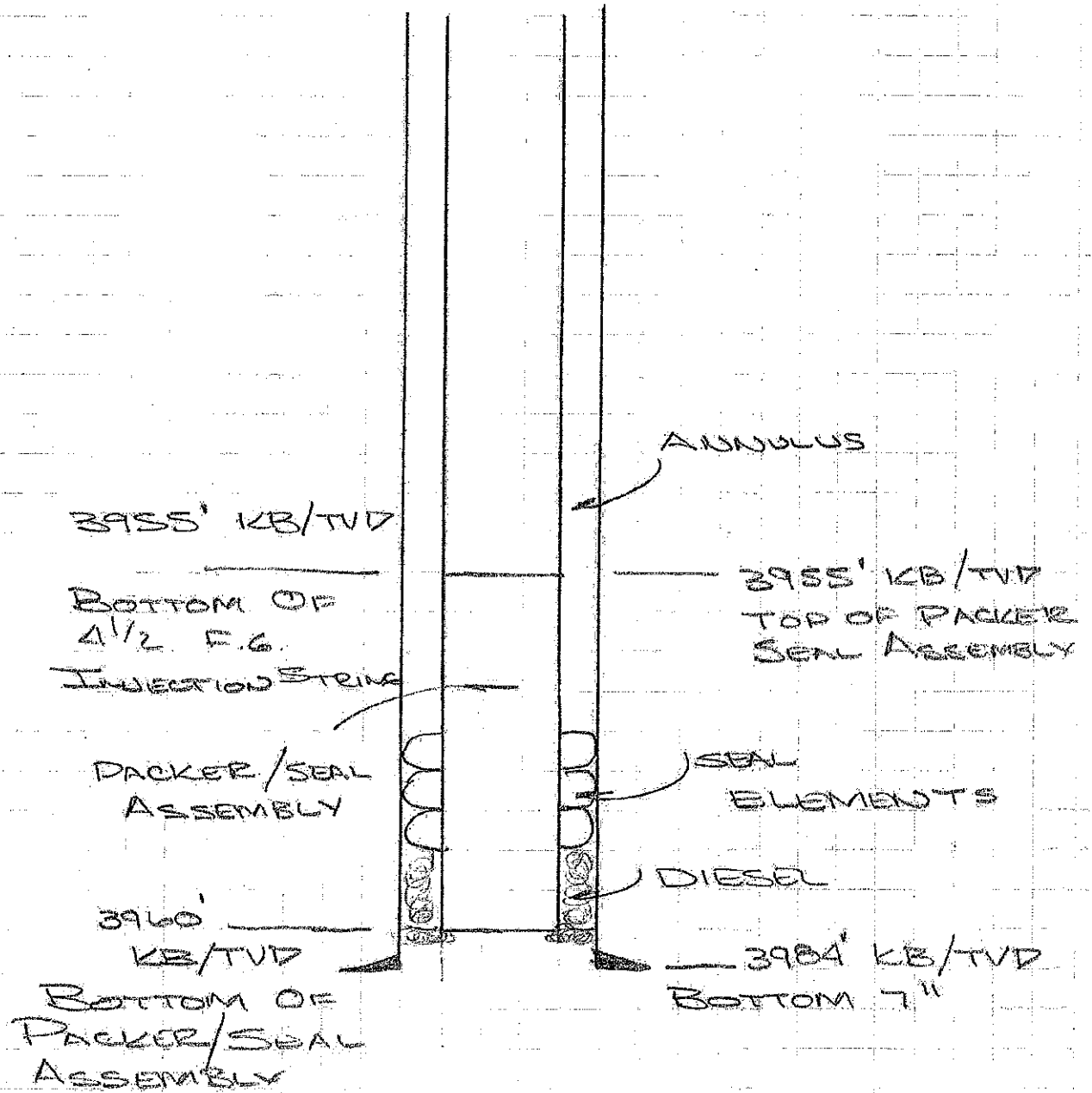


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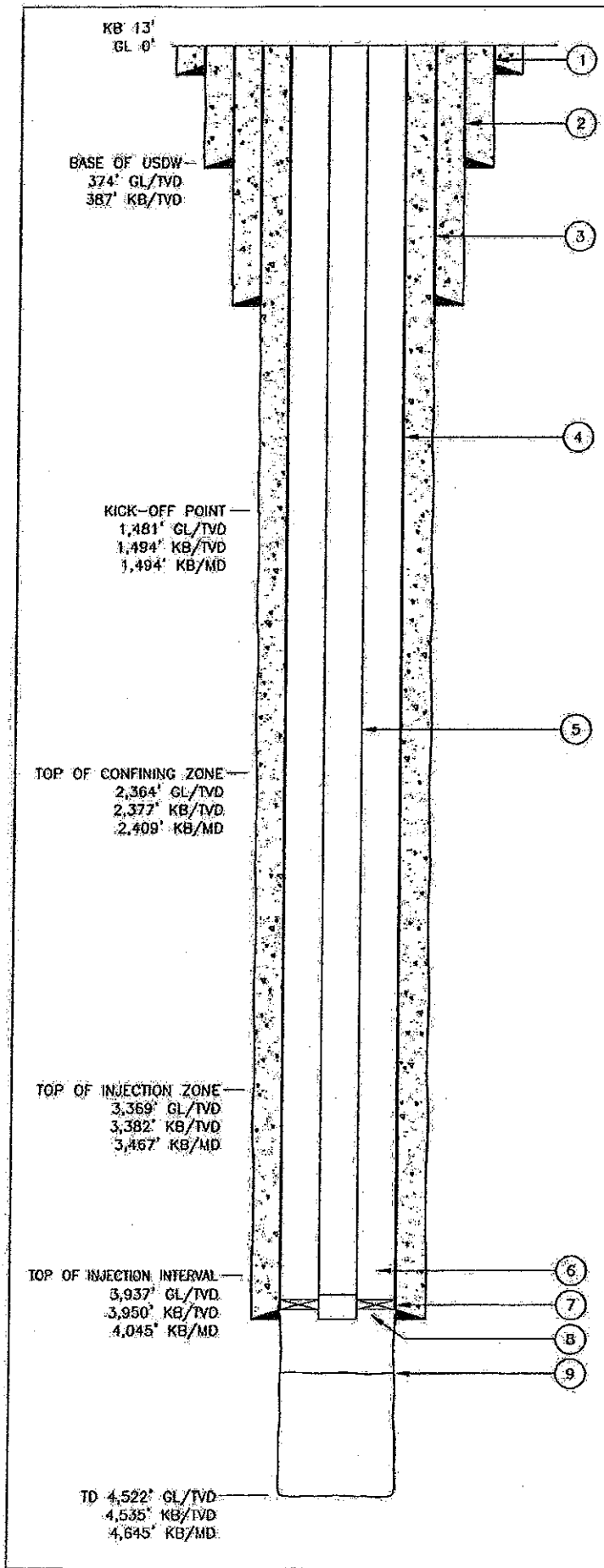
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Well 1-12



BELOW GROUND DETAILS

- ① CONDUCTOR CASING: 20" O.D., 94 lb/ft. SET AT 119' KB/MD, 119' KB/TVD IN 24" HOLE AND CEMENTED TO SURFACE
- ② SURFACE CASING: 13 3/8" O.D., 48 lb/ft. H-40 SET AT 396' KB/MD, 396' KB/TVD IN 17 1/2" HOLE AND CEMENTED TO SURFACE
- ③ INTERMEDIATE CASING: 9 5/8" O.D., 36 lb/ft. J-55 SET AT 824' KB/MD, 824' KB/TVD IN 12 1/2" HOLE AND CEMENTED TO SURFACE
- ④ LONG STRING CASING: 7" O.D., 26 lb/ft. J-55 SET AT 4,080' KB/MD, 3,984' KB/TVD IN 8 1/2" HOLE AND CEMENTED TO SURFACE
- ⑤ INJECTION TUBING: 4-1/2" O.D. FIBERGLASS TO 4,050' KB/MD, 3,955' KB/TVD
- ⑥ ANNULUS FLUID: OIL BASED FLUID
- ⑦ PACKER AND SEAL ASSEMBLY: 4-1/2" X 7" GPS PACKER, TOP AT 4,050' KB/MD, 3,955' KB/TVD, BOTTOM AT 4,055' KB/MD, 3,960' KB/TVD
- ⑧ DIESEL PAD UNDER PACKER
- ⑨ TOP OF FILL AT 4,246' KB/MD, 4,147' KB/TVD

NOTE: TRUE BOTTOM OF WELL IS 211' SOUTH AND 754' WEST OF SURFACE LOCATIONS

SUBSURFACE		HOUSTON, TX. SOUTH BEND, IN. BATON ROUGE, LA.
FIGURE 1 ENVIRONMENTAL GEO-TECHNOLOGIES, LLC ROMULUS, MICHIGAN EGT #1-12 WELL SCHEMATIC		
DATE: 8/9/13	CHECKED BY:	JOB NO: 60D6957
DRAWN BY: CRB	APPROVED BY:	DWG. NO:

KB 13'
GL 0'

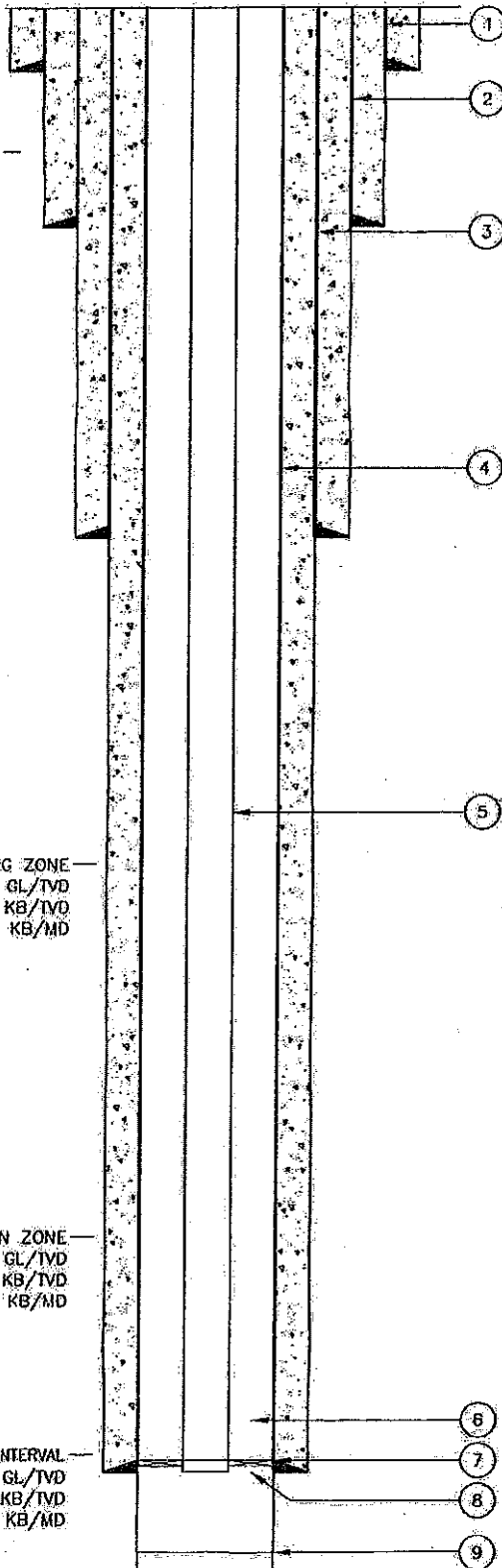
BASE OF USDW—
374' GL/TVD
387' KB/TVD

TOP OF CONFINING ZONE—
2,364' GL/TVD
2,377' KB/TVD
2,377' KB/MD

TOP OF INJECTION ZONE—
3,369' GL/TVD
3,382' KB/TVD
3,382' KB/MD

TOP OF INJECTION INTERVAL—
3,937' GL/TVD
3,950' KB/TVD
3,950' KB/MD

TD 4,537' GL/TVD
4,550' KB/TVD
4,550' KB/MD



BELOW GROUND DETAILS

- ① CONDUCTOR CASING: 20" O.D., 94 lb/ft, SET AT 169' KB/MD, 169' KB/TVD IN 24" HOLE AND CEMENTED TO SURFACE.
- ② SURFACE CASING: 13 3/8" O.D., 48 lb/ft, H-40 SET AT 598' KB/MD, 598' KB/TVD IN 17 1/2" HOLE AND CEMENTED TO SURFACE.
- ③ INTERMEDIATE CASING: 9 5/8" O.D., 36 lb/ft, J-55 SET AT 1,444' KB/MD, 1,444' KB/TVD IN 12" HOLE AND CEMENTED TO SURFACE.
- ④ LONG STRING CASING: 7" O.D., 26 lb/ft, J-55 SET AT 3,983' KB/MD, 3,983' KB/TVD IN 8 1/2" HOLE AND CEMENTED TO SURFACE.
- ⑤ INJECTION TUBING: 4-1/2" O.D. FIBERGLASS TO 3,953' KB/MD, 3,953' KB/TVD.
- ⑥ ANNULUS FLUID: OIL BASED FLUID
- ⑦ PACKER AND SEAL ASSEMBLY: 4-1/2" X 7" GPS PACKER, TOP AT 3,953' KB/MD, 3,953' KB/TVD, BOTTOM AT 3,958' KB/MD, 3,958' KB/TVD
- ⑧ DIESEL PAD UNDER PACKER
- ⑨ TOP OF FILL AT 4,180' KB/MD, 4,180' KB/TVD

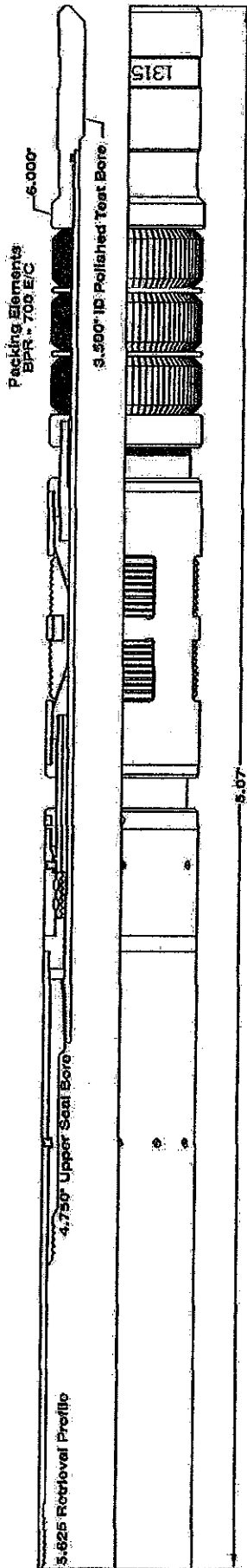
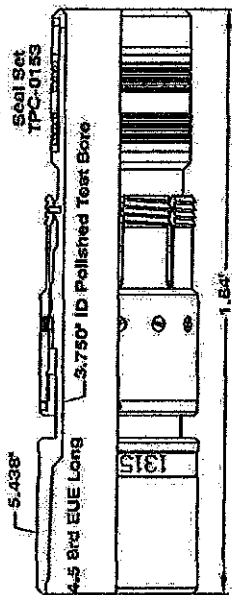
SUBSURFACE

HOUSTON, TX.
SOUTH BEND, IN.
BATON ROUGE, LA.

FIGURE 1
ENVIRONMENTAL GEO-TECHNOLOGIES, LLC
ROMULUS, MICHIGAN

EGT #2-12 WELL SCHEMATIC

DATE: 8/9/13	CHECKED BY:	JOB NO: 60D6957
DRAWN BY: CRB	APPROVED BY:	DWG. NO:



Groundwater Protection Systems

Environmental Disposal Systems
 199 W. Brown Street, Suite 200
 Birmingham, Michigan 48009

GPS Project No.: 10R011315

Scale: None

Date: Well No. 1-12

Drawn By: JTR

GPS Completion System

GPS 7" Model 12 Anchor Seal Assembly (C-276)
 GPS 7" Model 12 Disposal Packer (C-276)
 for Remulus, Michigan Facility

EDS Purchase Order No.: N/A

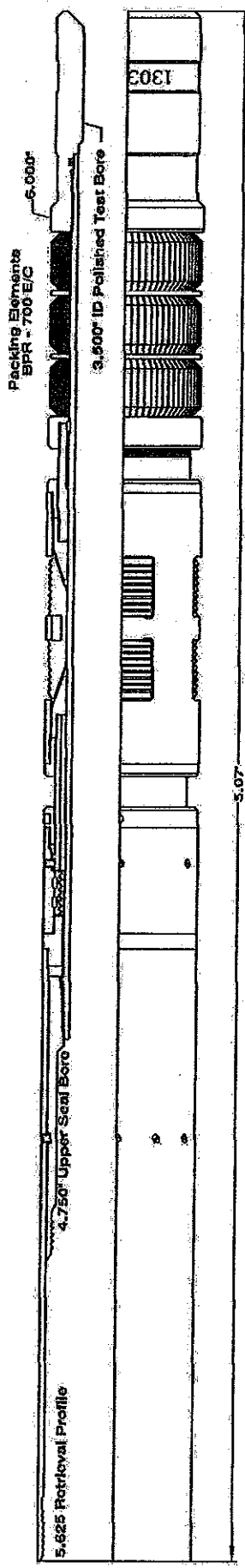
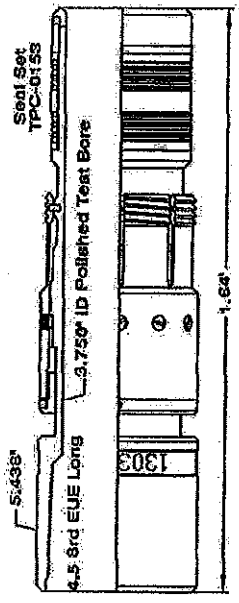
EDS Contact:

Douglas Wicklund

Date: 12-20-01

EDS Contact Phone No.:

248/642-4214



Groundwater Protection Systems

Environmental Disposal Systems 199 W. Brown Street, Suite 200 Birmingham, Michigan 48009 GPS Project No: 10R011303 Scale: None Drawn By: JTR For: Well No. 2-12	GPS Completion System GPS 7" Model 12 Anchor Seal Assembly (C-276) GPS 7" Model 12 Disposal Packer (C-276) for Romulus, Michigan Facility	EDS Contract: Douglas Wicklund
	EDS Purchase Order No: N/A	EDS Contract Phone No: 248/642-4214