

ATTACHMENT H: CONSTRUCTION DETAILS

DONALDSONVILLE SITE

Facility Information

Facility name: Ciel
CIEL NO.1

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Well location: Donaldsonville, Ascension, Louisiana
NAD 1927 (Louisiana South Zone) X: 2,114,245.33' ; Y: 511,857.41'

Introduction

The construction details for Ciel No.1 are described in this attachment. Table 1 describes the drilling intervals and corresponding open hole diameters. Table 2 gives the casing specifications and Table 3 gives the tubing specifications. Figure 1 shows the Ciel No.1 wellbore diagram.

Injection Well Construction Details

Table 1. Open Hole Diameters and Intervals

Name	Depth Interval Feet	Open Hole Diameter Inches	Comment
Conductor	150	-	To refusal
Surface	2,000	26	To bedrock
Intermediate	3,800	17.5	To the upper confining zone
Long-string	11,500	12.25	To total depth

Table 2. Casing Specifications

Name	Depth Interval (Feet)	Outside Diameter (Inches)	Inside Diameter (Inches)	Weight (lb/Foot)	Grade (API)	Design Coupling (Short or Long Threaded)	Thermal Conductivity @ 70°F (BTU/Feet.h r. °F)	Burst Strength (psi)	Collapse Strength (psi)
Conductor	0–150	30	28	310	X-56	Welded	31	3,270	1,680
Surface	0–2,000	20	18.73	133	J-55	Long or Buttress	31	3,060	1,500
Intermediate	0–3,800	13.375	12.415	68	L-80	Long or Buttress	31	5,020	2,260
Long string	0–3,800	9.625	8.535	53.5	P-110	Buttress	31	10,900	7,950
Long string	3,800–4,300	9.625	8.535	53.5	25CrS-110	Premium	8	10,900	7,950
Long string	4,300–11,100	9.625	8.535	53.5	13CrS-110	Premium	9	10,900	7,950
Long string	11,100–11,500	9.625	8.535	53.5	P-110	Buttress	31	10,900	7,950

Table 3. Tubing Specifications

Name	Depth Interval (Feet)	Outside Diameter (Inches)	Inside Diameter (Inches)	Weight (lb/Foot)	Grade (API)	Design Coupling (Short or Long Thread)	Burst strength (psi)	Collapse strength (psi)
Injection tubing	0–10,235	5.5	4.778	20	13Cr-MOD 110	Premium	12,630	11,100

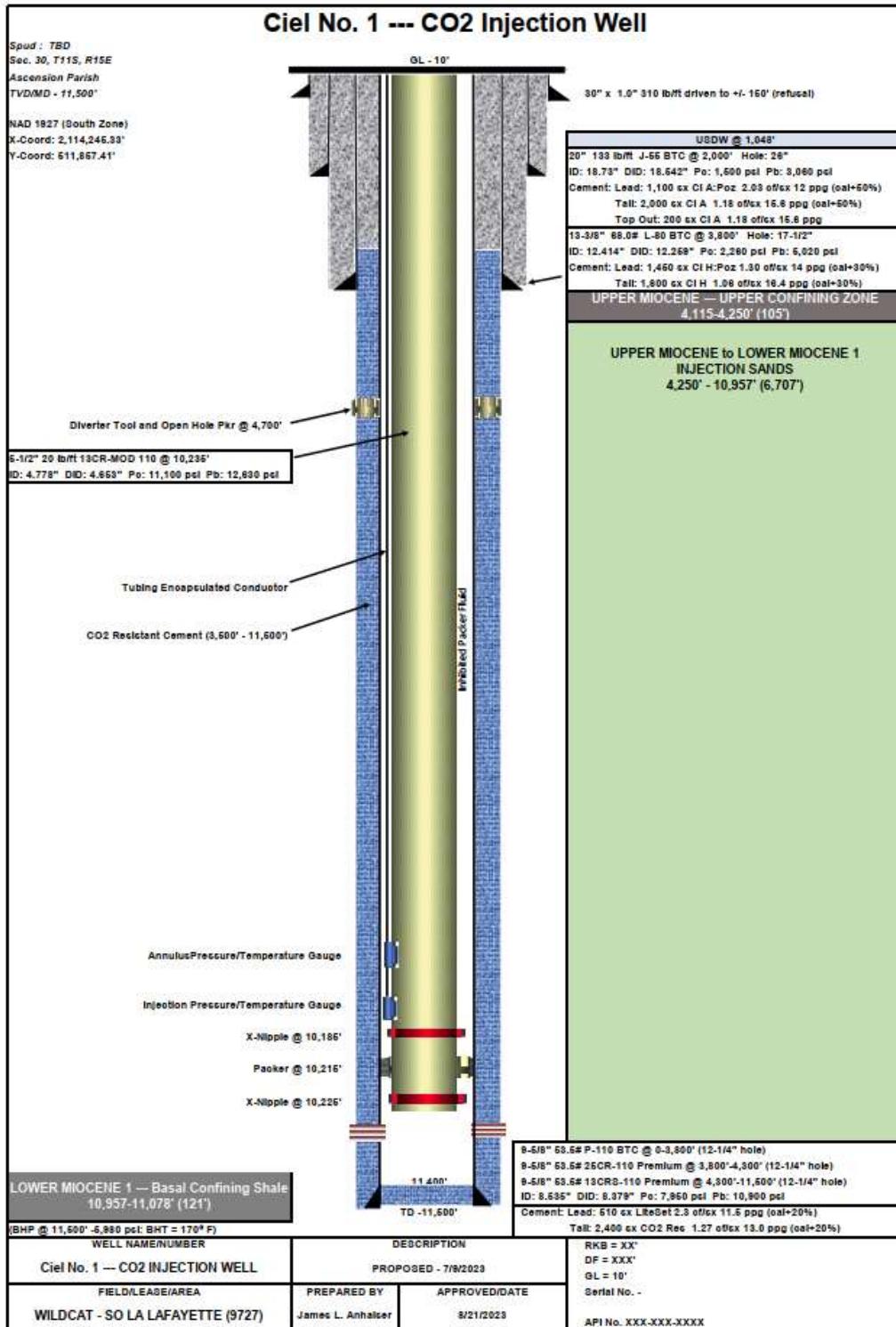


Figure 1. Ciel No.1, injection well construction diagram.