INJECTION WELL CONSTRUCTION PLAN
40 CFR §146.82(a)(11) and (12), §146.86, §146.87, and §146.88 (a), (b), (c), and (e)

Brown Pelican CO_2 Sequestration Project

1.0 Facility Information

Facility name: Brown Pelican CO_2 Sequestration Project
BRP CCS 1, CCS2 and CCS3 Wells

Facility contact: Caroline Huet, Carbon Certification Lead
5 Greenway Plaza, Houston, TX 77046
[redacted]

Well location: Penwell, Texas

[redacted]

2.0 Overview

Oxy Low Carbon Ventures, LLC (OLCV) will construct CO_2 injection wells for the Brown Pelican CO_2 Sequestration Project (BRP Project or Project) according to the procedures in this document. The matter of construction details is relevant to the requirements of Environmental Protection Agency (EPA) document 40 CFR Subpart H – Criteria and Standards Applicable to Class VI Wells. The main topics covered in this attachment are special construction requirements, open hole diameters and intervals, casing specifications, tubing specifications, data acquisition and testing plan, and demonstration of mechanical integrity.

The Brown Pelican CCS1, CCS2 and CCS3 (BRP CCS1, BRP CCS2 and BRP CCS3) injection wells are designed with the highest standards and best practices for drilling and well construction. The design parameters and material selection are aimed to ensure mechanical integrity in the system and to optimize the operation during the life of the Project.

3.0 Design Parameters and Specifications

The well was designed to maximize the rate of injection while maintaining the bottomhole pressure below 90% of the fracture gradient. The selected design provides enough clearance to deploy the pressure and temperature gauges on tubing and install a fiber optic cable on the long string casing to ensure continuous surveillance of external integrity and conformance.

Design parameters that will be employed during the life of the well are shown in Table 1, and CO_2 specifications for the Project are shown in Table 2. A nodal analysis was used to perform sensitivities on the tubing size, rate of erosion, and potential movement of the tubulars. The nodal analysis results, operating parameters, and CO_2 specifications were used in selecting materials to be used to construct the well.

4.0 Well Design

OLCV plans to construct three CO_2 injector wells: BRP CCS1 BRP CCS2 and BRP CCS3 for the Project. The locations and orientations of those wells are shown in Figure 1 below.

4.1 BRP CCS1

4.1.1 Design for BRP CCS1

The BRP CCS1 well design includes three main casing sections: 1) surface casing to cover the USDW and provide integrity while drilling to the Injection Zone, 2) intermediate section, and 3) a long string section to acquire formation data and isolate the target formation while running the upper completion equipment. Figure 2 presents wellbore trajectory of BRP CCS1 and Figure 3 is BRP CCS1 well proposed schematic

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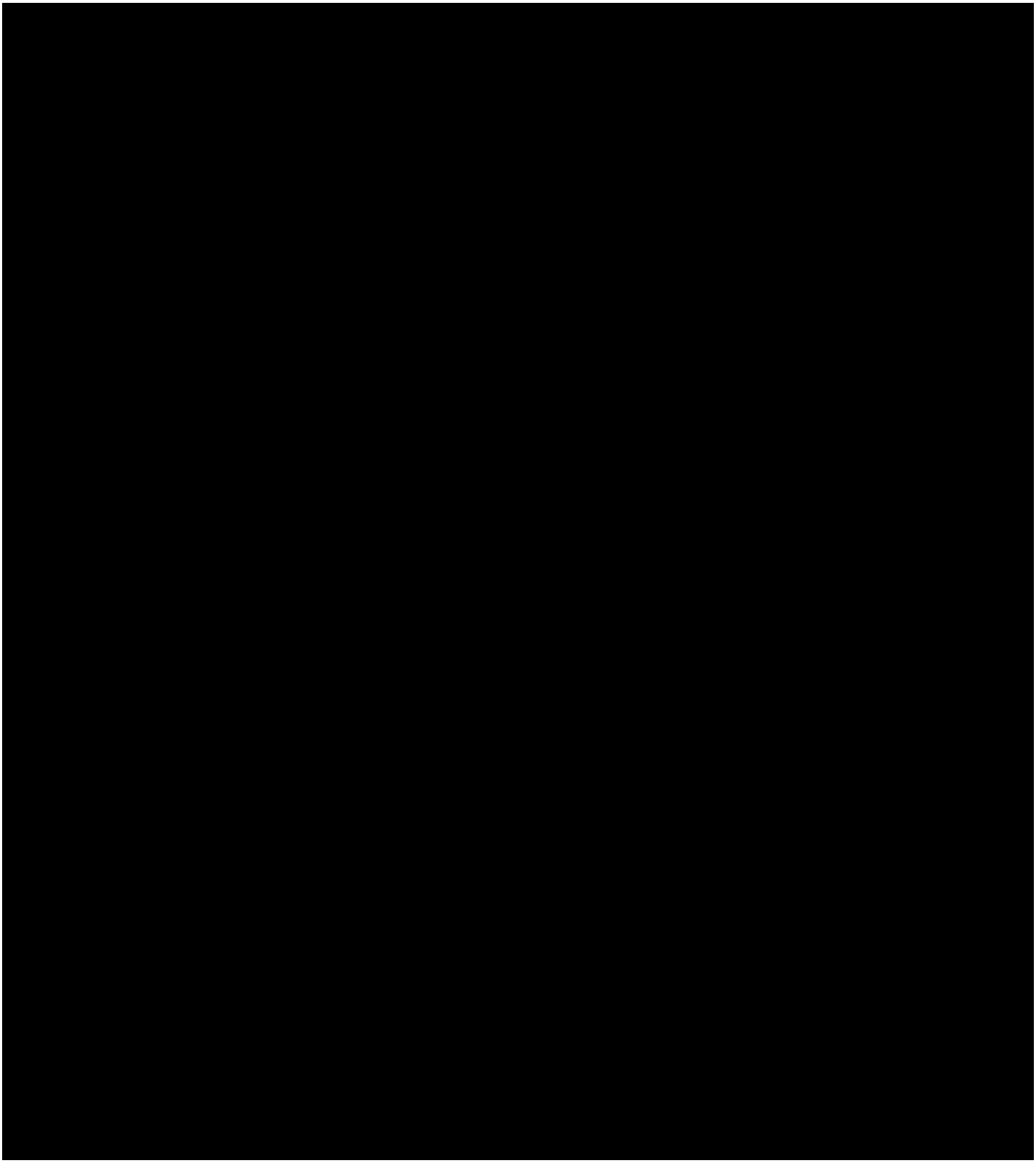

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4.1.2 Proposed Drilling Procedure for BRP CCS1

The next section is the drilling procedure for BRP CCS1.

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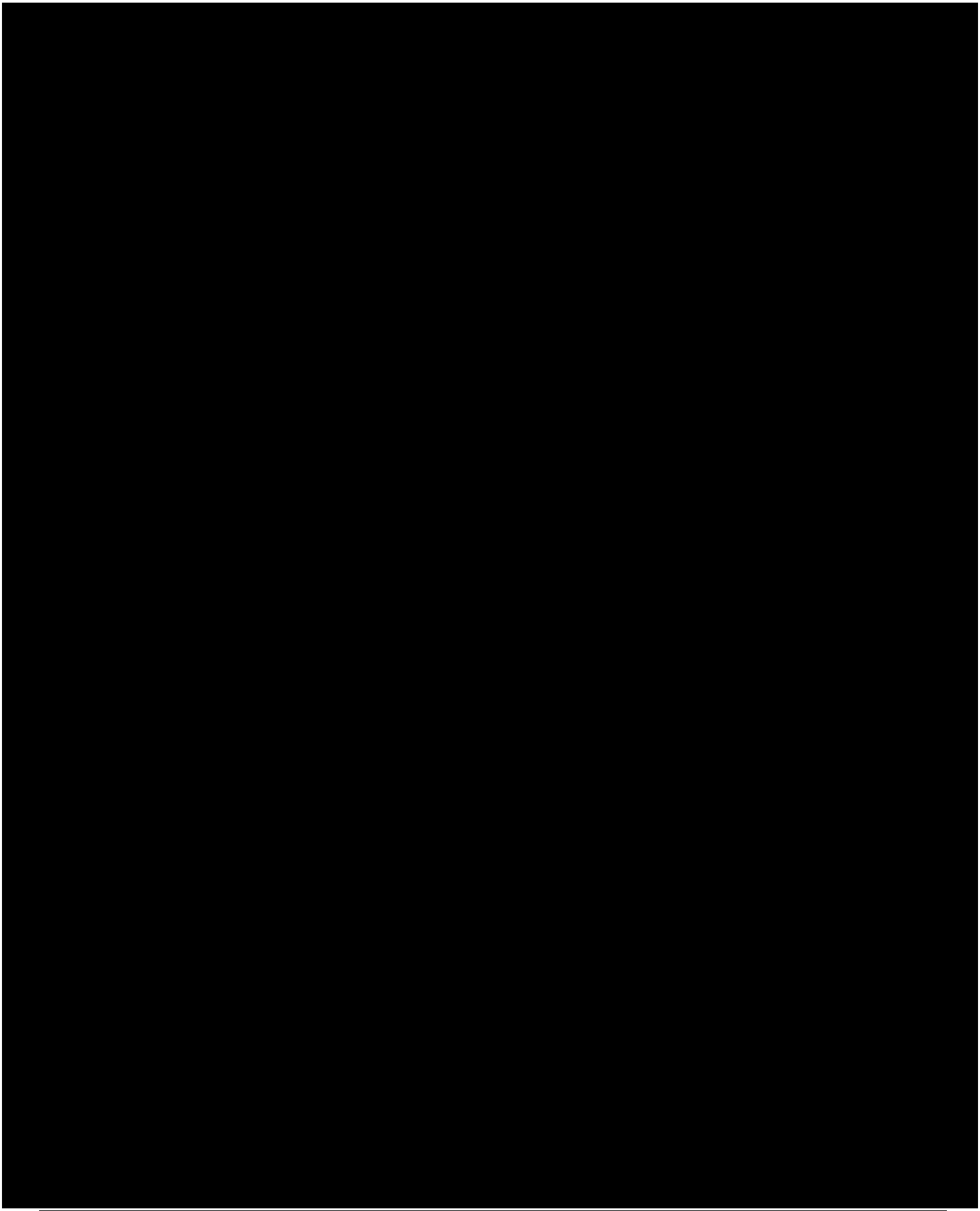

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4.2 BRP CCS2

The BRP CCS2 well design includes three main casing sections: 1) surface casing to cover the USDW and provide integrity while drilling to the Injection Zone, 2) intermediate section, and 3) a long string section to acquire formation data and isolate the target formation while running the upper completion equipment. Figure 4 presents wellbore trajectory of BRP CCS2 and Figure 5 is BRP CCS2 well proposed schematic

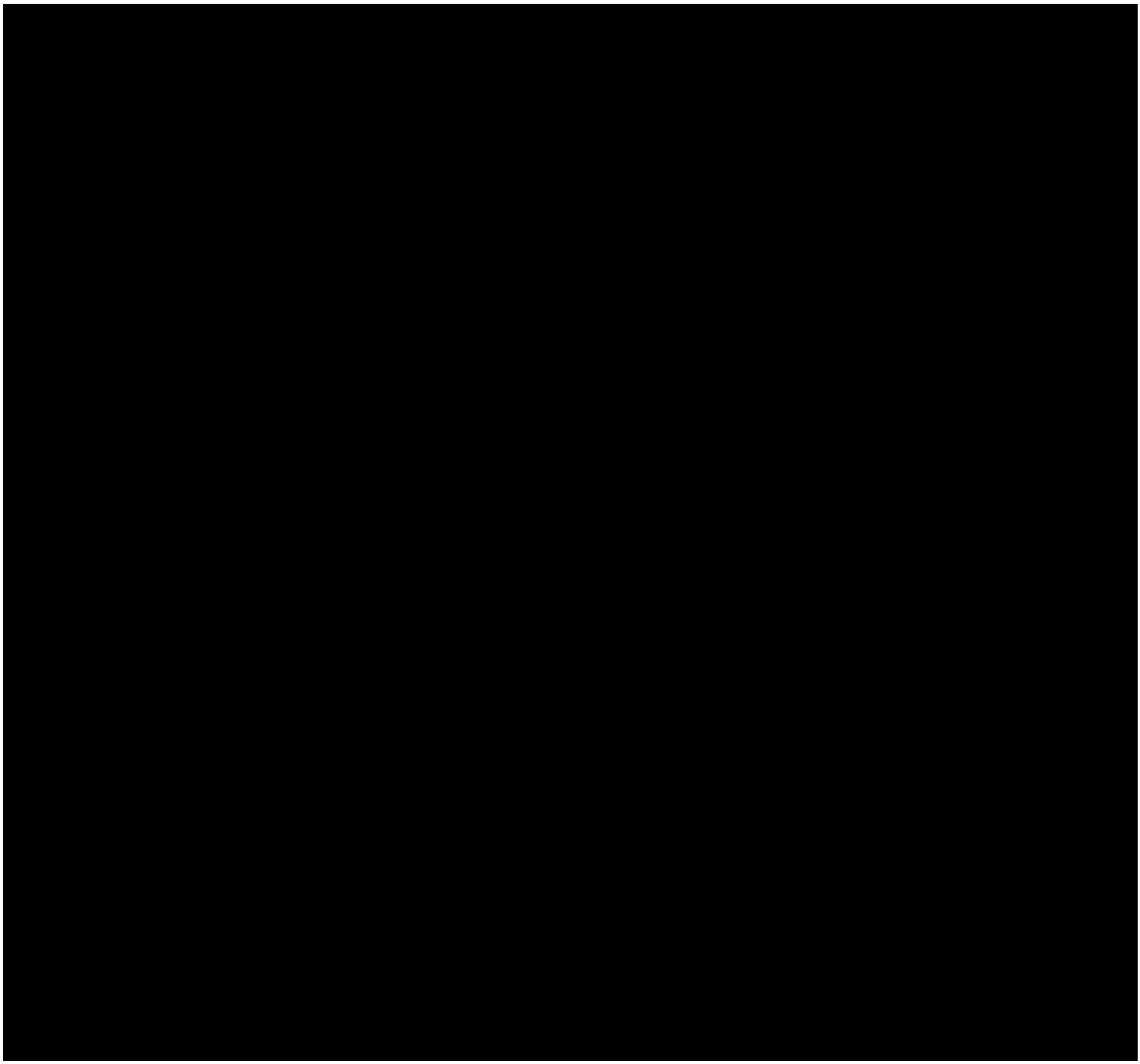

Figure 5—BRP CCS2 well proposed schematic

4.2.1 Design for BRP CCS2

Details regarding the BRP CCS2 well design are provided in the following tables. Table 9 contains the open hole diameters of each section, Table 10 lists the casing specifications, and Tables 11 details the casing material properties. In addition, Table 13 contains the upper completion equipment specifications, and Table 14 shows the tubing material properties.

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4.2.2 Proposed Drilling Procedure for BRP CCS2

The next section is the drilling procedure for BRP CCS2.

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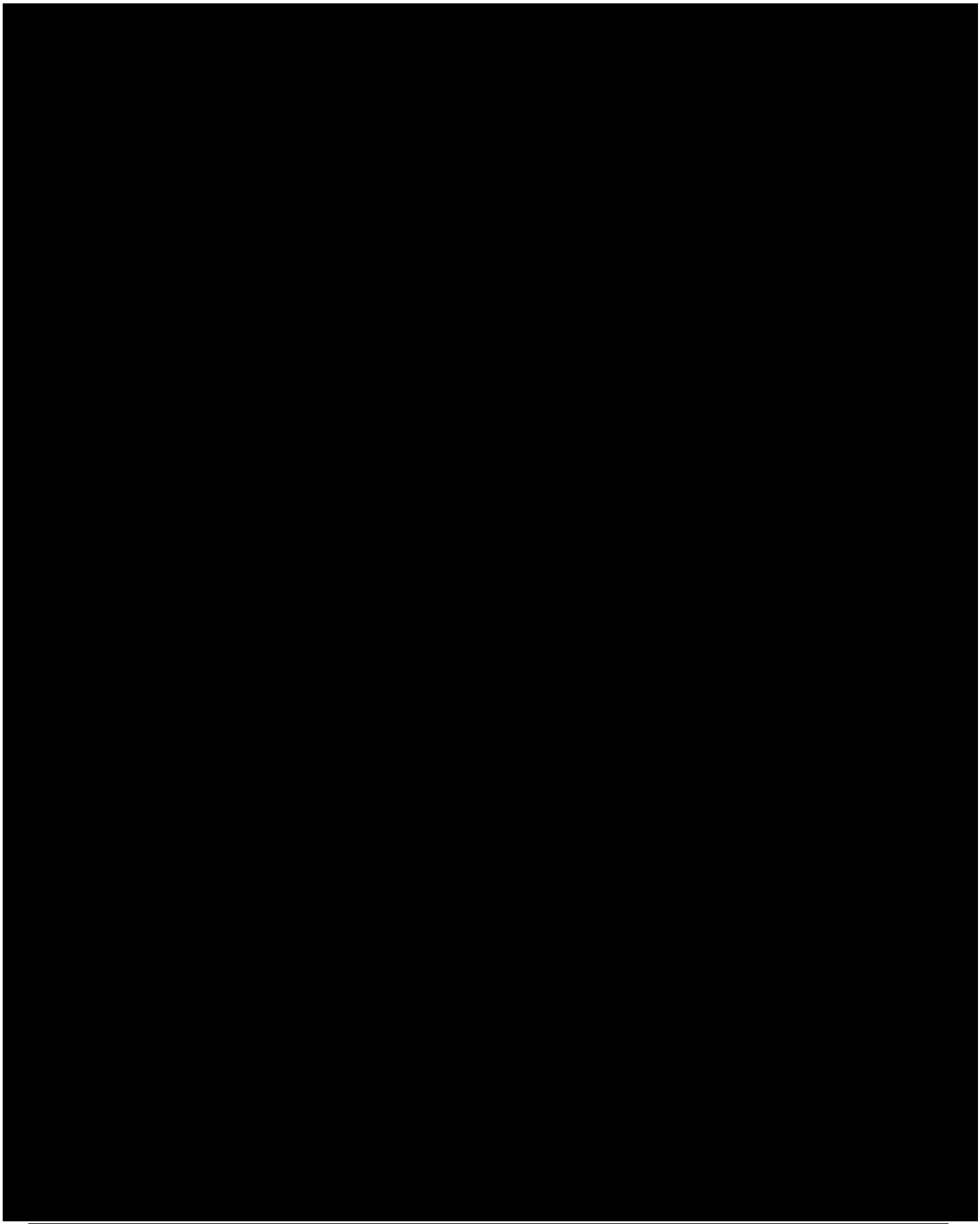

[redacted]

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1 Distributed acoustic sensing (DAS) and distributed temperature sensing (DTS)

[redacted]

4.2.3 Proposed Completion Procedure for BRP CCS2

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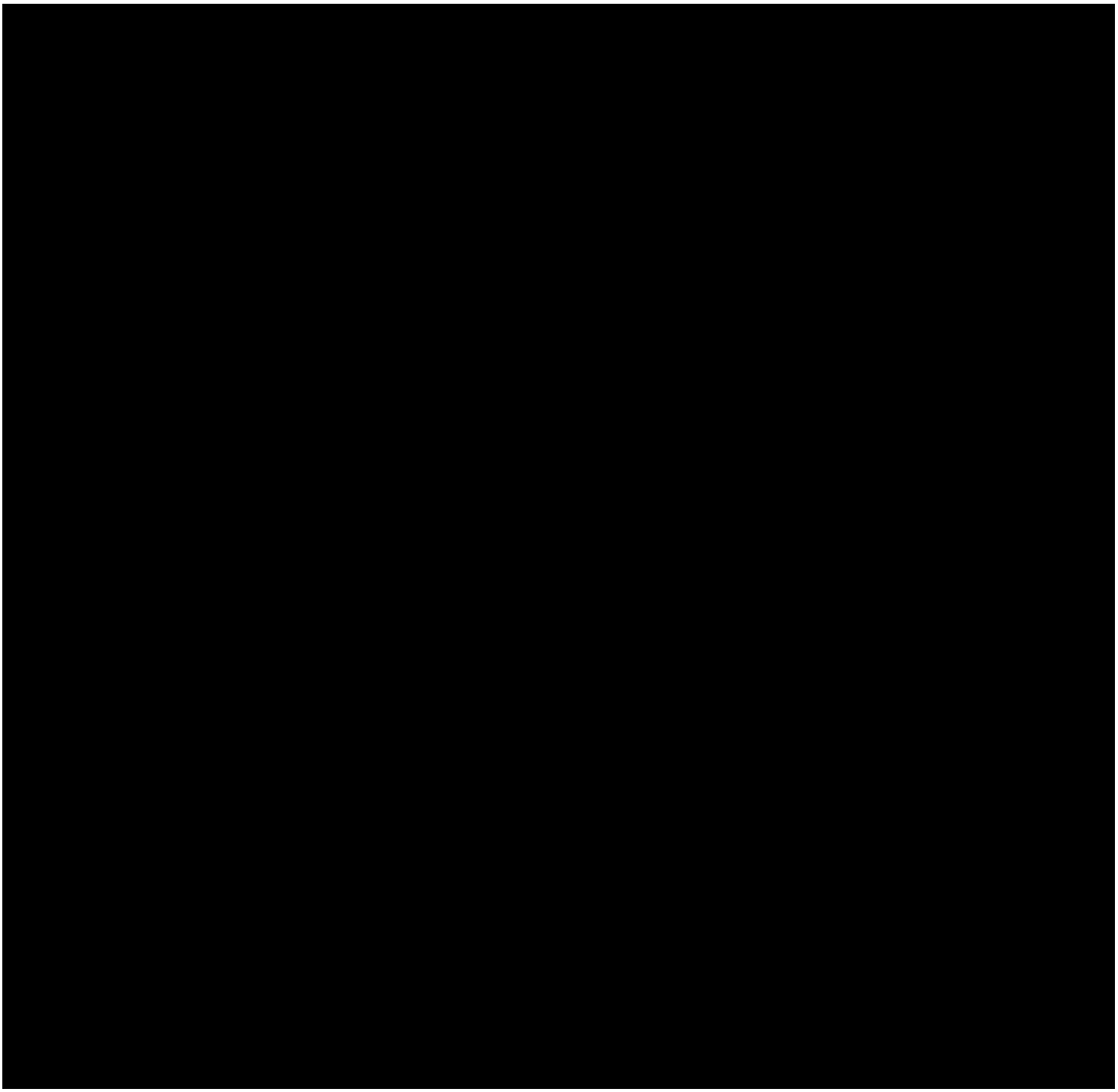
[redacted]

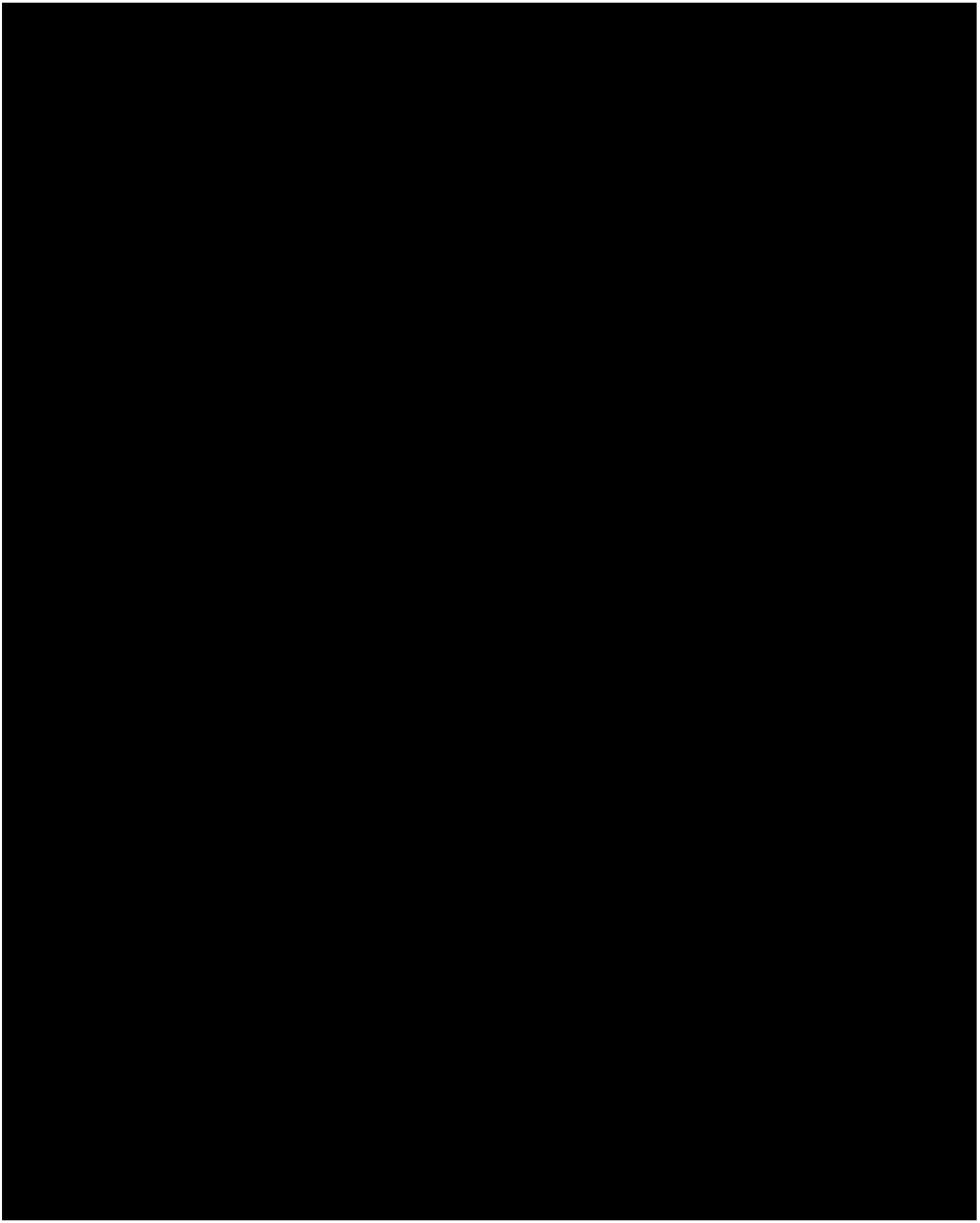
4.3 BRP CCS3

4.3.1 Design for BRP CCS3

The BRP CCS3 well design includes three main casing sections: 1) surface casing to cover the USDW and provide integrity while drilling to the Injection Zone, 2) intermediate section, and 3) a long string section to acquire formation data and isolate the target formation while running the upper completion equipment. Figure 6 presents wellbore trajectory of BRP CCS3 and Figure 7 is BRP CCS3 well proposed schematic.



Details of BRP CCS3 well design are provided in the following tables. Table 15 contains the open hole diameters of each section, Table 16 lists the casing specifications, and Table 17 details the casing material properties. In addition, Table 19 contains the upper completion equipment specifications, and Table 20 shows the tubing material properties.



4.3.2 Proposed Drilling Procedure for BRP CCS3

The next section is the drilling procedure for BRP CCS3.

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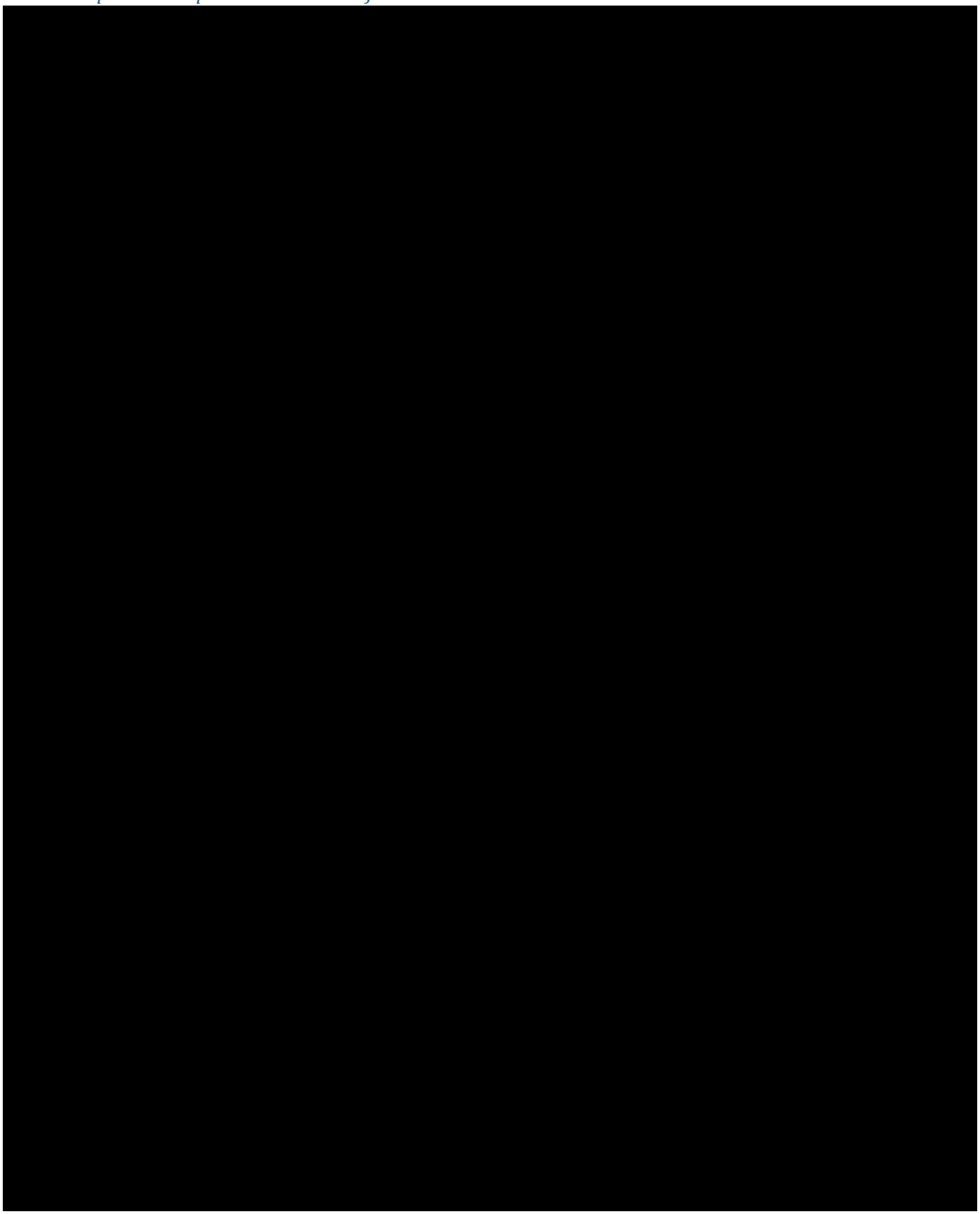
4.3.3 Proposed Completion Procedure for BRP CCS3



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4.4 Material Selection

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4.5 Cement Program

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4.6. Mud Program

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5.0 Data Acquisition and Testing Plan Summary

Comprehensive details on pre-operational testing are provided in the Pre-Operational Testing Plan that is part of this application. The information below summarizes key components of the plan.

The CO_2 Injection well testing program is designed to obtain the chemical and physical characteristics of the Injection and Upper Confining zone(s). This program includes a combination of logging, sidewall coring, formation hydrogeologic testing, and other activities performed during the construction of the CO_2 injection wells.

This pre-operational testing program will determine or verify the depth, thickness, mineralogy, lithology, porosity, permeability, and geomechanical information of the Injection Zone, the overlying Upper Confining Zone, and other relevant geologic formations. In addition, formation fluid characteristics of the Injection Zone will be obtained to establish baseline data against which future measurements may be compared after the start of injection operations. Table 27 lists the wireline logs and tests proposed for the BRP CCS1, BRP CCS2 and BRP CCS3.

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6.0 Demonstration of Mechanical Integrity and Baseline for Monitoring

Table 28 below summarizes the tests that will be conducted at the injection well before the start of injection to prove mechanical integrity.

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7.0 Blowout Preventer and Wellhead Requirements

7.1 Blowout Preventer Equipment (BOPE)

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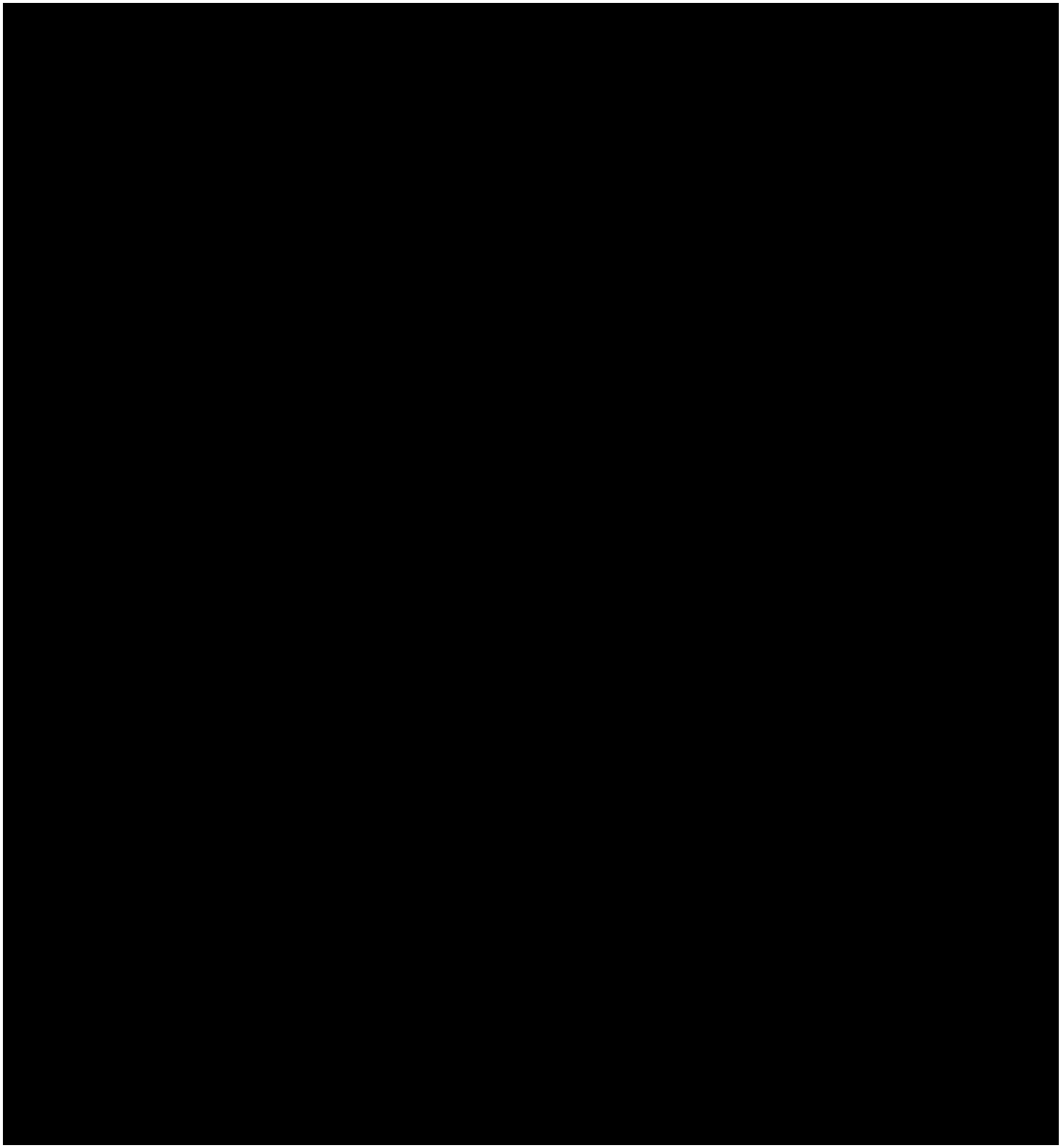

7.4 Pressure Testing

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7.5 Wellhead Schematic

Figure 8 below is a schematic diagram of the wellhead to be used for the BRP CCS1, BRP CCS2 and BRP CCS3 wells.