

FACT SHEET

<u>Applicant:</u>	RIVER PARISH SEQUESTRATION, LLC 1333 West Loop South, Suite 830 Houston, TX 77027 (832) 696-0052
<u>Project Proposal:</u>	Permit to drill and complete one Class V Stratigraphic Test Well
<u>Type of Facility:</u>	N/A
<u>Well Names:</u>	RPN-2-INJ No. 001
<u>Project Location:</u>	Section 79, Township 12 South, Range 14 East Assumption Parish
<u>Facility Local Address:</u>	N/A
<u>Application No.:</u>	45048
<u>Docket No.:</u>	

Project Summary: The following information is prepared according to the requirements of Statewide Order No. 29-N-1, (LAC 43:XVII, Subpart 1) to briefly set forth the principal facts and significant policy questions considered in preparing a draft permit concerning an application by River Parish Sequestration, LLC (River Parish) to drill one Class V stratigraphic test (injection) well in Assumption Parish, Louisiana.

The application is for the drilling of one proposed Class V stratigraphic test (injection) well. The total depth of the well is at a depth of approximately 10,794 feet below ground level.

The acquisition of geotechnical data is proposed to occur in the drilling of this well. No disposal of waste via injection will occur.

General Information: River Parish proposes to collect geotechnical cores, fluid samples, static pressure measurements, and other applicable information.

The base of the lowermost underground source of drinking water (USDW) is approximately 1,073 feet below ground level. There is one (1) registered water well located within a one-mile radius of the proposed well location. The principal regional aquifers in the area comprise of the confined Mississippi River Alluvial Aquifer below.

The complete application consists of the application form (Form UIC-25 Stratigraphic Test); technical attachments describing the geology, hydrology and construction.

The draft permit conditions were based on applicable rules and regulations as set forth in Statewide Order No. 29-N-1 (LAC: 43:XVII, Subpart 1) as amended. Such rules provide for the protection and non-endangerment of USDW regarding the permitting, drilling, completing, operating and maintaining of Classes I (nonhazardous waste), III, IV, and V injection well operations in the State of Louisiana.

Application Locations: An application package is available for inspection at the Louisiana Office of Conservation, Injection and Mining Division, LaSalle Building, 617 North Third Street, Room 817, Baton Rouge, LA 70802 from 8:00 am until 4:30 pm, Monday through Friday. To view, please ask for the River Parish Class V Permit Application identified at the beginning of this document. In addition, the application package is available on the Louisiana Department of Energy and Natural Resources website, Injection & Mining and Class VI Carbon Sequestration webpages.

For any information concerning the application, call Ben Gilder at (225) 342-5561, Monday through Friday, between the hours of 7:30 a.m. to 4:00 p.m.

Comment Period: The public comment period officially commences November 19, 2024, at 8:00 a.m. and concludes December 20, 2024, at 4:30 p.m. Submit all comments in writing to Ben Gilder, Louisiana Office of Conservation, Injection and Mining Division, 617 N. 3rd St, Baton Rouge, LA 70802. Comments may also be e-mailed to info@la.gov. Please reference River Parish Class V Permit, Application No. 45408.

TYLER PATRICK GRAY
SECRETARY

DUSTIN H. DAVIDSON
DEPUTY SECRETARY

KEITH O. LOVELL
ASSISTANT SECRETARY
COASTAL MANAGEMENT

AMANDA McCLINTON
ASSISTANT SECRETARY
ENERGY



MARK NORMAND, JR.
UNDERSECRETARY

ANDREW B. YOUNG
ASSISTANT SECRETARY
MINERAL RESOURCES

MANNY ACOSTA
OIL SPILL COORDINATOR

STEVEN M. GIAMBRONE
INTERIM DIRECTOR
CONSERVATION

DEPARTMENT OF ENERGY AND NATURAL RESOURCES

_____, 2024

ANDREW CHARTRAND
RIVER PARISH SEQUESTRATION, LLC (R1017)
1333 WEST LOOP SOUTH, SUITE 830
HOUSTON, TX 77027

*** APPROVAL TO CONSTRUCT ***

RE: STRATIGRAPHIC TEST WELL – NEW
WELL: RPN-2-INJ NO. 001
FIELD: WILDCAT-SO LA LAFAYETTE DIST
PARISH: ASSUMPTION

APPLICATION NO. 45408
SERIAL NO. _____
API NO. _____
SEC/TWN/RNG: 79/12S/14E

Mr. Chartrand:

The application by River Parish Sequestration, LLC (R1017) to drill a Class V stratigraphic test well has met the interim requirements for permitting such a well. You are hereby granted approval to perform the work as described in the application. The approved work must be completed by _____, 2024.

River Parish Sequestration, LLC is to notify the Conservation Enforcement Specialist (CES) for Assumption Parish, Eric Gauthreaux at (209) 406-2727, Monday through Friday, or by calling the Injection and Mining Division at (225) 342-5515 at least 72 hours prior to commencement of work. At least 48 hours before the casing test of the long string, contact the CES to schedule a witnessed casing test.

Within twenty (20) days after completion of the work, submit the documentation requested in the enclosed Reporting Requirements to the Injection and Mining Division. PLEASE READ THE ENCLOSURES CAREFULLY.

Please be reminded that for future work on the well, a work permit approval must be obtained from this office before repairing, stimulating, plugging, or otherwise working on this well.

Yours very truly,

Steven Giambrone
Interim Director, Conservation

Stephen H. Lee, Director
Injection and Mining Division



OFFICE OF CONSERVATION

IMD REPORTING REQUIREMENTS >> Class V Stratigraphic Test

Drilling and construction of the well must be completed within one (1) year from the date of the permit approval letter, otherwise, the permit will expire. **Before the expiration of the permit, the operator must notify the Injection and Mining Division (IMD) if a time extension will be requested or if well will not be drilled.**

The approved application describes how the well is to be constructed. Changes in the approved construction, such as well surface location, well depth, or casing setting depths, will require prior written approval from IMD. Failure to obtain prior written approval will be cause for revoking the permit.

At least forty-eight (48) hours prior to commencement of work, the appropriate Conservation Enforcement Specialist (CES) identified below must be contacted. If you are unable to reach the CES, please call the Injection and Mining Division at (225) 342-5515 between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday.

Application No.	45408	Serial No.	
CES Name	Eric Gauthreaux	CES Phone No.	(209) 406-2727

Within twenty (20) days after completion of the well, the completion documents listed below must be filed with IMD for review and approval in compliance with the regulations. Please place the well's Serial Number on the log headings.

- A Class V Well History and Work Résumé Report (Form UIC-42 STRAT TEST) with an original signature from an authorized representative of the operating company and two photocopies of the form (front and back). The Form UIC-42 can be saved, filled-out, and printed by going to www.dnr.louisiana.gov/consforms >> Injection & Mining Division >> Form UIC-42.
- Two (2) copies of the wellbore schematic depicting the completed well.
- Two (2) copies of the electric log used to identify the USDW.
- Two (2) copies of the cement bond log for each respective casing string.
- An original AFFIDAVIT OF TEST OF CASING IN WELL (Form CSG-T) signed by a company representative and witnessed by a third party for each casing. Provide a copy of the properly labeled pressure chart if the Form CSG-T does not have a witnessed signature. Include the well name, well serial number, casing size, test start time and stop time, date of test, and signature of company representative. The Form CSG-T can be downloaded from www.dnr.louisiana.gov/consforms >> Injection & Mining Division >> Form CSG-T.

Send the above required documentation together in **ONE PACKAGE** to:

Office of Conservation- 9th Floor
Injection & Mining Division
617 North 3rd Street
Baton Rouge, LA 70802

045408



CLASS V STRAT TEST WELL PERMIT APPLICATION

OFFICE OF CONSERVATION
INJECTION & MINING DIVISION
617 N. Third St., 9th FLOOR
BATON ROUGE, LA 70802

Injection-Mining@la.gov
(225) 342-5515

UIC-25 STRAT TEST

PLEASE READ APPLICATION INSTRUCTIONS

TYPE ONLY

1. APPLICATION TYPE: (Check One)				
<input checked="" type="checkbox"/> DRILL AND COMPLETE NEW CLASS V WELL <input type="checkbox"/> CONVERT AN EXISTING WELL TO CLASS V				
<input type="checkbox"/> OTHER (SPECIFY):				
2. IDENTIFY WELL USE				
Stratigraphic test well for geologic characterization.				
3. IDENTIFY FUTURE WELL USE (i.e. Conversion to Class VI, monitor well, P&A, etc.)				
Conversion to Class VI following receipt of Class VI permit.				
4. OWNER/OPERATOR NAME				
River Parish Sequestration, LLC				
5. OC OPERATOR CODE				
R1017				
6. OWNER/OPERATOR MAILING ADDRESS				
1333 West Loop South Suite 830				
7. CITY, STATE, ZIP CODE				
Houston, TX 77027				
8. TELEPHONE NO	9. E-MAIL ADDRESS			
(832) 696-0052	andrew.chartrand@blueskyinfrastructure.com			
10. WELL NAME	11. WELL NO	12. WELL SERIAL NO (Well Conversions Only)		
RPN-2-INJ	1			
13. FIELD NAME		14. FIELD CODE		
WILDCAT - SO LA LAFAYETTE		9727		
15. PARISH NAME		16. SECTION	17. TOWNSHIP	18. RANGE
Assumption		79	12S	14E
19. LOCATION COORDINATES (GCS, NAD 27)		20. STATE PLANE COORDINATES (LAMBERT, NAD 27)		
LATITUDE: 30 ° 02 MIN 9.29 SEC LONGITUDE: -91 ° 00 MIN 53.87 SEC		<input type="checkbox"/> NORTH ZONE <input checked="" type="checkbox"/> SOUTH ZONE X: 2,100,740 Y: 498,059		
21. LEGAL LOCATION DESCRIPTION (FROM LOCATION PLAT):				
Proposed Injection Well No. RPN-2-INJ surface location is North 42 09' 08" East, 14,222.20' from N.G.S. Monument "K 228" (P.I.D. BJ2052)				
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NOV 07 2024

045408

22. LIST PERMITS, LICENSES, OR APPROVALS THE APPLICANT HAS RECEIVED OR APPLIED FOR WHICH SPECIFICALLY AFFECT THE APPLICANT'S LEGAL OR TECHNICAL ABILITY TO CARRY OUT THE PROPOSED ACTIVITY. INCLUDE IDENTIFICATION NUMBER OF APPLICATIONS OR, IF ISSUED, THE IDENTIFICATION NUMBER OF THE PERMIT, LICENSE, OR OTHER APPROVALS.

Regulatory Program or Agency	Permits, Licenses, Construction, Project Approval Identification
LDENR Office of Coastal Management	Exempt from Coastal Use Permit
LDEQ	LPDES - Construction Stormwater (will apply)

23. WELL CASING / CEMENT DATA

CASING SIZE (OD- INCHES)	HOLE DIAMETER (INCHES)	CASING WEIGHT (LB/FT)	CASING GRADE	CASING SETTING DEPTHS		TOTAL SACKS	SACKS CEMENT (Lead/Tail)	TYPE (Lead/Tail)	YIELD (CU FT/SACK) (Lead/Tail)	CEMENT TOP
				TOP	BOTTOM					
20	20	129.33	X-42	0	Refusal	NA	NA	NA	NA	NA
13 3/8	17 1/2	68	J-55	0	2,800	3150	2300/850	Pox H / H	1.60 / 1033	0
9 5/8	12 1/4	47	L-80	0	3,980	800	0 / 800	NA / Poz H	NA / 1.59	0
9 5/8	12 1/4	47	25Cr, 80ksi	3,980	4,860	1250	0 / 1250	NA / CorrosaLock	NA / 2.233	3,705
7	10 3/4	29	25Cr, 110ksi	4,860	10,794	1250	0 / 1250	NA / CorrosaLock	NA / 2.233	3,705

ALL WELL DEPTHS SHOULD BE GIVEN IN MD

24. BASE OF USDW (FT): 1,073	25. REFERENCE E-LOG FOR USDW (SERIAL NUMBER): 62589
26. WELL TOTAL DEPTH (FT): 10,794	27. PLUGBACK DEPTH (FT): 28. TUBING SIZE & DEPTH: 7-inch / 4,840 ft

INJECTIVITY TEST INFORMATION (IF APPLICABLE)

30. INJECTION ZONE DEPTHS 4,913 Top: Bottom:	31. COMPLETION/PERFORATION DEPTHS 10,250 Top: Bottom:
-------------------------------------------------------	----------------------------------------------------------------

32. REFERENCE E-LOG FOR INJECTION ZONE INFO (SERIAL NUMBER):

33. WELL COMPLETION	<input type="checkbox"/> OPEN HOLE	<input checked="" type="checkbox"/> PERFORATIONS	<input type="checkbox"/> SCREEN
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34. TEST MATERIAL (e.g. nitrogen, brine, etc): Brine	35. MAXIMUM TEST PRESSURE (psi): 4,000	36. TOTAL INJECTION VOLUME (bbls): 6,810
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CO₂ is prohibited as a Class V test material

37. Is the Well Located on Indian Lands or Other Lands Owned by or under the Jurisdiction or Protection of the Federal Government?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
38. Is the Well Located on State Water Bottoms or Other Lands Owned by or under the Jurisdiction or Protection of the State of Louisiana?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
39. If the proposed well is associated with a potential Class VI geologic sequestration project, does the applicant own the mineral rights at the proposed well locations?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
40. If no, has written notification been provided to the mineral owner(s)?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

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NOV 07 2024

41. AGENT OR CONTACT AUTHORIZED TO ACT ON BEHALF OF THE APPLICANT DURING THE PROCESSING OF THIS APPLICATION**NAME:** Andrew J. Chartrand**COMPANY:** River Parish Sequestration, LLC**MAILING ADDRESS:** 1333 West Loop South, Suite 830, Houston, TX 77027**TELEPHONE NUMBER:** (832) 696-0052**E-MAIL ADDRESS:** andrew.chartrand@blueskyinfrastructure.com**42. CERTIFICATION BY WELL OWNER/OPERATOR**

I certify that as the owner/operator of the injection well, the person identified in Item No. 37 above is authorized to act on my behalf during the processing of this application, to submit additional information as requested, and to give oral statements in support of this application. I will grant an authorized agent of the Office of Conservation entry onto the property to inspect the injection well and related appurtenances as per LSA-R.S. 30:4. I agree to operate the well in accordance with Office of Conservation guidelines. I further certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment or both (LSA-R.S. 30:17).

Print Name of Well Owner/Operator Timothy Watson	Print Title of Company Official (as applicable) Geologist
Signature of Well Owner/Operator 	Date 11/06/24

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NOV 07 2024

INJECTION & MINING DIVISION

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT
P.O. BOX 44487
BATON ROUGE, LOUISIANA 70804-4487
(225) 342-7591
1-800-267-4019

COASTAL USE AUTHORIZATION/CONSISTENCY DETERMINATION

C.U.P No.: **P20230510**

NAME : **RIVER PARISH SEQUESTRATION, LLC**
PROJECT CONSULTING SERVICES, INC
1347 NORTH CAUSEWAY BOULEVARD SUITE 201
MANDEVILLE, LA 70471
Attn: David Wandell

LOCATION: **Ascension, Assumption Parishes, LA**
POB: Lat 30 12' 16.90" N, Long 90 59' 23.72" W; POE: Lat 30 2' 10.02" N, Long 91 0' 54.53" W; Section 16 T11S R14E; McCall, LA.

DESCRIPTION: Proposed installation of three CO2 injection wells, associated monitoring wells, a central pump station, and pipelines to transport anthropogenic CO2. A 24" pipeline will transport CO2 from the industrial area on the east side of the Mississippi River in Geismar, Louisiana, cross below the Mississippi River and the adjacent protection levees, continuing to a Central Pump Station and Injection Well RPN-1-INJ (occurs outside the coastal zone). From the Central Pump Station, a series of in-field pipelines (20", 16" & 8") approximately 8 miles in length will interconnect Injection Wells RPN-2-INJ and RPN-3-INJ. Approx. 82,974 c.y. of material will be excavated and used as fill. Approx. 28,976 c.y. of material will be brought in as additional fill.

Pursuant to the State and Local Coastal Resources Management Act of 1978, as amended (La. R.S. 49:214.21, et seq), a portion of the proposed activity (work in Ascension Parish) is being conducted outside the Louisiana Coastal Zone, and a Coastal Use Permit is not required. Pursuant to the State and Local Coastal Resources Management Act of 1978, as amended (La. R.S. 49:214.34.A), a portion of the proposed activity (line, wells, access) is exempt and a Coastal Use Permit is not required. Pursuant to the Louisiana Administrative Code, Title 43, §723.B.8.b, you are hereby notified that the remainder of the referenced activity (HDD pipeline installation under B. Lafourche) has been determined to have no direct and significant impact (NDSI) on coastal waters and a Coastal Use Permit is not required.

This determination is valid for two (2) years from the date of the signature of the Secretary or his designee on the original determination which was September 11, 2023. If the proposed activity is not initiated within this two year period, this determination will expire and the applicant will be required to submit a new application. The applicant will notify the Office of Coastal Management of the date on which initiation of the proposed activity began by entering a commencement date through the online system, or by mailing said information to OCM.

This determination has been made based on the information provided in your application showing that either no dredging or limited dredging would be necessary to access to the work site. Dredging beyond that described in your application, including prop washing, wheel washing, or otherwise displacing water bottom material is not authorized by this determination. If site conditions are such that dredging beyond that authorized is necessary, a revised determination including agency or public notice if applicable, will be required.

This determination has been made on the basis of information provided by your application. If it is later established that you furnished erroneous data, you may be directed to alter or modify your plans, to remove structures you have installed, and/or to restore the work area to pre-project conditions at your own expense. If

it is established that you knowingly furnished erroneous data, you could also be subject to legal action.

Permittee shall, prior to commencement of the herein permitted activities, contact Atchafalaya Basin Levee District, Attn: Ms. Tiffany Weber Address: P.O. Box 170 Port Allen, LA 70767-0170 permits@abldla.com Pontchartrain Levee District, Attn: Ms. Monica Gorman Address: P. O. Box 426 Lutcher, LA 70071 lono@leveedistrict.org to determine if a construction permit will be required from the local levee district. This determination does not eliminate the need to obtain a permit from the United States Army, Corps of Engineers or any other Federal, state or local approval that may be required by law. The drawings submitted with your referenced application are attached hereto and made a part of the record. If you have any questions regarding this authorization, please contact our office (225) 342-7591 or (800) 267-4019.

***** End of Determination *****

By accepting this determination the applicant agrees to its terms and conditions.

I affix my signature and issue this determination this 11th day of September, 2023.

DEPARTMENT OF NATURAL RESOURCES



Kyle F. Balkum, Administrator
Office of Coastal Management

This agreement becomes binding when signed by the Administrator of the Office of Coastal Management Permits/Mitigation Division, Department of Natural Resources.

Attachments

P20230510

RIVER PARISH SEQUESTRATION, LLC w/attachments

09/11/2023

Page 3 of 3

Final Plats:

1) P20230510 Final Plats 08/11/2023

cc: Martin Mayer, COE w/attachments
Dave Butler, LDWF w/attachments
Les Rosso, State Land w/attachments
Steven Giambrone, DNR/OC w/attachments
Crystal Deroche, DNR/OC w/attachments
Atchafalaya Basin Levee District, LD w/attachments
Pontchartrain Levee District, LD w/attachments
Bayou Lafourche Fresh Water District, BLFWD w/attachments
Jordan Cobbs, OCM w/attachments
Joseph Heintz, OCM/FI w/attachments
Ascension Parish w/attachments
Assumption Parish w/attachments

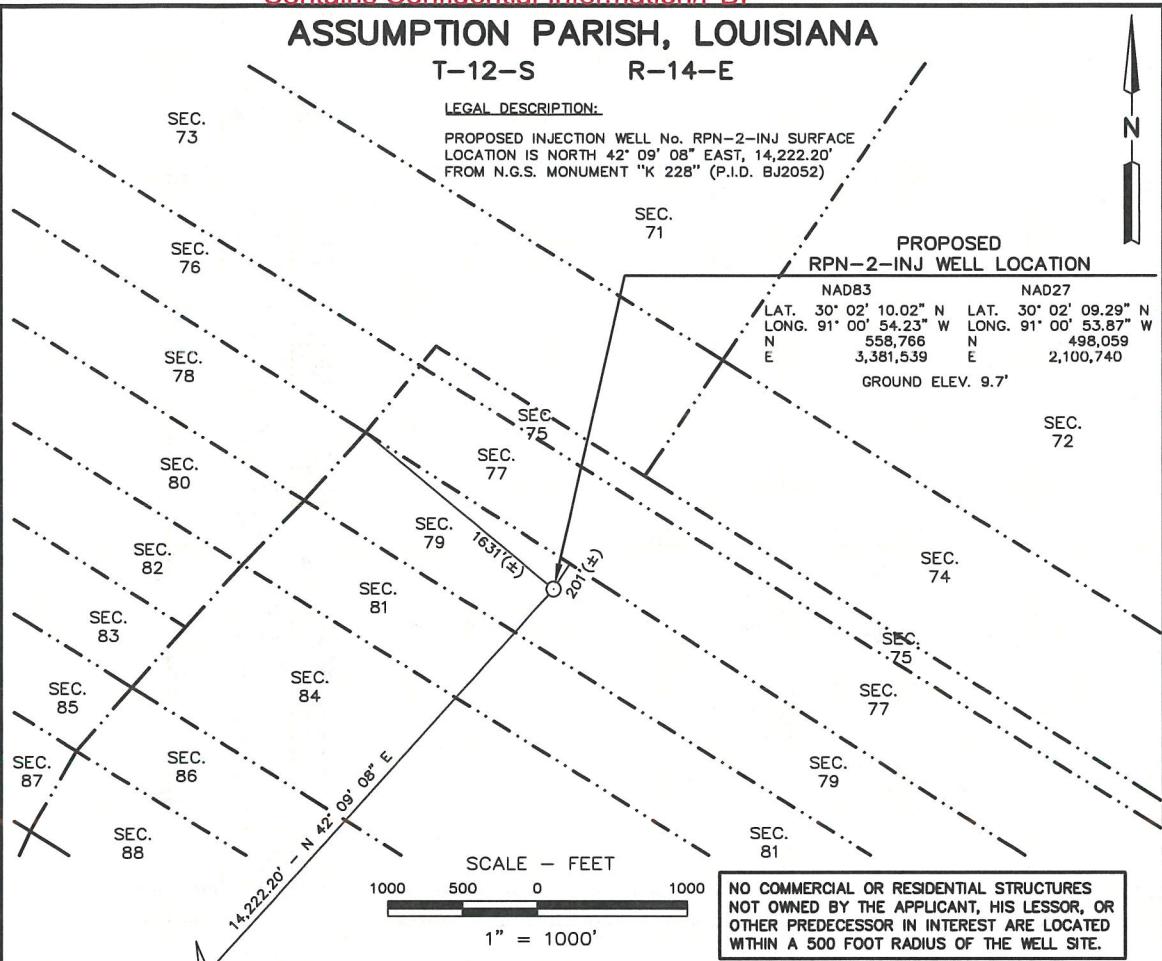
RIVER PARISH SEQUESTRATION, LLC w/attachments

04540

INJECTION & MINING DIVISION

OFFICE OF CONSERVATION

AUG 02 2024



N.G.S. MONUMENT
"K 228"
NAD83
N 548,222.24
E 3,371,995.03



1/29/2024

NOTES:

NORTH ARROW AND COORDINATES REFER TO THE LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83). COORDINATES WERE DERIVED FROM RTK GPS OBSERVATIONS USING LSU C4G REAL TIME NETWORK CORRECTIONS.

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88), BASED ON RTK GPS OBSERVATIONS USING LSU C4G REAL TIME NETWORK CORRECTIONS AND GEODID MODEL "GEODID 18".

N.G.S. MONUMENT INFORMATION TAKEN FROM PUBLISHED N.G.S. DATA SHEETS.

DISTANCES IN FEET BY HORIZONTAL MEASUREMENT.

PARISH, SECTION, TOWNSHIP, AND RANGE SCALED FROM REFERENCED U.S. GEOLOGICAL SURVEY QUADRANGLE MAP. THE LOCATION OF ANY SECTION LINES DEPICTED HEREON SHALL BE CONSIDERED APPROXIMATE AND SHOULD BE USED SOLELY FOR ORIENTATION PURPOSES.

PROPOSED WELL LOCATION FURNISHED BY RIVER PARISH SEQUESTRATION, LLC.

DATE OF FIELD SURVEY : MAY 24, 2023.

REFERENCES:

HYDRO FIELD BOOK No. 1720.

UNITED STATES GEOLOGICAL SURVEY QUADRANGLE MAP "BELLE ROSE, LA.", DATED 1999.

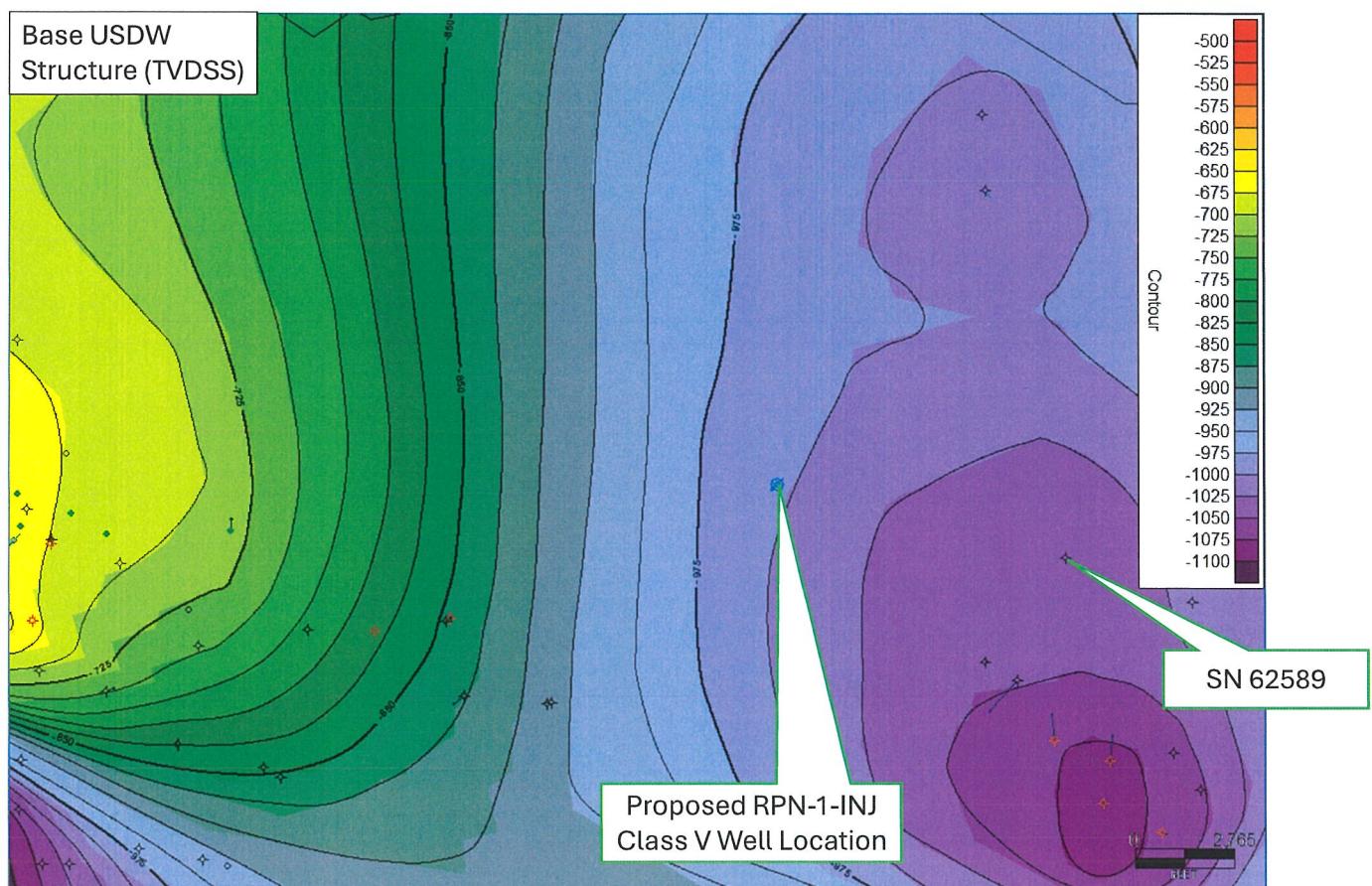
BY	RIVER PARISH SEQUESTRATION, LLC		
REVISION	PROPOSED RPN-2-INJ WELL		
ASSUMPTION PARISH, LOUISIANA			
 Hydro Consultants, inc. 10275 SIEGEN LANE - BATON ROUGE, LOUISIANA - (225) 766-4422			
DATE	DRAWN WAM	CHECKED ISL	APPROVED MEG JR
	DATE JANUARY 29, 2024		DWG. NO. A06-471-05

045408

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OCT 23 2024

INJECTION AND MINING DIVISION

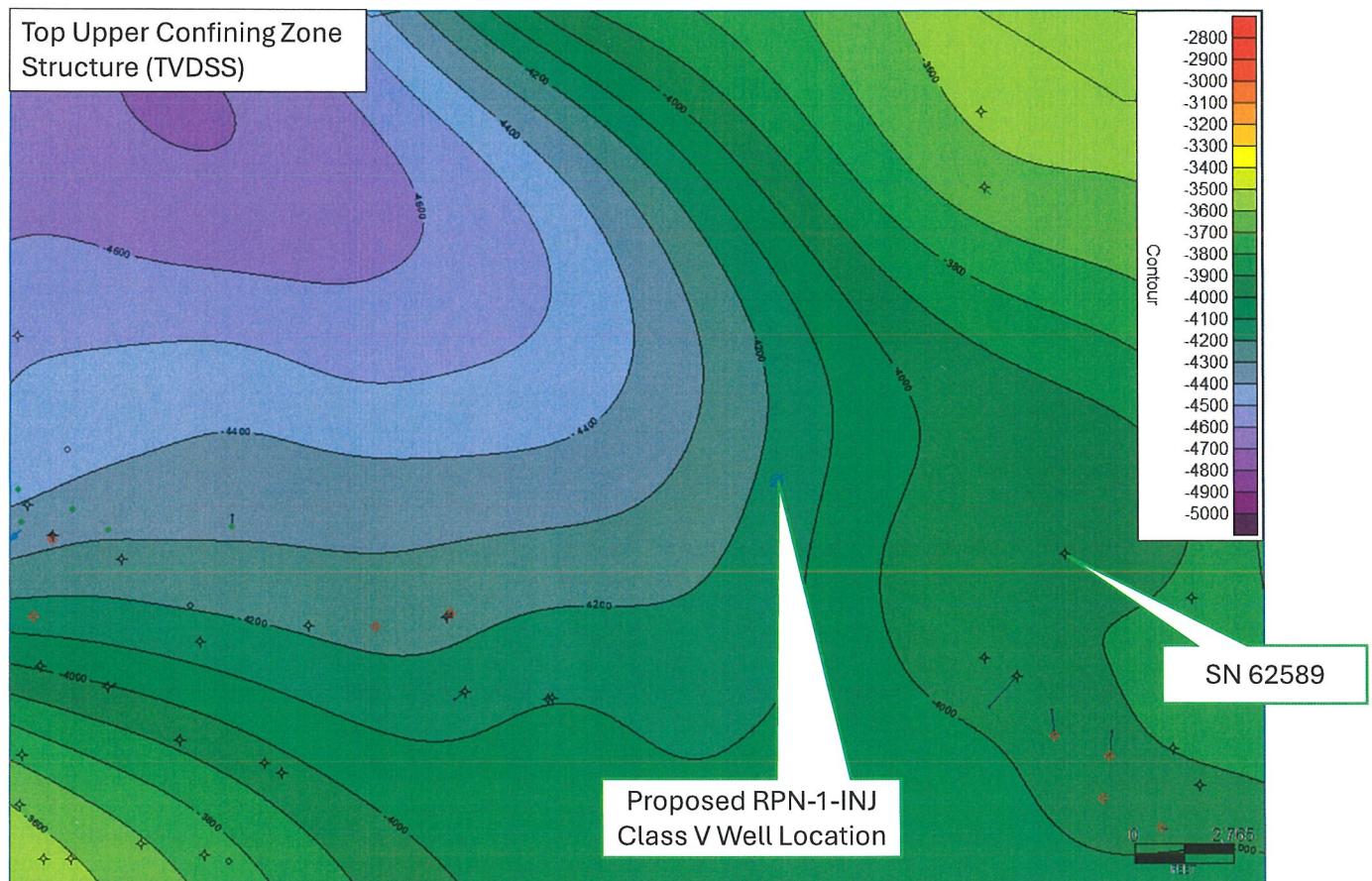


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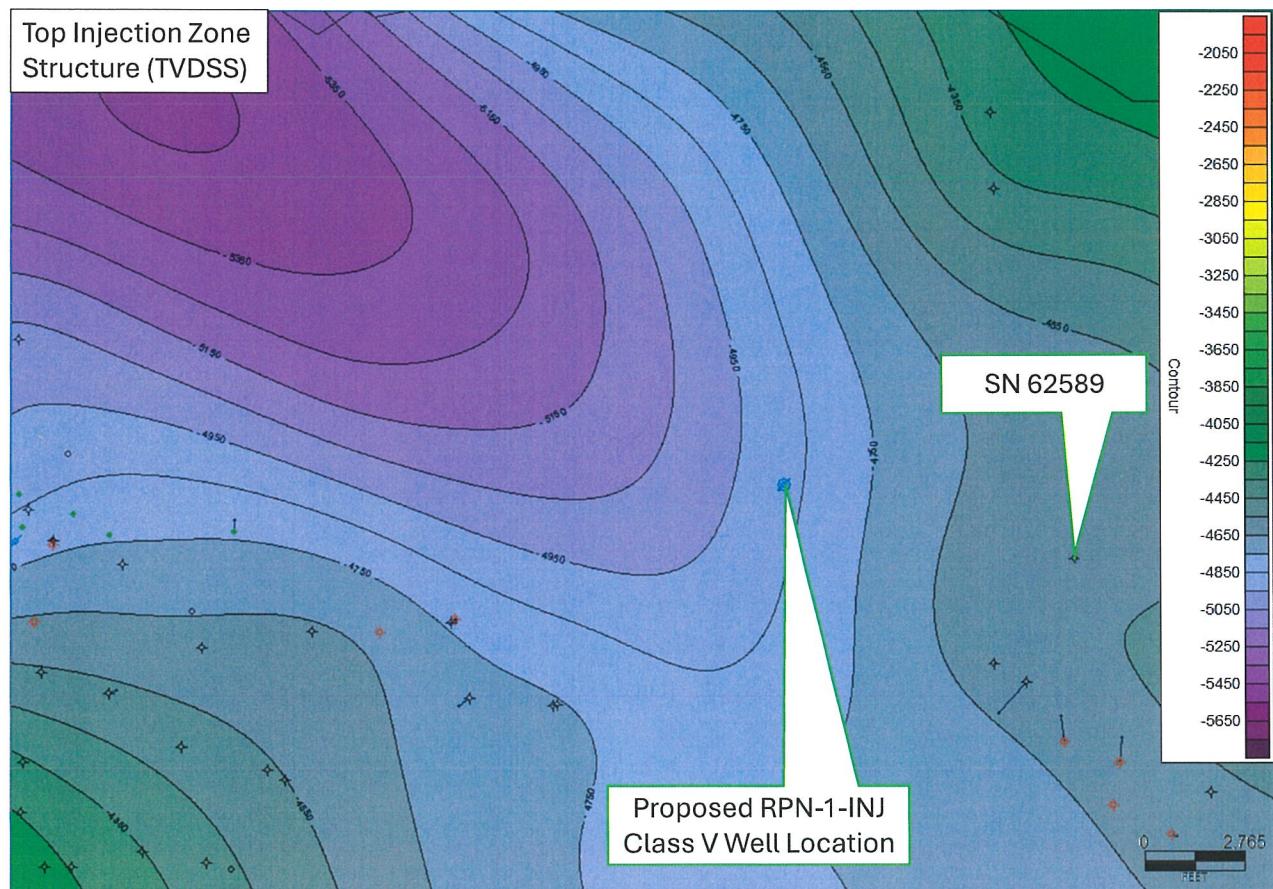
OCT 23 2024

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OCT 23 2024

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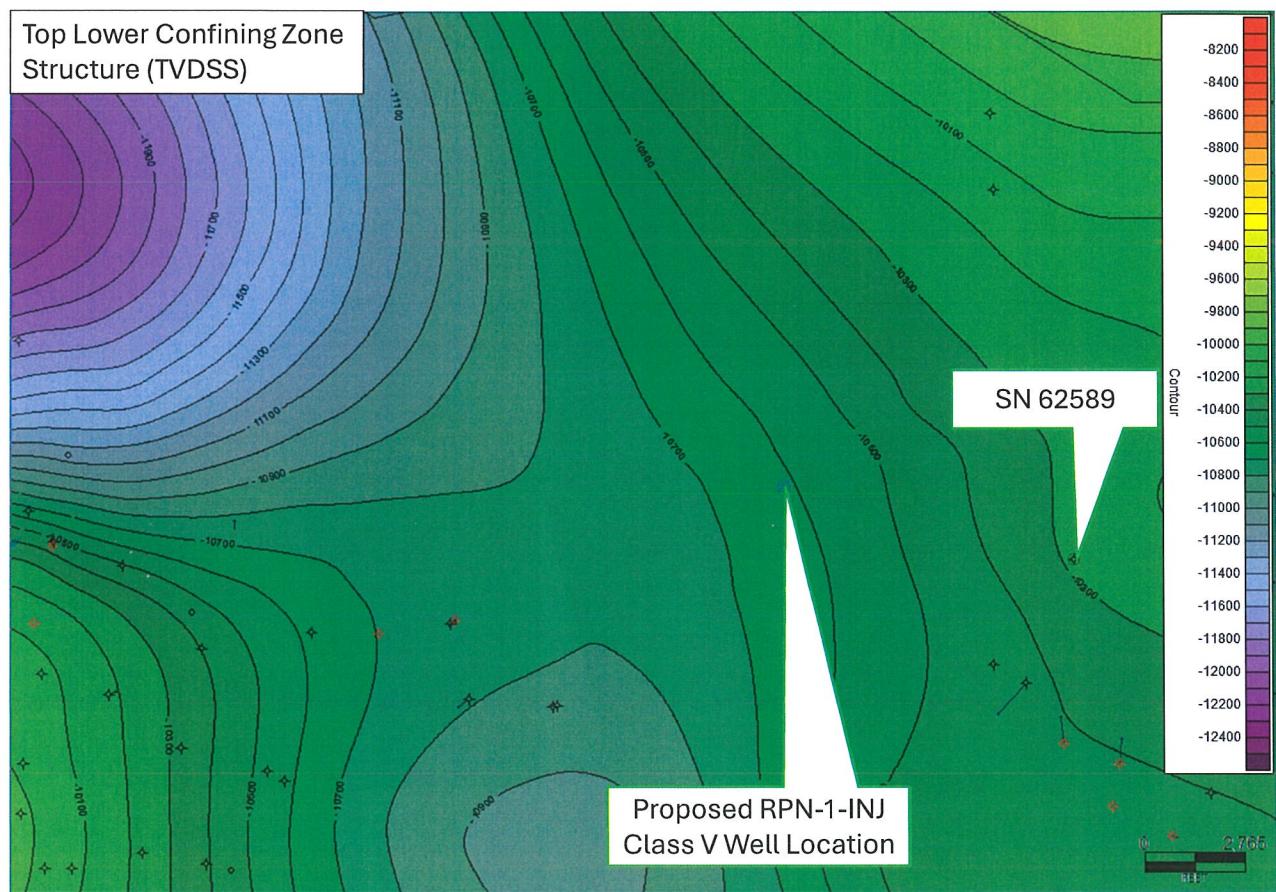


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OCT 23 2024

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a) General Well Information:

Well Name	RPN-2-INJ
Well Classification	Class V
County, State	Assumption, Louisiana
Target Formation	Miocene
TVD / MD (ft)	10,794 ft (MD)
Trajectory	Vertical

b) Prognosis:

Intervals	MD (ft)	Comments
Base of USDW	1,041	
Pliocene Shale	4,205	shale seal
Lower Pliocene Sand	4,913	permeable sandstone & shale sequence
Top Miocene	5,569	permeable sandstone & shale sequence
Bigenerina Humblei	7,194	permeable sandstone & shale sequence
Cibicides Opima	8,192	permeable sandstone & shale sequence
Operc	9,711	permeable sandstone & shale sequence
Camerina	10,162	permeable sandstone & shale sequence
Marginulina Ascensionesis	10,644	shale seal

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OCT 23 2013

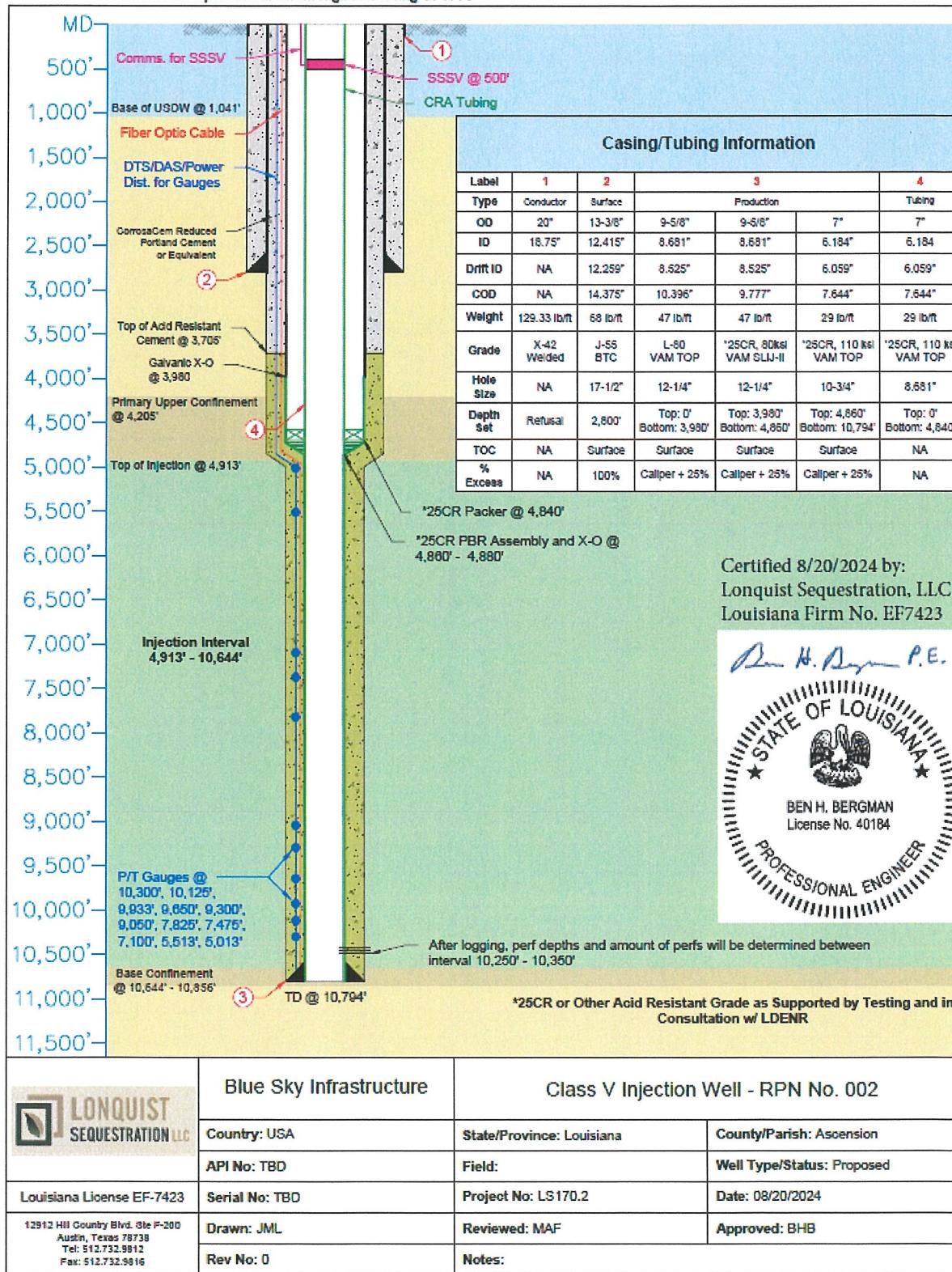
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OCT 23 2024

c) Proposed Well Schematic (Attachment 4):

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NOTE: All Depths are MD from Rig Floor Using 35' KBD



OCT 20 2024

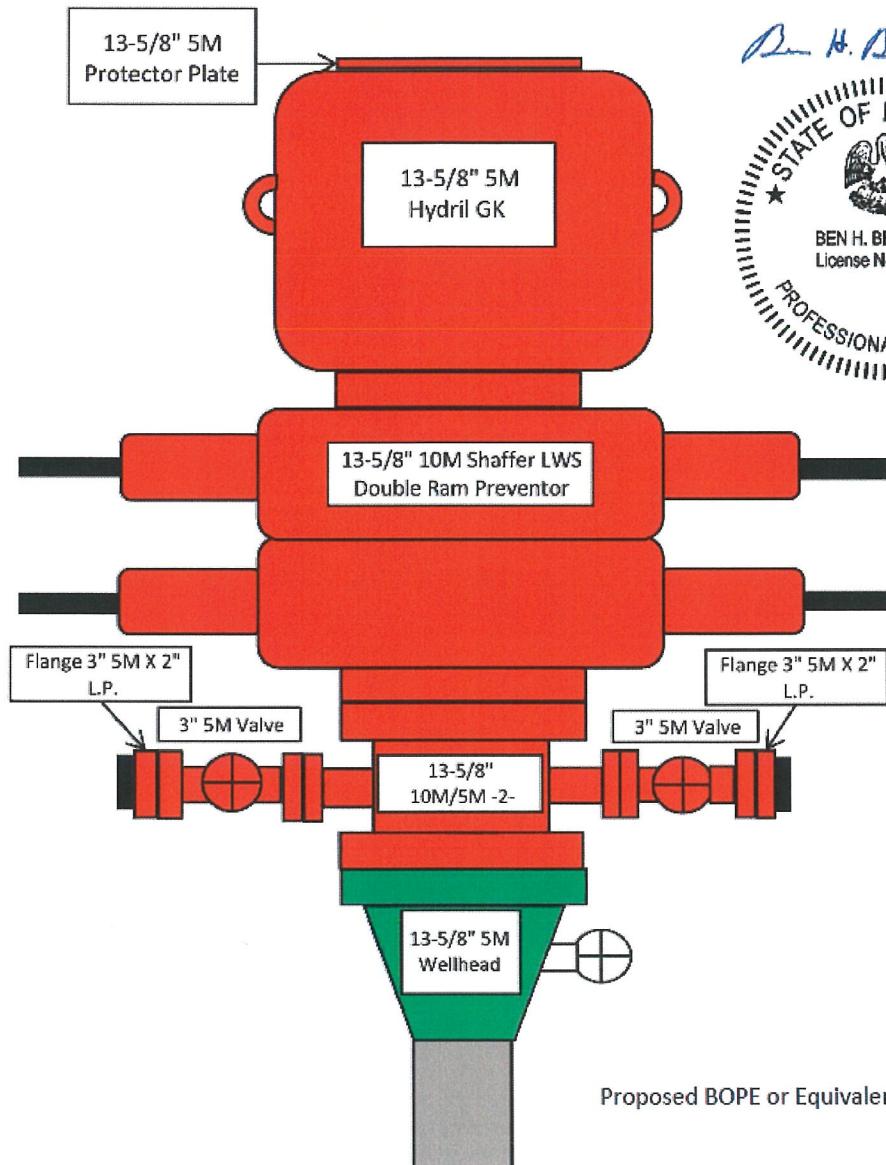
INJECTION AND MINING DIVISION

d) BOP Schematic:

BOPE Stack Schematic

Certified 7/25/2024 by:
Lonquist Sequestration, LLC
Louisiana Firm No. EF7423

BEN H. BERGMAN P.E.



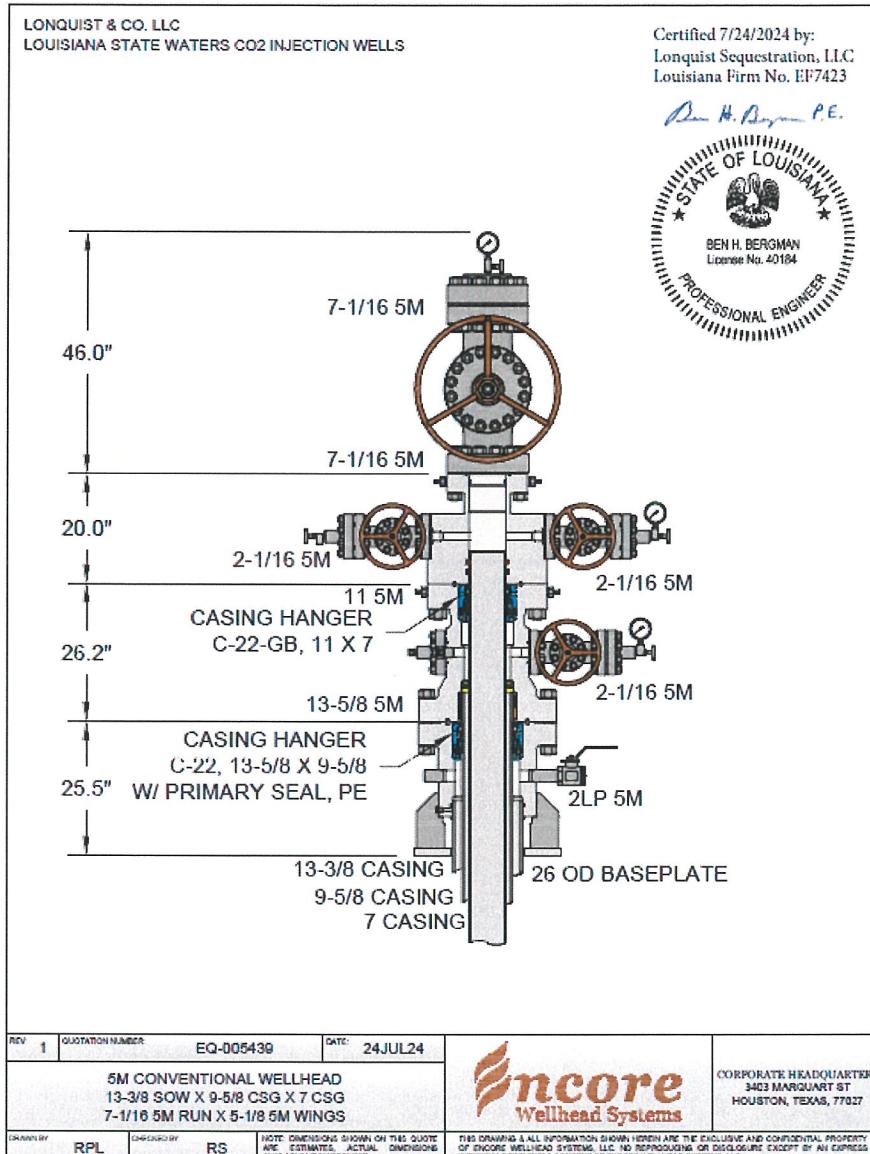
045408

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OCT 20 2024

e) Wellhead Schematic:

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f) Drilling Scope of work (Attachment 5):

20" Conductor Drive

09/23/2008

1. Build location
2. Construct cellar for drilling operations
3. Move-in rig to drive conductor on location
4. Position rig on marked well center
5. Rig up hydraulic hammer and drive adaptor
6. Spud well, drive 20" to planned depth ~200' (200 blows/ft)
7. Cut & dress conductor pipe as required

INJECTION AND MINING DIVISION

13-3/8" Surface Casing

8. Move in drilling rig and equipment
9. PU 17-1/2" bit/BHA
10. Clean-out conductor as needed
11. Drill 17-1/2" hole with WBM and sweeps as needed
12. Drill to TD of ~2,800' with estimated ~ 9.0 – 9.2 ppg WBM
13. Notify CES at least 48 hours prior to anticipated casing test, and CES will be provided the opportunity to witness the test.
14. Run open hole wireline log to determine USDW
15. Submit log to IDM confirming base USDW and at least one non-USDW sand prior to setting casing
16. Upon approval from IDM, run 13-3/8" casing with centralizers to TD (or deeper as determined by open hole logs)
17. Move-in cementing company and rig-up cementing equipment
18. Mix and pump cement
19. Cement casing to surface and pump top-off cement job as required
20. WOC
21. Make 13-5/8" rough cut, laid down 13-5/8" cut off
22. Weld on 13-3/8" SOW x 13-5/8" 5M - CSG Head
23. Test Well head to 1500 psi
24. Run cased hole cement evaluation log w/ temp log

9-5/8" x 7" Production Casing

25. Install 13-5/8" 5 M x 13-5/8" 10M adaptor spool
26. Install 13-5/8", 10M BOP and pressure test BOP to 5,000 psi using test plug
27. Pressure test with chart recorder the 13-5/8" casing to 1,000 psi for 60 minutes
28. Sign and submit form CSG-T and pressure chart to IMD
29. RIH with 12-1/4" bit & BHA
30. Drill out shoe, changeover to OBM
31. Perform Formation Integrity Test (Pressure TBD)
32. Drill to Core interval depth for Upper Confinement Shale Interval
33. Circulate hole clean
34. Pull out of hole. Stand Back BHA

09/23/2023

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35. Drill ahead with 12-1/4" bit to 3,300' (Core Point #1)
36. Core from 3,300' – 3,330' TVD and POOH (Core #1)
37. Run in hole with 12-1/4" bit & BHA
38. Ream through cored interval (Core #1) then Drill ahead with 12-1/4" bit to 4,250' (Core Point #2)
39. Core from 4,250' – 4,310' TVD and POOH (Core #2)
40. Ream through cored interval (Core #2) then Drill ahead with 12-1/4" bit to 4,600' (Core Point #3)
41. Core from 4,600' – 4,660' TVD and POOH (Core #3)
42. Ream through cored interval (Core #3) then drill 12-1/4" hole section to TD of ~4,860
43. Increase MW as needed throughout hole section
44. Circulate hole clean
45. Pull out of hole. Stand Back BHA.
46. RIH with 8.5" core assembly
47. Core from 4,860' – 4,920' TVD and POOH (Core #4)
48. Core from 4,920' – 4,950' TVD and POOH (Core #5)
49. Ream through cored interval (Core #4 & Core #5) then drill ahead with 10-3/4" bit to 5,930' (Core Point #6)
50. Core from 5,930' – 5,990' TVD and POOH (Core #6)
51. Ream through cored interval (Core #6) then drill ahead with 10-3/4" bit to 7,165' (Core Point #7)
52. Core from 7,165' – 7,195' TVD and POOH (Core #7)
53. Core from 7,195' – 7,225' TVD and POOH (Core #8)
54. Core from 7,225' – 7,255' TVD and POOH (Core #9)
55. Ream through cored interval (Core #7, #8, & #9) then drill ahead with 10-3/4" bit to 7,400' (Core Point #10)
56. Core from 7,400' – 7,430' TVD and POOH (Core #10)
57. Ream through cored interval (Core #10) then drill ahead with 10-3/4" bit to 7,580' (Core Point #11)
58. Core from 7,580' – 7,610' TVD and POOH (Core #11)
59. Core from 7,610' – 7,640' TVD and POOH (Core #12)
60. Ream through cored interval (Core #11 & #12) then drill ahead with 10-3/4" bit to 8,200' (Core Point #13)
61. Core from 8,200' – 8,230' TVD and POOH (Core #13)
62. Ream through cored interval (Core #13) then drill ahead with 10-3/4" bit to 8,596' (Core Point #14)
63. Core from 8,596' – 8,656' TVD and POOH (Core #14)
64. Ream through cored interval (Core #14) then drill ahead with 10-3/4" bit to 9,250' (Core Point #15)
65. Core from 9,250' – 9,280' TVD and POOH (Core #15)
66. Ream through cored interval (Core #15) then drill ahead with 10-3/4" bit to 9,681' (Core Point #16)
67. Core from 9,681' – 9,741' TVD and POOH (Core #16)
68. Ream through cored interval (Core #16) then drill ahead with 10-3/4" bit to 10,100' (Core Point #17)
69. Core from 10,100' – 10,130' TVD and POOH (Core #17)

70. Ream through cored interval (Core #17) then drill ahead with 10-3/4" bit to 10,186' (Core Point #18)
71. Core from 10,186' – 10,216' TVD and POOH (Core #18)
72. Core from 10,216' – 10,246' TVD and POOH (Core #19)
73. Ream through cored interval (Core #18 & #19) then drill ahead with 10-3/4" bit to 10,675' (Core Point #20)
74. Core from 10,675' – 10,705' TVD and POOH (Core #18)
75. Ream through cored interval (Core #20) then drill ahead with 10-3/4" bit to TD (10,794')
76. Circulate hole clean & condition hole/mud for open hole logging.
77. Pull out of hole. Stand Back BHA.
78. Rig up wireline unit and run open hole logs.
79. Rig down logging company.
80. Run in hole with 12-1/4" bit & BHA to 4,860'
81. Circulate and condition hole in preparation to run production casing
82. Pull out of hole. Stand back drill pipe and BHA, lay down 12-12/4" bit & stabilizers
83. Run in hole with 10-3/4" bit & BHA to 10,794' TD
84. Circulate and condition hole in preparation to run production casing
85. Pull out of hole laying down drill pipe, BHA and bit
86. Rig-up 9-5/8" & 7" casing running tools
87. Run in hole with 7" 25CR casing with 7" 25CR Polished Bore Receptacle (or other corrosion resistant grade as supported by testing and in coordination w/ LDENR) with centralizers and fiber optic line.
88. Cross-over to 9-5/8" 25CR casing (or other corrosion resistant grade as supported by testing and in coordination w/ LDENR) with fiber optic line to ~ 225' above the Upper Confinement Shale Interval. RIH with 9-5/8" L-80 casing with fiber optic line to 10,794' TD
89. Land 9-5/8" hanger in B-section of wellhead
90. Cement production casing to surface with Acid resistant cement to +/- 500' above Upper Confinement Shale Interval. Displace cement w/ Brine
91. WOC
92. Run cased hole ultrasonic casing inspection and cement evaluation log w/ temp log
93. Pressure test with chart recorder the 9-5/8" x 7" production casing to 5,000 psi for 60 min.
94. Sign and submit form CSG-T and pressure chart to IMD
95. Break BOPE at wellhead connection.
96. Lay down 13-5/8" 5 M x 13-5/8" 10M adaptor spool
97. Nipple BOPE
98. Install B-Section of Wellhead
99. Test well head to 4000 psi
100. Start completion phase of well construction

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g) Completion Scope of work:

7" Tubing and Packer

101. Install 11" 5M x 13-5/8" 10M adaptor spool on B-Section
102. Nipple up BOPE
103. Body Test BOPE and wing valves to 4,000 psi using test plug
104. Rig-up 7" tubing running tools
105. Run in hole with 7" 25CR tubing with Seal Assembly for 7" 25CR Polished Bore
Receptacle and 9-5/8" 25CR Packer on 7" 25CR tubing (or other corrosion resistant grade as supported by testing and in coordination w/ LDENR)
106. Circulate hole clean with brine
107. String into Polished Bore Receptacle and set 7" Packer @ +/-4,840'
108. Test 7" packer down 9-5/8" x 7" annulus using kill line to 3,000 psi with IMD witness
109. Break BOPE connection at wellhead
110. Set sips on 7" in tubing
111. Cut off 7" tubing and lay down cut off
112. Lay down BOPE
113. Install wellhead and tree
114. Test wellhead to 5,000 psi
115. Rig down and move out drilling rig and equipment

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Perforate

116. Move in and rig up wireline unit
117. Run in hole. Perforate lowest injection interval (perforation depths and number of shots TBD)
118. Pull out of hole and lay down perf guns
119. Shut well in for 24 hours to allow to allow bottom hole pressures to stabilize

Step Rate Test

120. LELAP accredited fluid sample, updated test procedure, and CBL will be submitted to IMD for approval prior to any injection testing.
121. Set the required number of 500-bbl frac tanks to complete the test per the proposed schedule
 - a. Fill with clean brine
122. Rig up all necessary pump equipment and iron
 - a. MIRU kill trucks/frac pumps/equipment and lay iron
 - b. Pumps must be positive displacement with digital recording of rate
 - c. Pumps, iron and flow control should be sized so that steps in rate will not create pressure or rate transients, other than those caused by the intended steps
 - d. Rig up flow meter and pressure gauges (ensure pressure gauges are recently calibrated and able to accommodate the full range of expected pressures)
123. MIRU WL (w/ FOSV & lubricator to be able to be able to contain and accurately measure pressure while performing tests. Test pumps, lines and lubricator to 4,000 psi.
124. Perform gauge ring run.

125. Pick up Bottom Hole Pressure memory gauge and RIH to top perforation depth, ensure the gauge is calibrated

e. Bottom Hole Pressure memory gauge should have a continuous surface readout

126. If not already in place, install surface pressure gauge with a continuous readout

127. If surface pressure indicates that fluid level is beneath the surface, fill hole with Brine at a constant rate of 0.3 BPM

128. Once the well is full, stop pumping and allow the pressure to descend 0 PSIG indicating that fluid level is at surface

129. Begin test at the initial injection rate for 30 minutes

130. Step up rates per the rate schedule below:

Step No	Injection Rate		Fluid Velocity (ft/s) 7", 29#	Duration of Pumping Minutes
	bbl/min	bbl/day		
1	1	1,440	0.4	30
2	5	7,200	2.2	30
3	10	14,400	4.5	30
4	15	21,600	6.7	30
5	20	28,800	9	30
6	25	36,000	11.2	30
7	30	43,200	13.5	30
8	35	50,400	15.7	30
9	40	57,600	17.9	30
10	46	66,240	20.6	30

f. BHP vs rate should be plotted in real time

g. Injection rate must not exceed the recommended limit of 30 ft/sec in the tubing

h. Surface pressure should not exceed 80% of the maximum pressure rating of the wellhead at any time (80% = 4,000 psi)

i. Changes in flow rate must occur over as short of intervals as possible

j. Injection rates should be controlled with a constant flow regulator

k. All injection flow rates, including hole conditioning treatments prior to the test, must be documented on service company forms

l. Re-fill frac tanks as needed

l. LCO recommends that a minimum of three fluid samples be collected throughout the test, at the beginning, middle and end

m. The density of the samples will be read by an in-house method, and recorded for later reference

131. Upon completion of the final injection stage, the line valve must be closed to stop injection immediately. This will allow the pressure to bleed off into the formation.

m. Ensure that pressure values are recorded at the highest obtainable frequency during shut-in

n. Continue to capture falloff pressure data for a minimum of one hour

132. Conclude test, rig down and move out pumps and WL unit

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Temporary Abandonment Operations**INJECTION AND MINING DIVISION**

1. Move in and rig up wireline unit
2. Ensure well is static
3. Make gauge ring run to 20' above perforations
4. Run in hole with 7" cast iron bridge and set 30' above top perforation
5. Run in hole with dump bailor and leave 20' of cement on top of cast iron bridge plug
6. Rig down wireline unit
7. Rig up pump truck and pressure test casing and cast-iron bridge plug to 1500 psi
8. Shut well in and rig down pump truck

h) P&A Scope of work (Attachment 6):

1. Move in Workover Unit that has a pulling capacity of 200,000 lbs or greater, work string fluid, pumps, tanks and equipment
2. Ensure well is static
3. Nipple down tree
4. Nipple up BOPE
5. Test BOPE 3,000 psi using test plug
6. Unset packer
7. Pull seal assembly out of polished bore receptacle
8. Pull out of hole laying down 7" production tubing, packer and seal assembly
9. Make up 5-7/8" bit
10. Run in hole and tag top of cement on cast iron bridge plug
11. Close pipe rams and test casing to 1500 psi
12. Displace hole with 9.0 ppg freshwater mud
13. Pull out of hole standing back 2,600' of workstring
14. Continue to pullout of hole laying down workstring, bit and scraper
15. Rig up wireline unit
16. Make gauge ring run
17. Run in hole on wireline with 9-5/8" cast iron cement retainer and set at 4,156'
18. Run in hole on wireline with dump bailor and leave 20' of cement on top of cast iron bridge plug
19. Run in hole on wireline with 9-5/8" cast iron cement retainer and set at 2,850'
20. Run in hole with workstring. Tag top of cement retainer
21. Rig up cementers and spot 100' cement plug on top of cast iron cement retainer from 2,850' to 2,750'
22. Displace with 9 ppg fresh water mud
23. Pull above top of cement to +/- 2,600' and circulate bottoms up to clean out workstring
24. Pull out of hole standing back 900' working string

25. Continue to pull out of hole laying down tubing
26. Run in hole on wireline with 9-5/8" cast iron cement retainer and set at 860'
27. Rig down wireline unit
28. Run in hole with workstring. Tag top of cement retainer
29. Rig up cementers and spot cement plug from 860' to surface.
30. Pull out of hole laying down workstring
31. Rig down and move out cementers
32. Cut off casing 4' below ground level
33. Lay down wellhead and cut off
34. Weld steel plate on top of 9-5/8" casing
35. Move workover unit and all equipment off location.

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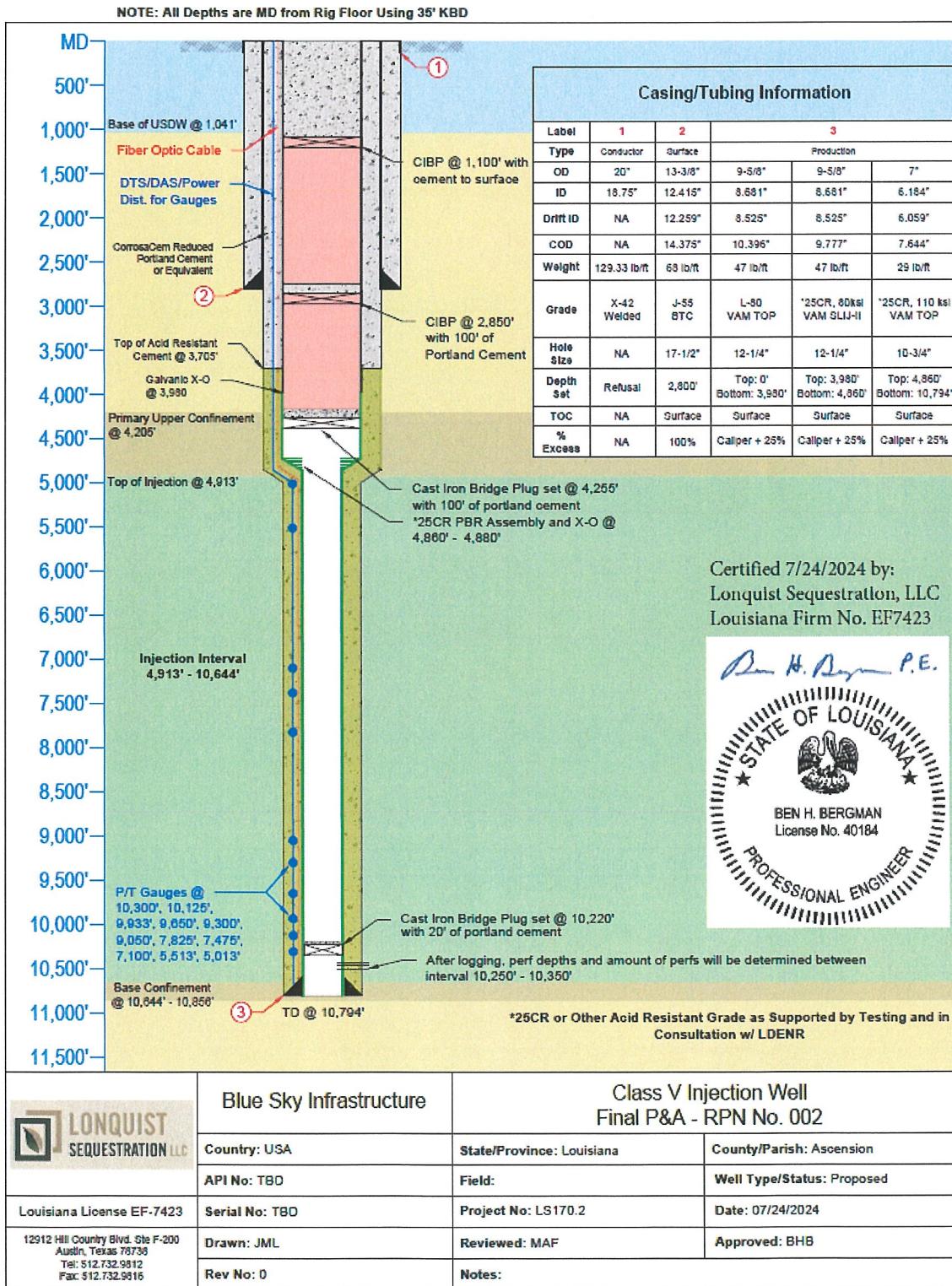
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i) Proposed P&A Schematic (Attachment 6):

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j) Logging & Testing Program:**1) Mudlogging Requirements:**

- a. Sample every 30 ft from surface to TD.

2) Coring Requirements:

Core Interval #	Formation	Lithology	# of Cores	Barrel Length (ft)	Interval Length (ft)	Upper Depth MD (ft)	Upper Depth TVDSS (ft)
1	Above Primary Conf	Shale/mudstone	1	30	30	3300	-3263
2	Lower Plio Shale	Shale/mudstone	1	60	60	4250	-4213
3	Lower Plio Shale	Shale/mudstone	1	60	60	4600	-4563
4	Lower Plio Shale	Shale/mudstone	1	60	60	4860	-4823
5	Lower Pliocene Sand	Sand	1	30	30	4920	-4883
6	1st Miocene Shale	Shale	1	60	60	5930	-5893
7	Tex W/Big Hum	Sand/Shale	3	30	90	7165	-7128
8	Big Hum Sand	Sand	1	30	30	7400	-7363
9	Lwr Cris I	Shale/Sand	2	30	60	7580	-7543
10	Cib OP Shale	Shale	1	30	30	8200	-8163
11	Amp_B	Sand/Shale	1	60	60	8596	-8559
12	Rob_L Sand	Sand	1	30	30	9250	-9213
13	Rob_L/Operc_Shale	Sand/Shale	1	60	60	9681	-9644
14	Operc Sand	Sand	1	30	30	10100	-10063
15	Camerina Shale	Shale	1	30	30	10186	-10149
16	Camerina Sand	Sand	1	30	30	10216	-10179
17	Marg_A_Shale	Shale	1	30	30	10675	-10638
			20		780		

3) Logging Program:

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Section	Open Hole Logs	Interval/ sample
17.5" @ 2800 ft	Gamma Ray	0 - 2800
	Resistivity	0 - 2800
	Density	0 - 2800
	Neutron	0 - 2800
	SP	0 - 2800
	Sonic	0 - 2800
	4/6 arm caliper	0 - 2800
12.25" x 10.75" @ TD OBM	Spectral GR	2800 - TD
	Resistivity	2800 - TD
	Density	2800 - TD
	Neutron	2800 - TD
	Spontaneous Potential	2800 - TD
	Dipole Sonic	2800 - TD
	High Resolution Resistivity Imager	2800 - TD
	Elemental Capture Spectroscopy	2800 - TD
	Magnetic Resonance	2800 - TD
	RSWC	100
	Pressure Sampling	15
	Fluid Sampling	10
	Mini-Frac	1
Section	Cased Hole Logs	Interval/ sample
13 3/8" @ 2800 ft	CBL, GR, Temp	0 - 2800
9 5/8" x 7" @TD	Radially Investigative CBL, GR, CCL	2800 - TD

Blue Sky Infrastructure

Claimed as PBI

RPN 002

OPERATION: Plug & Abandonment			Date:
Operator: Blue Sky Infrastructure			LFS Labor: \$ 77,680.00
Well Name: RPN	Well No.: 002		Third Party Costs: \$ 320,580.00
Field Name:	API/SN: TBD		LFS Management Fee 0%: \$ -
Location: River Parish Sequestration	County/Parish: Ascension (03)		0% Contingency: \$ -
State: Louisiana (LA)	Job Days: 12		8.95% Tax: \$ 28,691.91
Rig Contractor: TBD	Project No: LS170.2		TOTAL: \$ 426,951.91

Claimed as PBI

SERVICE	CODE	ESTIMATE	COMMENTS
LFS Project Support	01.00		
Field Supervision	01.01	\$30,000	Site Supervision - \$2,500/Day
Site Safety Supervision	01.02	\$19,200	Site Safety - \$1,600/Day
Per Diem / Computer & Phone	01.04	\$3,360	Per Diem / Computer & Phone
Mileage / Travel	01.05	\$7,200	Field & Safety Supervision - Mileage, Lodging - \$175/Night
Project Engineer	01.07	\$6,300	Project Engineer - 3 Hours/Day @ \$175/Hour
Operations Manager	01.08	\$3,120	Operations Oversight - \$260/Hour (1-Hour Per Day)
Engineering Support	01.09	\$5,000	Procedure, AFE & Vendor Procurement, Etc.
Final Reporting	01.14	\$3,500	Final Report & Regulatory Filings

THIRD PARTY

SERVICE	CODE	ESTIMATE	COMMENTS
Drilling/Workover Rig	02.00		
Workover Rig Rate	02.02	\$52,800	500 HP Rig w/ Pump & Tank Combo - \$500/Hour
Mob/Demob	02.03	\$12,000	Trucking, Permitting, & Rig Time
Fuel	02.04	\$7,200	Red Dye Diesel - \$60/Hour
BHA	03.00		
Bits	03.01	\$5,000	5-7/8" Mill Tooth (Rental)
Fluids	04.00		
Service Fluids	04.03	\$13,500	9.0 PPG, 45 Vis FW Mud (Plug Mud)
Cement	05.00		
Remedial Cement	05.03	\$50,000	Cement Unit & Materials - API Class 'A' Neat Plugs
Casing Crews	08.00		
Hanging Strings	08.03	\$9,500	7" CSG Pull (-5,000') - 3-Man Crew & Power Tongs
Wireline	09.00		
Cased Hole Logs	09.02	\$30,000	Cast-Iron Bridge Plugs (CIBP) Setting Chargess (2X); GR Correlation Included
Misc Wireline	09.99	\$24,000	9-5/8" 47.00#: Cast-Iron Bridge Plugs (3)
Services	12.00		
Packers	12.05	\$3,000	Tool Hand - Unseat Packer
Trucking	12.11	\$17,500	Mobilization & Demobilization of Equipment, Hotshots, Etc.
Welding	12.12	\$1,200	8 Hours @ Welding Installing Cap
Rentals	13.00		
BOP	13.01	\$17,500	11" 5M BOP & Adaptor Spools, Expendables
Forklift	13.06	\$4,100	12K Forklift - 2 Weeks
Pickup/Laydown Machine	13.13	\$22,800	Lay Down Machine & Operator - \$2,850/Day @ 7 Days
Pipe Racks	13.14	\$600	Pipe Rack Rentals - \$50/Day
Pumps	13.15	\$630	4" Transfer Pump (Boost)
Tanks	13.18	\$3,400	500 Bbl. Frac Tank (2X), Washout Fees
Work String	13.19	\$21,600	2-7/8" 7.90# P-110 PH-6 Work String
Port-o-Potty	13.21	\$750	(2) POJ & (1) Handwash Station
Disposal	14.00		
Vac Truck	14.02	\$12,500	Transfer of Mud & Disposal of Fluids
Mud	14.04	\$8,000	Fresh Water Mud Disposal
Misc Disposal	14.99	\$3,000	Washout Fees - \$500/Each

Prepared By	Date	Approved By	Date	Claimed as PBI
Colten Long	7/26/2024	Michael Franko	7/26/2024	

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RIVER
PARISH

**ENVIRONMENTAL IMPACT ASSESSMENT
(IT ANALYSIS)**

ATTACHMENT 7

**River Parish Sequestration Project
RPN-2-INJ Test Well**

River Parish Sequestration, LLC

July 2024

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INJECTION AND MINING DIVISION

Environmental Assessment Statement (IT Analysis)

INTRODUCTION

On July 31, 2024, River Parish Sequestration, LLC (RPS) submitted an application to the Injection and Mining Division (IMD) of the Louisiana Department of Energy and Natural Resources (LDENR), Office of Conservation (OC), for a permit to drill a Class V stratigraphic test well (referred to as the “RPN-2-INJ test well) in Assumption Parish in order to collect geotechnical cores, fluid samples, static pressure measurements, and other applicable information.

As required under the Louisiana Constitution, Article IX, §1 and the Louisiana Revised Statutes (La. R.S. 30:2018), an Environmental Impact Assessment, also referred to as a response to the “IT Decision,” has been developed in support of this Class V application. This document provides the Environmental Impact Assessment for the Evan Belle test well.

Article IX, Natural Resources, of the Louisiana Constitution provides a constitutional basis for implementation of environmental standards in the State. The public policy set forth in Article IX, Section 1 is as follows:

The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved and replenished insofar as possible and consistent with the health, safety and welfare of the people. The legislature shall enact laws to implement this policy.

In *Save Ourselves v. Environmental Control Commission*, 452 So. 2d 1152, 1157 (La. 1984), the Louisiana Supreme Court ruled that the constitutional requirements of the Natural Resources Article of the Louisiana Constitution were not self-implementing and that the IT factors are derived from Louisiana law by analogy to the National Environmental Policy Act. The court then created what have been labeled the “IT Questions.” The questions are:

1. Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?
2. Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?
3. Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits?
4. Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?
5. Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?

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PROJECT DESCRIPTION

On July 31, 2024, RPS submitted an application to the IMD for a permit to drill the RPN-2-INJ Class V stratigraphic test well in order to collect geotechnical cores, fluid samples, static pressure measurements, and other applicable information. The purpose of drilling the stratigraphic test well is to collect subsurface information in order to evaluate the feasibility of developing a carbon capture and sequestration project in the area. After the proposed drilling is completed, the test well will be plugged and abandoned.

The total depth of the proposed test well is approximately 10,794 feet below ground level. The base of the lowermost underground source of drinking water (USDW) is approximately 860 feet below ground level in the area. The principal regional aquifers in the area comprise of the confined Mississippi River Alluvial Aquifer below. Deeper aquifers underlying the parish, including the Norco aquifer, contain only saltwater.

The location of the proposed test well is on privately-owned land that is currently used for agriculture (sugarcane). The landowner has entered into an agreement with RPS to allow the test well to be drilled on the property.

PUBLIC COMMENT

The Class V permit application process will include a 30-day public comment period prior to issuance of the permit.

AVOIDANCE OF ADVERSE ENVIRONMENTAL IMPACTS: Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?

Yes, RPS has located and designed the test well to avoid and minimize the potential and real adverse environmental effects to the maximum extent possible. Information is presented below regarding the potential and real adverse environmental effects of the proposed test well.

Water Use and Quality

Surface Water and Wetlands

The site of the test well is entirely upland agricultural land with no surface waterbodies or wetlands present. The nearest waterbody is Bayou Lafourche, which is located approximately 9,560 feet to the northwest. The nearest wetland area is approximately 7,400 feet to the southeast of the test well site.

The well pad for the test well will be constructed with a borrow ditch and ring levee surrounding it so that any discharges from the drilling operation are captured and prevented from flowing off-site (see Figure 1). Prior to construction, RPS will prepare a stormwater pollution prevention plan (SWPPP) and will seek coverage under a general stormwater permit from the Louisiana Department of Environmental Quality (LDEQ).

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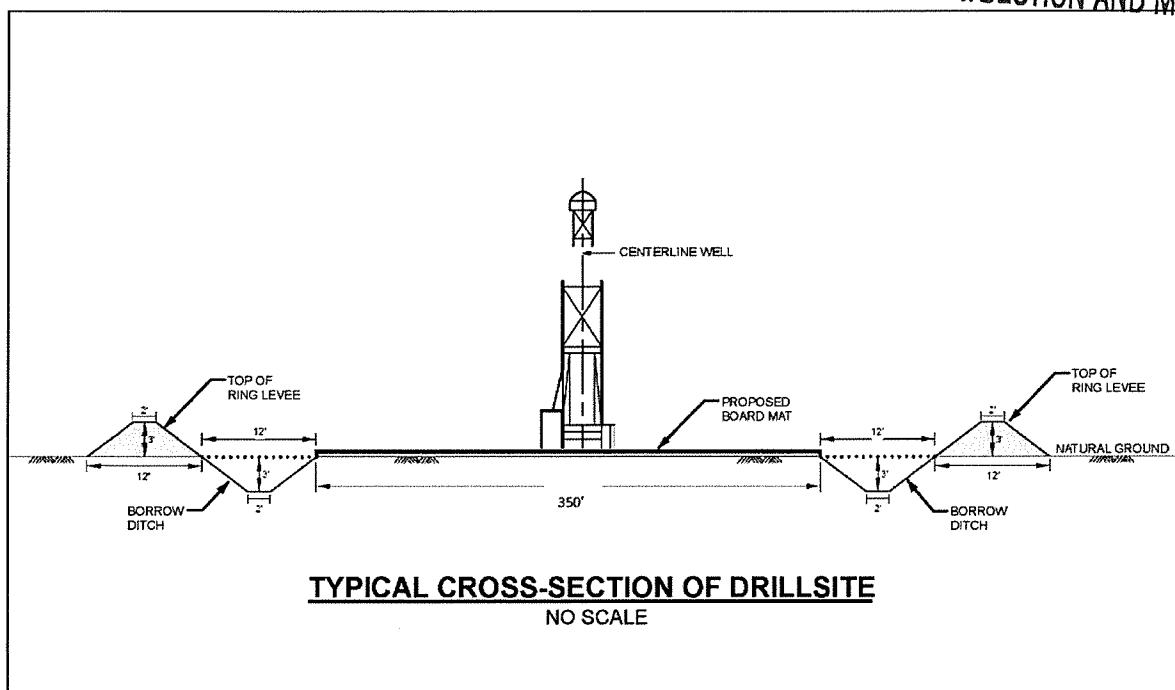


Figure 1. Typical Cross-Section of Drill Site with Ring Levee

RPS had the site of the test well surveyed for the presence of wetlands and the consultant documented that the site has no wetlands.

Based on the lack of presence of waterbodies or wetlands at the site and the measures to be taken to ensure that no runoff from the test well site could reach waterbodies or wetlands, there will be no anticipated impact to waterbodies or wetlands.

Groundwater

The test well is located in the southeastern Louisiana hydrogeologic system and collocated with two primary groundwater aquifers: The Mississippi River Alluvial Aquifer and the Chicot Equivalent Aquifer System. The principal Chicot equivalent units include the Gramercy, Norco, Gonzalez-New Orleans, and "1200-Foot Sand" aquifers. Groundwater occurs throughout the multiple interbedded and interconnected alluvial and terrace deposits ranging in age from Holocene to Lower Pleistocene and Upper Pliocene. Deposits generally contain coarser material at the base and fine upward from pea- and cobble-sized gravel to very fine sand and silt with interbedded clay units. The Gramercy aquifer, where present, overlies the Norco aquifer, which overlies the Gonzalez-New Orleans aquifer separated by a clay bed nearly 200 feet thick. The dip and general flow direction of the Chicot equivalent packages is to the south-southwest and the equivalent sands outcrop to the northeast near the northern edge of Livingston and St. Tammany Parishes.¹

¹ Tomaszewski, D.J., "Water-level surface in the Chicot equivalent aquifer system in southeastern Louisiana, 2009," U.S. Geological Survey Scientific Investigations Map 3173 (2011), 2 pl.

The homes in the area are generally served by municipal water, which mainly comes from Bayou Lafourche. There are few groundwater wells and most are used for agricultural purposes. The groundwater wells in the area are typically about 150 to 200 feet in depth. To prevent impacts to underground sources of drinking water (USDW) during drilling, all injection wells will have a surface casing that is set below the deepest USDW formation (typically about 2,800 feet deep) and is cemented to surface.

Fish, Wildlife, and Vegetation

The construction footprint of the test well and pad will be approximately 3 acres in size. The existing site vegetation (sugarcane) will be removed during construction, but RPS will restore the site to pre-existing conditions and the landowner would be able to replant crops at the site following construction.

There are no fish or other aquatic organisms at the site due to a lack of wetlands or waterbodies. Wildlife use of the site is minimal due to the agricultural land use.

There are no federal or state-listed threatened or endangered species identified in Assumption Parish and there is no critical habitat for listed species. The Alligator Snapping Turtle (*Macrochelys temminckii*) is proposed for federal listing for Assumption Parish. The Alligator Snapping Turtle is an aquatic species that prefers deep water, which is not present at or near the test well site. Therefore, the test well project will have no effect on listed or proposed species.

Cultural Resources

RPS hired a cultural resources firm to investigate and survey for archaeological and historical resources at the test well site. The consultant determined that there will be no impacts to cultural resources from the test well and associated pad. The results of these surveys are detailed in a report entitled, *Phase I Cultural Resources Investigations of the Proposed River Parish Sequestration, In-Field Expansion Pipeline Project in Ascension and Assumption Parishes, Louisiana* (Goodwin and Associates, 2024). The report was submitted to the State Historic Preservation Office (SHPO) on April 3, 2024. On April 23, 2024, the SHPO responded with a letter stating, "... our office concurs with the assessment that no historic properties listed in or eligible for the National Register of Historic Places will be affected by this project."

There are no tribal lands in the area of the proposed project.

Socioeconomics

The test well will be located within U.S. Census Tract 22007050100. Table 2 provides demographic data for the census tract from the U.S. Environmental Protection Agency's (EPA's) EJScreen tool.

Table 2. Demographic Data for the Census Tracts

Factor	Census Tract 22007050100	State Avg.	USA Avg.
Population	3,914		

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Factor	Census Tract 22007050100	State Avg.	USA Avg.
People of Color	65	43	39
Low Income (%)	34	40	31
Unemployment Rate (%)	8	7	6
Limited English Speaking (%)	0	2	5
Less than HS Education (%)	20	15	12

According to the U.S. Department of Energy's (DOE's) Disadvantaged Communities Report tool, this census tract is considered to be a "disadvantaged community" (DAC). Based on DOE's described method, to be considered a DAC, a census tract must rank in the 80th percentile of the cumulative sum of 36 burden indicators and have at least 30% of households classified as low-income. Data regarding fossil fuel dependence, energy burden, environmental and climate hazards and vulnerability related to housing and transportation are several of the burden indicators measured by the DOE to determine whether a community is disadvantaged.

The test well project will have temporary but positive socioeconomic impacts in the local communities by requiring temporary housing in the area for workers who will also spend money in the local area. Impacts would include minor, temporary traffic increases but the area is rural with limited existing traffic and any traffic impacts will be short-lived. The test well project is not anticipated to cause any negative socioeconomic impacts on the community.

Geological Resources

The purpose of drilling the test well is to gather site-specific geologic data. RPS will ensure that the USDW is protected by setting surface casing below the lowermost USDW and cementing that casing to surface in accordance with IMD standards. There are no unique or special geological resources in the area and there are no known faults below the test well location.

Soils

The test well is located across two soil types: Thibaut clay, frequently flooded, and Cancienne silt loam, 0 to 1 percent slopes. Cancienne silt loam, 0 to 1 percent slopes, is somewhat poorly drained, is considered non-hydric, and is a prime farmland soil. Thibaut clay, frequently flooded, is considered poorly drained and is non-hydric and is not a prime farmland soil. The site soils may be temporarily compacted during test well drilling but the soil will be tilled and restored following construction so that it can revert to agricultural use.

Land Use, Recreation and Aesthetics

Land use at the site is entirely agricultural, planted in sugarcane. Agricultural operations would cease during test well pad construction and test well drilling. After drilling operations, the site would be restored to pre-existing conditions and will be able to return to agricultural use if desired by the landowner.

The site is not used for recreation and no impacts to recreation are expected.

The site is in a rural area and away from roads and residences. In addition, the drilling activities will be temporary in nature, so impacts to aesthetics are expected to be minimal and temporary.

The test well project would not affect any of the following resources:

- Public or conservation land
- Unique or unusual landforms
- Federal, state, or local parks
- State forests
- Monuments
- Contaminated or hazardous waste sites

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Air Quality

Air emissions from the test well drilling will only be in the form of mobile equipment (truck traffic) and the from drilling rig. There will be no long-term, operational emissions from the test well. Air emissions are expected to be minor and only last for a period of a few months.

Noise

The project area is rural with low ambient noise and there are no dwellings within one mile of the RPN-2-INJ test well location. Noise impacts from the project will be temporary during construction and occur from the drilling of the test well. There are few residences in the project area and the test well is not located in close proximity to any residences. Therefore, the noise impacts are expected to be minor and no noise mitigation is expected to be necessary.

Coastal Resources

The State and Local Coastal Resources Management Act of 1978, as amended, set the Louisiana coastal zone boundary in this area as including all of Assumption Parish, but not including Ascension and Iberville parishes. Ground-disturbing activities within the Louisiana Coastal Zone typically require a Coastal Use Permit from the LDENR, Office of Coastal Management (OCM).

In June 2023, RPS submitted an application to the LDENR OCM for a Coastal Use Permit that included the test well location. The OCM provided a determination on September 11, 2023, that these facilities have been "... determined to have no direct and significant impact (NDSI) on coastal waters and a Coastal Use Permit is not required." Therefore, no impacts to coastal resources are anticipated.

COST-BENEFIT ANALYSIS (BALANCING): Does the cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?

Yes, the social and economic benefits will outweigh the environmental impacts of the proposed project. As identified in the responses to the previous questions, the environmental impacts of the project will be minimal. The purpose of the test well is to collect geologic data that is needed to fully evaluate the feasibility of geologic sequestration in the area. The social and economic benefits

of a future geologic sequestration project in this area would be substantial and far outweigh the minor environmental impacts associated with the test well project.

ALTERNATIVE PROJECTS: Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits?

No, the proposed test well is designed to evaluate the feasibility of developing a CCS project on the west side of the Mississippi River near Donaldsonville, Louisiana. RPS has used existing well logs and seismic data from the area to develop preliminary geologic assessments, but site-specific geologic data is not available for this site. The collection of site-specific data, such as core samples, fluid samples, static pressure measurements, and other information, provide for a more comprehensive characterization of the geologic sequestration potential of the RPS Project and cannot be acquired through other means except by drilling directly into the subsurface formations. For these reasons, no alternative projects or other means of data collection are available to meet the objective of the proposed test well.

ALTERNATIVE SITES: Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?

No, the site location was selected to minimize environmental impacts while providing the necessary subsurface information needed to evaluate the feasibility of developing a CCS project in this area. The following environmental factors of the site were considered important for the selection:

- No wetland or waterbody impacts
- No cultural resources impacts
- No threatened and endangered species impacts
- Not close to any noise sensitive areas
- No public lands or unique land use features
- Vegetation is in crop rotation (sugarcane)

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Non-environmental factors for the site selection included: placing the test well outside of any of the planned areas of review for carbon dioxide sequestration; placing the test well on private land where the landowner is agreeable to the drilling; and placing the test well in close proximity to proposed injection wells for the RPS Project so that the subsurface data is representative of the storage complex.

MITIGATING MEASURES: Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?

In addition to the environmental protection features associated with siting of the test well, RPS has committed to the following mitigating measures:

- Protection of the USDW by proposing to set surface casing below the lowermost USDW and cementing that casing to surface in accordance with IMD standards.
- Ensuring that all sanitary waste generated during construction activities is properly disposed of and not discharged without authorization from the LDH and/or LDEQ, as necessary.
- Ensuring that spills or leaks at the construction site do not leave the well pad area.
- Creating a stormwater pollution prevention plan (SWPPP) and obtaining stormwater permit coverage for the construction activities.

There are no mitigating measures which offer more protection to the environment than the facility as proposed, without unduly curtailing non-environmental benefits.

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