Santa Fe Main Office Phone: (505) 476-3441 General Information Phone: (505) 629-6116 Online Phone Directory Visit: https://www.emnrd.nm.gov/ocd/contact-us/	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	C-102 Revised July 9, 2024 Submit Electronically via OCD Permitting Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-025-54599	97834	AGI: DEVONIAN-FUSSELMAN
Property Code	**Property Name**	**Well Number**
337198	LIBBY AGI	#1
OGRID No.	**Operator Name**	**Ground Level Elevation**
372603	DKL FIELD SERVICES, LLC	3,719.4'

Surface Owner: ☐ State ☒ Fee ☐ Tribal ☐ Federal

Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from S	Ft. from W	Latitude	Longitude	County
	26	20	34		1,588'	2,061'	N32.54121°	W103.53281°	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code

Order Numbers.

Well setbacks are under Common Ownership: ☐Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☐ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Signature — Date: 9/11/25

Hector J. Sanchez
Printed Name

hector.sanchez@dklogistics.com
Email Address

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

THOMAS G. CARLSON NEW MEXICO 22896 11/12/25 PROFESSIONAL SURVEYOR

Thomas G. Carlson
Signature and Seal of Professional Surveyor

22896 — Certificate Number

11/12/2024 — Date of Survey

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

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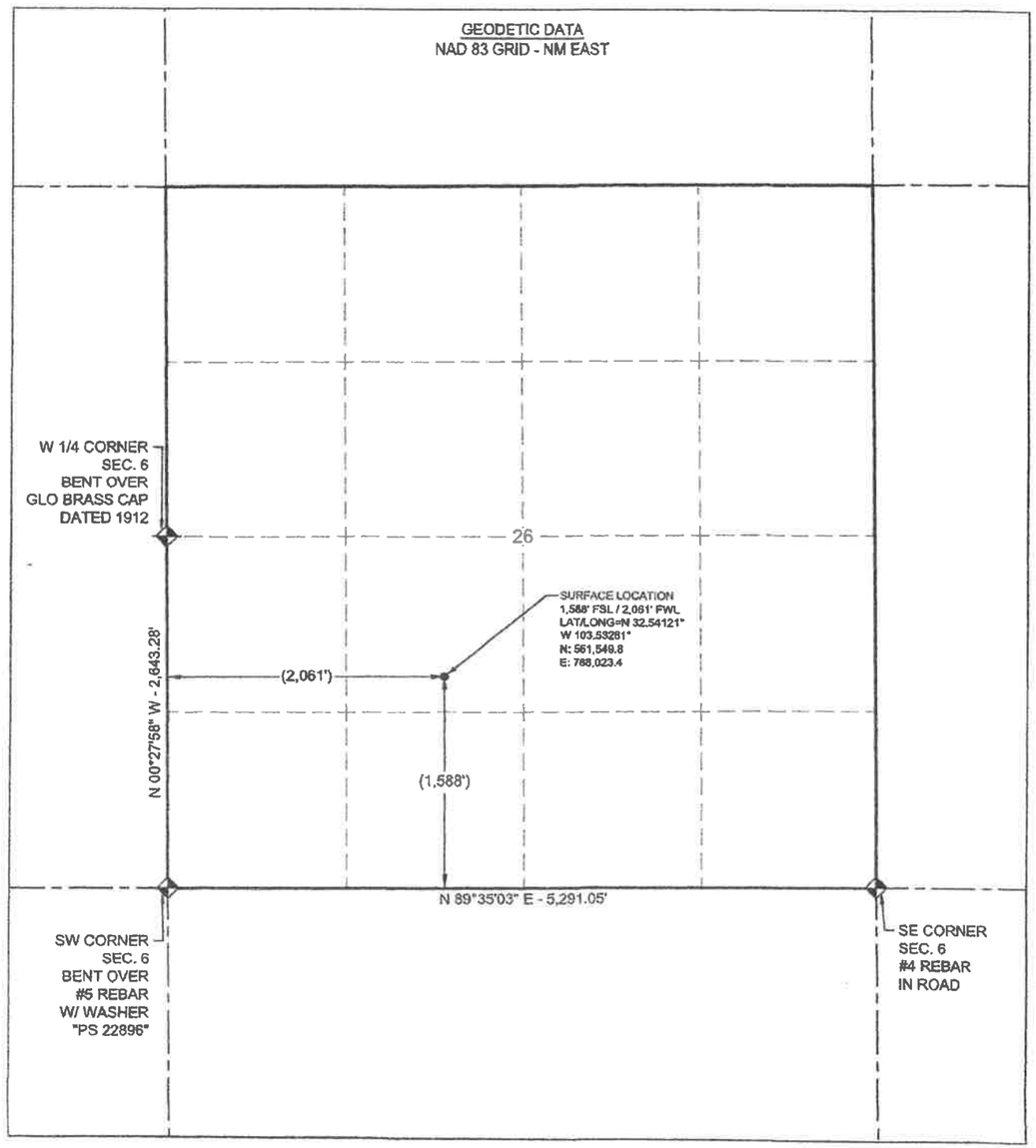

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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
DKL FIELD SERVICES 310 Sevens Springs Way, Suite 500 Brentwood, TN 37027	372603
	3. API Number 30-025-54599

4. Property Code	5. Property Name	6. Well No.
337198	LIBBY AGI	001

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
K	26	20S	34E		1588	SOUTH	2061	WEST	LEA

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
K	26	20S	34E		1588	SOUTH	2061	WEST	LEA

9. Pool Information

Pool Name	Pool Code
ACID GAS INJECTION	97834

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	AGI	ROTARY	FEE	3719.4'
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	16400'	DEVONIAN-FUSSELMAN	SLB/NABORS	

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
200'	NA	NA

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
SURFACE	28"	24"	186	1,640	1050	SURFACE
SALT STRING	22"	18 5/8"	115	3,690'	2200	SURFACE
#1 INT	16.5"	13 3/8"	68	5,870'	2500	SURFACE
#2 INT	12 ¼"	9 5/8"	47	11,680'	940	SURFACE
PROD	8 ½"	7"	32	14,870'	450	SURFACE

Casing/Cement Program: Additional Comments

5 7/8" OPEN HOLE TO 16,400'

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
ANNULAR	5000	5000	SHAFFER
DOUBLE RAM	10000	10000	SHAFFER

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.** Signature:	OIL CONSERVATION DIVISION Approved By:
Printed name: Hector J. Sanchez	Title:

Title: HSER- Sr. Manager		Approved Date:	Expiration Date:
E-mail Address: hector.sanchez@deleklogistics.com			
Date: 9/11/25	Phone: 432 238-6465	Conditions of Approval Attached	

Santa Fe Main Office Phone: (505) 476-3441 General Information Phone: (505) 629-6116 Online Phone Directory Visit: https://www.emnrd.nm.gov/ocd/contact-us/	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	C-102 Revised July 9, 2024 Submit Electronically via OCD Permitting

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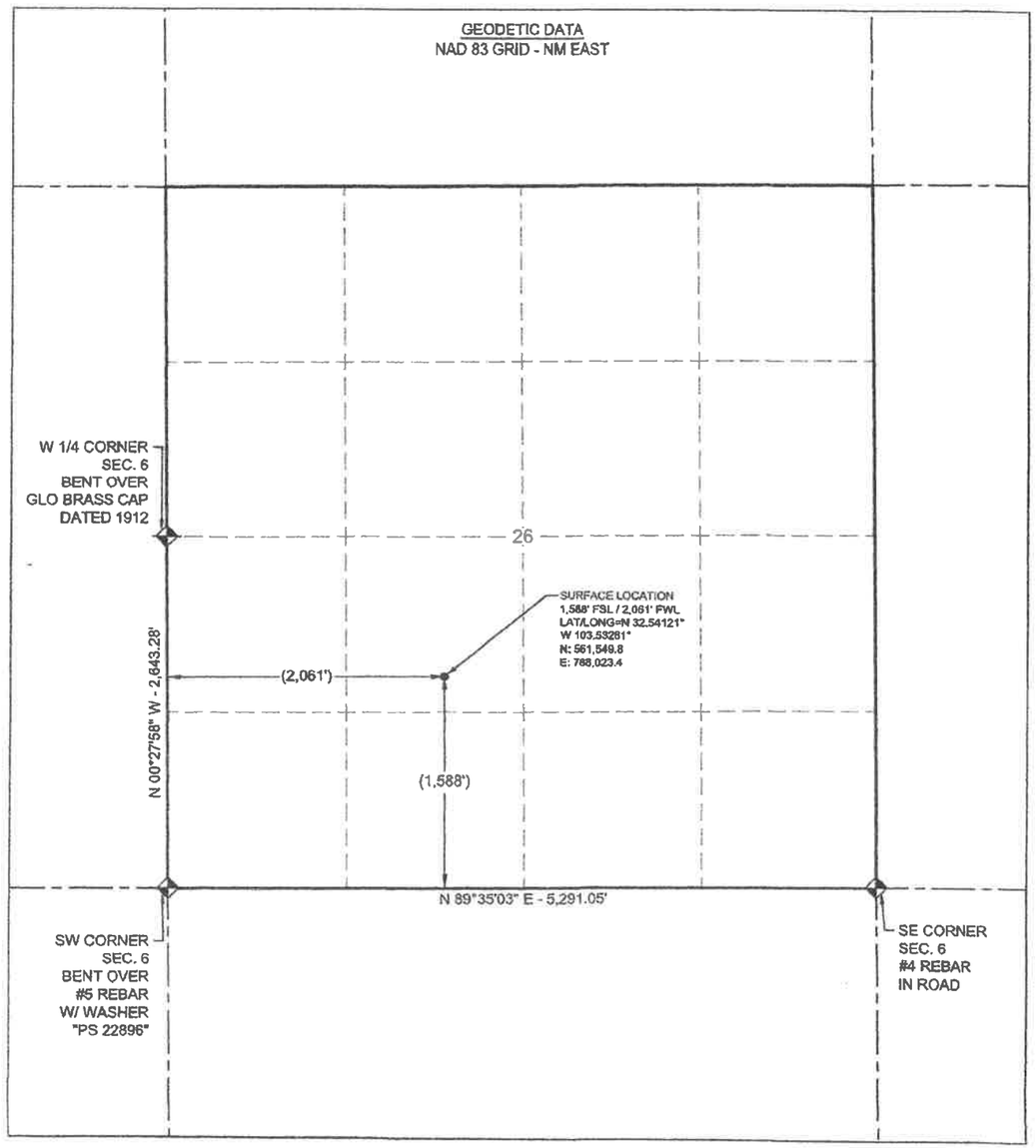


3.4.3 Casing Program

Section	Type	Tubular	OD (in)	ID (in)	Drift ID (in)	Start MD (ft)	End MD (ft)	TOC (ft)	Grade	Connection
30 Conductor	Conductor	30" Casing 118.65 lbm/ft X56 MIJ	30.000	29.250	29.062	32.50	152.50		X56	MIJ
28 in Surface Section	Surface Casing	24" Casing 186.41 lbm/ft X56 XLF	24.000	22.500	22.312	32.50	1640.00	32.50	X56	XLF
22 in Salt Section	Casing	18.625" Casing 115 lbm/ft K55 BTC	18.625	17.437	17.250	32.50	1700.00	32.50	K55	BTC
22 in Salt Section	Tapered	18.625" Casing 115 lbm/ft J55 BTC	18.625	17.437	17.250	1700.00	3690.00	32.50	J55	BTC
16.5 in Intermediate Section 1	Casing	13.375" Casing 68 lbm/ft L80 BTC	13.375	12.415	12.259	32.50	5870.00	32.50	L80	BTC
12.25 in Intermediate Section 2	Casing	9.625" Casing 47 lbm/ft L80HC BTC	9.625	8.681	8.525	32.50	11680.00	32.50	L80	BTC
8.5 in Protection Section	Production Casing	7in 32lb-ft VASS95 VA SUPERIOR	7.000	6.094	5.969	32.50	14570.00	32.50	VA SS95	VAsuperior
8.5 in Protection Section	Tapered	7in. 32lb-ft Nickel Alloy G3 110 Tenaris BLUE	7.000	6.094	5.969	14570.00	14870.00	32.50	G3-110	Blue
5.875 in Injection Section	Open Hole					14880.00	16400.00			

3.4.4 Cement Program

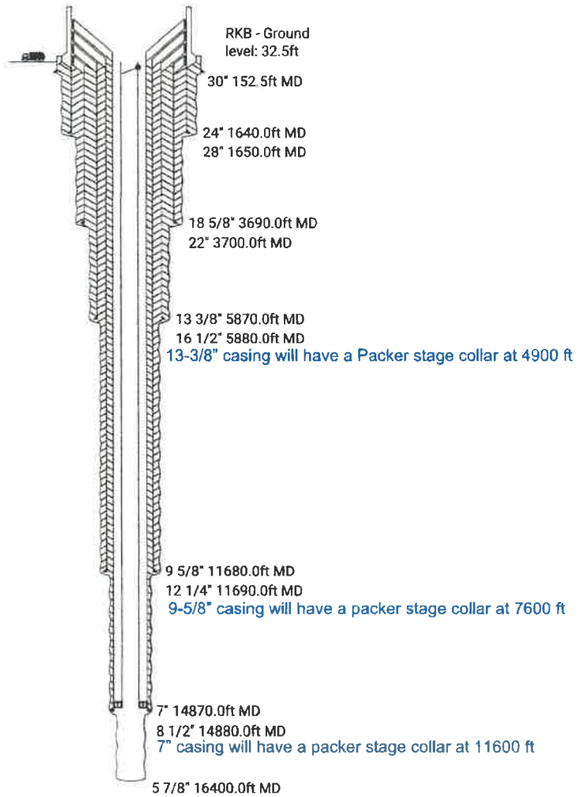
Reference	Fluid Type	Description	Density (lbm/gal)	Yield (ft3/sack)	Top of Fluid MD / TVD (ft)	Excess Volume (%)	Total Volume (bbl)	Dry Cement (sack)	Comments
Wellbore: Libby AGI #1 Hole: 28.000 in Surface Casing: 24.000 in MD/TVD: 1640.00 / 1640.00 ft	Wash	Gelled Water	8.33		Returns		50.00		
	Lead	Class C	12.80	1.81	32.50 / 32.50	100.00	512.47	1589.68	
	Tail	Class C	14.80	1.33	1340.00 / 1340.00	100.00	142.95	603.45	
Wellbore: Libby AGI #1 Hole: 22.000 in Casing: 18.625 x 18.625 in MD/TVD: 3690.00 / 3690.00 ft	Wash	Gelled Water	8.33		Returns		50.00		
	Lead	Class C	12.80	1.81	32.50 / 32.50	100.00	720.85	2236.06	
	Tail	Class C	14.80	1.33	3390.00 / 3390.00	100.00	92.63	391.04	
Wellbore: Libby AGI #1 **1st Stage** Hole: 16.500 in Casing: 13.375 in MD/TVD: 5870.00 / 5870.00 ft	Wash	MUDPUSH Express LCM	9.40		4679.50 / 4679.50		20.00		
	Lead	Class TXI	11.50	2.32	4900.00 / 4900.00	150.00	106.56	257.89	
	Tail	Class C	14.80	1.33	5370.00 / 5370.00	150.00	126.36	533.43	
Wellbore: Libby AGI #1 **2nd Stage** Stage MD/TVD: 4900.00 / ft Hole: 16.500 in Casing: 13.375 in MD/TVD: 5870.00 / 5870.00 ft	Wash	MUDPUSH Express LCM	10.50		Returns		50.00		
	Lead	Class TXI	11.50	2.32	32.50 / 32.50	150.00	610.84	1478.29	
	Tail	Class C	14.80	1.33	4400.02 / 4400.02	150.00	113.36	478.55	
Wellbore: Libby AGI #1 **1st Stage** Hole: 12.250 in Casing: 9.625 in MD/TVD: 11680.00 / 11680.00 ft	Wash	MUDPUSH Express LCM	11.80		7101.60 / 7101.60		28.92		
	Lead	Class TXI	12.00	2.04	7620.00 / 7620.00	80.00	376.02	1034.90	
	Tail	Class C	14.80	1.33	11365.00 / 11365.00	80.00	37.98	160.34	
Wellbore: Libby AGI #1 **2nd Stage** Stage MD/TVD: 7600.00 / ft Hole: 12.250 in Casing: 9.625 in MD/TVD: 11680.00 / 11680.00 ft	Wash	MUDPUSH Express LCM	11.80		Returns		40.00		
	Lead	Class TXI	12.00	2.04	32.50 / 32.50	0.00	343.31	944.87	
	Tail	EverCRETE	15.90	1.08	5780.00 / 5780.00	80.00	181.22	942.08	
Wellbore: Libby AGI #1 **1st Stage** Hole: 8.500 in Production Casing: 7.000 x	Wash	MUDPUSH Express + PNET	11.50		8886.00 / 8886.00		75.35		
	Lead	Class TXI	12.50	1.56	11815.00 / 11815.00	100.00	108.09	389.04	

7.000 in MD/TVD: 14870.00 / 14870.00 ft	Tail	EverCRETE	15.90	1.08	14208.00 / 14208.00	100.00	32.75	170.23	
Wellbore: Libby AGI #1 **2nd Stage** Stage MD/TVD: 11585.00 / ft Hole: 8.500 in Production Casing: 7.000 x 7.000 in MD/TVD: 14870.00 / 14870.00 ft	Wash	MUDPUSH Express + PNET	11.50		Returns	0.00	40.00		
	Lead	Lead TXI	12.50	1.56	32.50 / 32.50	0.00	295.82	1064.68	

The 18-5/8" cement jobs are planned to be single-stage jobs. This job should consider a bottom plug to reduce contamination, as in these wells, it is essential that cement is shown to surface to fulfill the OCD requirements.

**For the 18-5/8" cement job, cement will be pumped until pure cement is returned to the surface. For the other sections, a caliper log will be taken, and the final excess will be on top of the caliper volume. Excess may be changed depending on the result of the caliper.

3.4.1 Wellbore Schematic

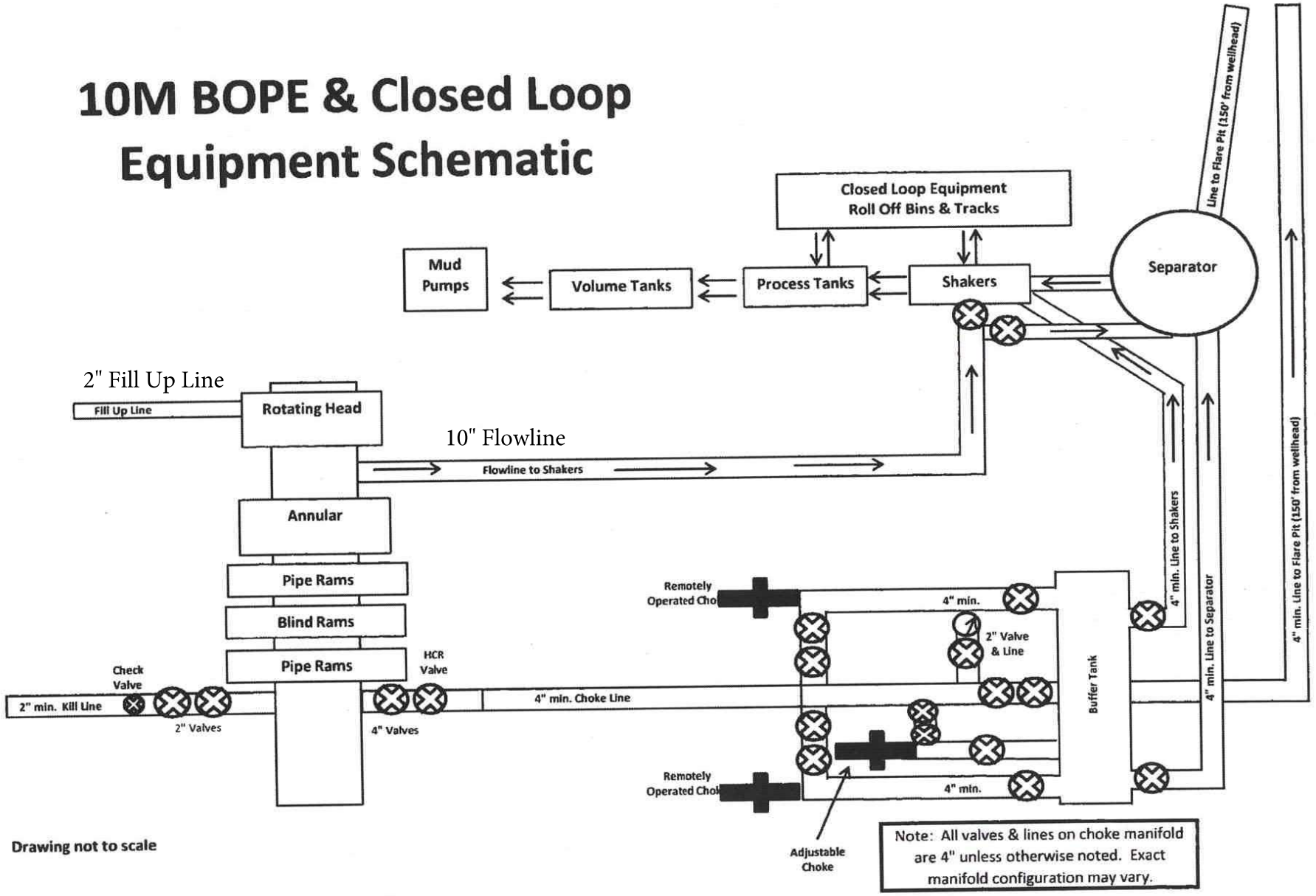


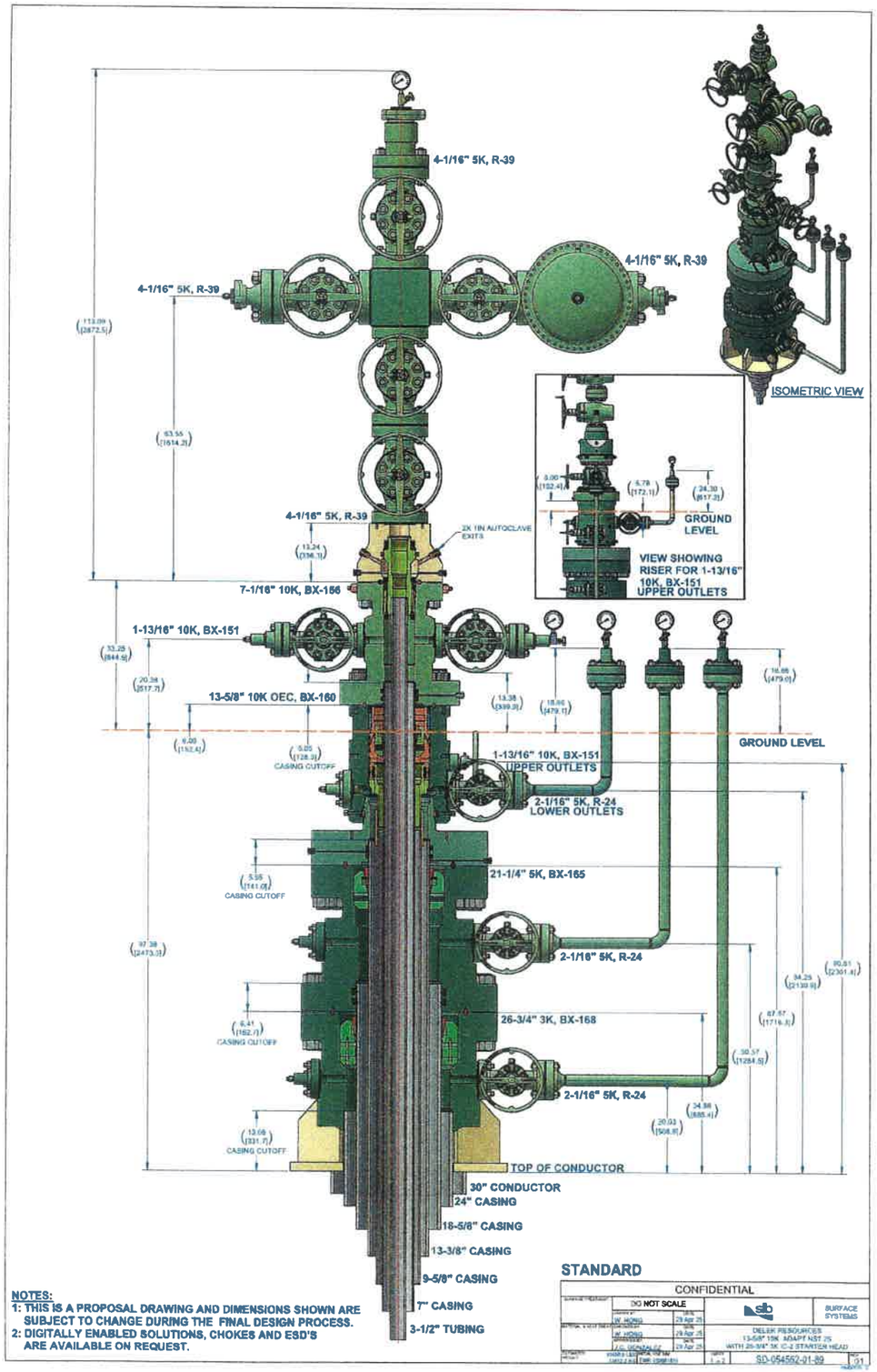
DKL FIELD SERVICES
LIBBY AGI #001
1588' FSL & 2061 FWL
SEC 26 – T20S – R34E
LEA COUNTY, NM

FORMATION TOPS
GL 3719.4'

Rustler	1597'
Top of Salt	1914'
Base of Salt	3330'
Yates	3667'
7 Rivers	4005'
Capitan Reef	5038'
Top of DMG	5849'
Brushy	7598'
Bone Spring	8697'
Wolfcamp	11,662'
Morrow	13,286'
Woodford	14,679'
Devonian	14,848'
Fussellman	15,964'
Montoya	16,376'

10M BOPE & Closed Loop Equipment Schematic





NOTES:
1: THIS IS A PROPOSAL DRAWING AND DIMENSIONS SHOWN ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PROCESS.
2: DIGITALLY ENABLED SOLUTIONS, CHOKES AND ESD'S ARE AVAILABLE ON REQUEST.

STANDARD

CONFIDENTIAL

DO NOT SCALE		SLB	SURFACE SYSTEMS
W. HONG	29 Apr 25		
W. HONG	29 Apr 25	DELEK RESOURCES 13-5/8" 10K ADAPT NST 2S WITH 26-3/4" 3K IC-2 STARTER HEAD	
J.G. GONZALEZ	29 Apr 25		
		1 of 2	SD-054562-01-89 01

3.4.15 Wellhead & BOP Pressure Test

Initial high pressure test: The 21-1/4" 5K stack should be pre-tested on BOP pressure testing stump as per below testing schedule:

21-1/4" 3K BOP stack

Casing Size [in]	Stack Size [in]	Rating [PSI]	Low Pressure [PSI]	High Pressure [PSI]
18-5/8"	21-1/4" Annular	5,000	300	3500
	21-1/4" Pipe Ram	5,000	300	5000
	21-1/4" Pipe Ram	5,000	300	5000

Subsequent high pressure test: BOPs shall be tested to the maximum anticipated surface pressure for the borehole sections that are to be drilled.

The interval between pressure tests shall not exceed 21 days unless local regulations mandate more frequent testing. The pressure test should be planned to minimize disruption to normal operations while ensuring compliance with the 21-day requirement.

21-314" 5K BOP stack

Casing Size [in]	Stack Size [in]	Rating [PSI]	Low Pressure [PSI]	High Pressure [PSI]*
18-5/8"	21-1/4" Annular	5,000	250	2200
	21-1/4" Pipe Ram	5,000	250	2200
	21-1/4" Pipe Ram	5,000	250	2200
	Choke/Kill line	5,000	250	2200
	Choke manifold	5,000	250	2200
	CHH outer valves	5,000	250	2200

*MASP with full replacement to 0.1 Psi/ft Gas while drilling next section where this BOP installed for equal to 2114 psi.

This pressure test will include stand pipe with rotary hose, pump discharge line, FOSV, gray valve and TDS IBOP

- Function test 21-1/4" annular with 5" drill pipe. Verify closing time <45 secs (API-16D).
- Pressure test BOP manual and HCR valves and kill line check valve.
- Pressure test choke manifold individual valves (from direction of anticipated flow) to 300 psi and 2200psi for 5/10 mins.
- Function the Hydraulic chokes and use the manual choke function (30 sec Max). Confirm all pressure gauges are calibrated and that stroke counter at remote choke panel is working.
- Walk the lines and verify correct rig-up as per P&ID and working diagrams. All TPW rig-ups to be secured with Fibre Rope Restraints (FRR).
- Once nipple up on well, function and pressure test choke hose, kill line and BOP connections to 300 psi and 2200 psi for 5/10 mins.

3.5 Intermediate Section 1 - 16" Wellbore - 13-3/8" Casing

System	Bit Size	Casing OD	Objective of this Section	TD Criteria
Surface	16"	13-3/8"	• Provides zonal isolation for the Capitan Reef	30 feet into the Cherry Formation

3.4.7 Drilling Fluid Program

Drilling Fluid Interval Summary

28.000 in HOLE, 24.000 in SURFACECASING, 1650.00 ft / 1650.00 ft	
FLUID SYSTEM	Freshwater - Water Based
OPERATION	Surface stack activities - Misc without parameter
KEY PRODUCTS	DUO-VIS, M-I GEL, Lime, SODA ASH, WALNUT NUT PLUG MEDIUM, M-I PAC UL
POTENTIAL PROBLEMS	
SOLIDS CONTROL	

INTERVAL DRILLING FLUID PROPERTIES (Rec / Min - Max)

Measured Depth (ft)	Density (lbm/gal)	Funnel Viscosity (s)	Plastic Viscosity (cP)	Yield Point (lbf/100ft2)	6 RPM Dial Reading	pH	Brine Salinity (wt%) @ Salt Type	API Fluid Loss (mL/30min)	%LGS (%)	MBT (lbm/bbl)	Total Hardness as Calcium (mg/L)
152.50 - 1650.00	8.40 / 8.40 - 9.70	35.00 / 32.00 - 38.00	3.00 / 1.00 - 5.00	8.00 / 6.00 - 10.00	4.00 / 3.00 - 6.00	9.50 - 10.00	0.00 / 0.00 - 0.00 @ None	- 100.00	5.00 / 3.00 - 8.00	- 15.00	- 400.00

Interval Recommendations
- Drill out the conductor with Gel Mud.
- **Sapp** and **Soap Sticks** may be used down drill string every connection.
- Sweeps can be used for hole cleaning with one of the following every 400 ft:
  - Duo-Vis Sweep
  - Rapid Sweep Sticks (1 – 2 sticks at connections)
  - Pre-Hydrated Gel Sweep
- Maintain pH 9.5 – 10.0 with additions of **LIME**
- Walnut Fine / Medium to aid in eliminating bit balling.
- Important notes for **Pre-Hydrated Bentonite** using the following recipe: **DO NOT ADD LIME TO PREMIX RECIPE.**
  - Fresh Water to fill Pre-Mix
  - Ensure Chlorides are less than 5,000 mg/L, preferably as low as possible.
  - SODA ASH for <240mg/L Ca++ (Do not over treat with Soda Ash. Check Ca++)
  - M-I GEL 30-35 ppb (allow to hydrate before utilizing)
  - Duo-Vis may be used after GEL Hydration to add additional viscosity 0.75 – 1.5 ppb. Adding Duo-Vis slowly to hopper is critical for the proper application.
- Run all solids control equipment as much as possible.
- Have some LCM ready to mix on location. LCM can be mixed with kill mud prior to pump or can be mixed and pumped before the kill mud if needed. This will mitigate fluid lost issues after pumping kill mud.
- If water flow occurs, recommend attack the issue ASAP and kill the well to prevent more produce water going to the system and create more contamination.
- Maintain hardness below 400 mg/l if possible at all times. This will allow the use of Duo-vis to increase the viscosity if needed.
- If H2S is present, treat system with H2S Scavenger.
- Upon reaching TD, sweep hole with a 50 bbl (80 sec/qt) sweep prior to pulling out of hole to run casing.
- Plan to spot Starch Pill in lower open hole prior POOH for casing unless active is already sufficiently treated.

Hole Cleaning & LCM Sweeps:
- Pump Hi-Vis Sweeps with **Duo-Vis / My-Lo-Jel** for hole cleaning as needed.

- LCM concentration and particle size should be taken into consiceration depending on use of Down Hole Motors and Bit Jet sizes.
- LCM can be added as needed if losses occur (3 – 4 ppb of each).Ensure LCM totals are consulted with MWD and Directional prior to pumping with higher total concentrations
  - Safe-Carb 250
  - Tiger Bullets
  - Nut Plug F/M
  - M-I-X II F

Well Control:

- Monitor pits for gains and losses.
- Keep enough barite on location to increase active system mud weight by 1 pound per gallon.
- Have a load of sack barite along with the Bulk barite on location all the time.

Corrosion/H2S:

- Increase pH to ≥ 9.5 with lime (0.5 – 1.0 ppb) to combat corrosion and buffer H2S intrusions.
- Add corrosion inhibitor to mud system
- Use H2S Scavenger **SAFE-SCAV HSW** if necessary
- See the **SAFE-SCAVE HSW** Product Sheet for usage recommendations.

22.000 in HOLE, 18.625 in CASING, 3700.00 ft / 3700.00 ft	
FLUID SYSTEM	Freshwater - Water Based
OPERATION	Drilling run - Trip In
COMMENT	Fresh Water + Hi-Vis Sweeps for hole cleaning
KEY PRODUCTS	SODIUM CHLORIDE BRINE, DEFOAM-X, DUO-VIS, MY-LO-JEL, Lime, M-I WATE, M-I PAC UL
POTENTIAL PROBLEMS	
SOLIDS CONTROL	

INTERVAL DRILLING FLUID PROPERTIES (Rec / Min - Max)

Measured Depth (ft)	Density (lbm/gal)	Funnel Viscosity (s)	Plastic Viscosity (cP)	Yield Point (lbf/100ft2)	6 RPM Dial Reading	pH	Brine Salinity (wt%) @ Salt Type	API Fluid Loss (mL/30min)	%LGS (%)	MBT (lbm/bbl)	Total Hardness as Calcium (mg/L)
1650.00 - 3700.00	10.00 / 10.00 - 10.00	28.00 / 28.00 - 32.00	2.00 / 1.00 - 5.00	4.00 / 2.00 - 8.00	1.00 / 1.00 - 1.00	9.50 - 10.00	0.00 / 0.00 - 0.00 @ None	0.00 - 100.00	5.00 / 3.00 - 6.00	- 20.00	0.00 - 1600.00

Interval Recommendations:

- The objective of this interval is to drill the 22" using saturated brine from 1,650' until interval TD, where the 18.625" Salt Section casing will be set.
- Drill out the 24" casing with Saturated Brine 10.0 ppg MW.
- Keep Saturated brine in the system to avoid excessive washout and chemical contamination from Salado formation.
- Maintain pH 10 with additions of **Lime.**
- Monitor volumes closely and have plenty of reserve Brine in frac :anks during this interval. Refer to LCM Decision Tree as needed.
- Have some LCM ready to mix on location. LCM can be mixed with kill mud prior to pump or can be mixed and pumped before the kill mud if needed. This will mitigate fluid lost issues after pumping kill mud.
- If water flow occurs, recommend attack the issue ASAP and kill the well to prevent more produce water going to the system and create more contamination.
- Maintain hardness below 400 mg/l if possible at all times. This will allow the use of Duo-vis to increase the viscosity if needed.
- If H2S is present, treat system with H2S Scavenger.
- Upon reaching TD, sweep hole with a 50 bbl (80 sec/qt) sweep prior to pulling out of hole to run casing.

- Plan to spot Starch Pill in lower open hole prior POOH for casing unless active is already sufficiently treated.

Hole Cleaning & LCM Sweeps:
- Pump Hi-Vis Sweeps with **Duo-Vis / My-Lo-Jel** for hole cleaning as needed.
- LCM concentration and particle size should be taken into consideration depending on use of Down Hole Motors and Bit Jet sizes.
- LCM can be added as needed if losses occur (3.0 – 4.0 ppb of each). Ensure LCM totals are consulted with MWD and Directional prior to pumping with higher total concentrations
  - Safe-Carb 250
  - Tiger Bullets
  - Nut Plug F/M

Well Control:
- Monitor pits for gains and losses.
- Keep enough barite on location to increase active system mud weight by 1 pound per gallon.
- Have a load of sack barite along with the Bulk barite on location all the time.

Corrosion/H2S:
- Increase pH to ≥ 9.5 with lime (0.5 – 1.0 ppb) to combat corrosion and buffer H2S intrusions.
- Add corrosion inhibitor to mud system
- Use H2S Scavenger **SAFE-SCAV HSW** if necessary
- See the **SAFE-SCAVE HSW** Product Sheet for usage recommendations.

16.500 in HOLE, 13.375 in CASING, 5880.00 ft / 5880.00 ft	
FLUID SYSTEM	Cut Brine - Water Based
OPERATION	Drilling run - Trip In
COMMENT	NaCL cut brine
KEY PRODUCTS	DEFOAM-X, DUO-VIS, POLY-PLUS, MY-LO-JEL, Lime, M-I WATE, SODA ASH
POTENTIAL PROBLEMS	
SOLIDS CONTROL	

INTERVAL DRILLING FLUID PROPERTIES (Rec / Min - Max)

Measured Depth (ft)	Density (lbm/gal)	Funnel Viscosity (s)	Plastic Viscosity (cP)	Yield Point (lbf/100ft2)	6 RPM Dial Reading	pH	Brine Salinity (wt%) @ Salt Type	Total Chlorides (mg/L)	API Fluid Loss (mL/30min)	%LGS (%)	MBT (lbm/bbl)	Total Hardness as Calcium (mg/L)
3700.00 - 5880.00	10.00 / - 10.00	28.00 / 28.00 - 32.00	1.00 / 1.00 - 5.00	2.00 / 2.00 - 8.00	3.00 / 3.00 - 5.00	10.00 - 11.00	11.90 / 11.90 - 14.50 @ NaCl (Sodium Chloride)	78014	0.00 - 100.00	3.00 / 1.00 - 6.00		600.00 - 1600.00

Interval Recommendations:
- The objective of this interval is to drill the 16.5" using saturated brine from 3,700' until interval TD, where the 13.375" intermediate # 1 casing will be set.
- Drill out the 18.625" casing with Saturated Brine 10.0 ppg MW.
- Keep Saturated brine in the system to avoid excessive washout and chemical contamination from Salado formation.
- Maintain pH 10 with additions of **Lime.**
- Monitor volumes closely and have plenty of reserve Brine in frac tanks during this interval. Refer to LCM Decision Tree as needed.
- Have some LCM ready to mix on location. LCM can be mixed with kill mud prior to pump or can be mixed and pumped before the

kill mud if needed. This will mitigate fluid lost issues after pumping kill mud.

- If water flow occurs, recommend attack the issue ASAP and kill the well to prevent more produce water going to the system and create more contamination.
- Maintain hardness below 400 mg/l if possible at all times. This will allow the use of Duo-vis to increase the viscosity if needed.
- If H2S is present, treat system with H2S Scavenger.
- Upon reaching TD, sweep hole with a 50 bbl (80 sec/qt) sweep prior to pulling out of hole to run casing.
- Plan to spot Starch Pill in lower open hole prior POOH for casing unless active is already sufficiently treated.

Hole Cleaning & LCM Sweeps:
- Pump Hi-Vis Sweeps with **Duo-Vis / My-Lo-Jel** for hole cleaning as needed.
- LCM concentration and particle size should be taken into consideration depending on use of Down Hole Motors and Bit Jet sizes.
- LCM can be added as needed if losses occur (3.0 – 4.0 ppb of each). Ensure LCM totals are consulted with MWD and Directional prior to pumping with higher total concentrations
  - Safe-Carb 250
  - Tiger Bullets
  - Nut Plug F/M

Well Control:
- Monitor pits for gains and losses.
- Keep enough barite on location to increase active system mud weight by 1 pound per gallon.
- Have a load of sack barite along with the Bulk barite on location all the time.

Corrosion/H2S:
- Increase pH to ≥ 9.5 with lime (0.5 – 1.0 ppb) to combat corrosion and buffer H2S intrusions.
- Add corrosion inhibitor to mud system
- Use H2S Scavenger **SAFE-SCAV HSW** if necessary
- See the **SAFE-SCAVE HSW** Product Sheet for usage recommendations.

12.250 in HOLE, 9.625 in CASING, 11690.00 ft / 11690.00 ft	
FLUID SYSTEM	Cut Brine - Water Based
OPERATION	Drilling run - Trip In
COMMENT	NaCL Cut Brine
KEY PRODUCTS	DEFOAM-X, DUO-VIS, POLY-PLUS, Lime, SODA ASH, M-I WATE
POTENTIAL PROBLEMS	
SOLIDS CONTROL	

INTERVAL DRILLING FLUID PROPERTIES (Rec / Min - Max)

Measured Depth (ft)	Density (lbm/gal)	Funnel Viscosity (s)	Plastic Viscosity (cP)	Yield Point (lbf/100ft2)	6 RPM Dial Reading	pH	Brine Salinity (wt%) @ Salt Type	Total Chlorides (mg/L)	API Fluid Loss (mL/30min)	%LGS (%)	MBT (lbm/bbl)	Total Hardness as Calcium (mg/L)
5880.00 - 11690.00	10.00 / 10.00 - 11.50	28.00 / 28.00 - 35.00	1.00 / 1.00 - 8.00	2.00 / 2.00 - 15.00	3.00 / 2.00 - 6.00	10.00 - 11.00	11.90 / 11.90 - 14.50 @ NaCl (Sodium Chloride)	78014	0.00 - 100.00	3.00 / 2.00 - 6.00		

Interval Recommendations:
- The objective of this interval is to drill the 12.25" using Saturated brine from 5,880' until interval TD, where the 9.625" Intermediate # 2 casing will be set.

- Drill out the 13.375" casing with saturated brine, 10.0 ppg MW.
- Run all solids control equipment as much as possible.
- Maintain pH 10 with additions of **Lime.**
- Monitor volumes closely and have plenty of reserve Brine in frac tanks during this interval. Refer to LCM Decision Tree as needed.
- Have some LCM ready to mix on location. LCM can be mixed with kill mud prior to pump or can be mixed and pumped before the kill mud if needed. This will mitigate fluid lost issues after pumping kill mud.
- If water flow occurs, recommend attack the issue ASAP and kill the well to prevent more produce water going to the system and create more contamination.
- Maintain hardness below 400 mg/l if possible at all times. This will allow the use of Duo-vis to increase the viscosity if needed.
- Increase mud weight up to 11.5 ppg progressively to control formation pressure. Use Duo-VIS to adjust viscosity before adding barite.
- If H2S is present, treat system with H2S Scavenger.
- Upon reaching TD, sweep hole with a 50 bbl (80 sec/qt) sweep prior to pulling out of hole to run casing.
- Plan to spot Starch Pill in lower open hole prior POOH for casing unless active is already sufficiently treated.

Hole Cleaning & LCM Sweeps:

- Pump HI-Vis Sweeps with **Duo-Vis / My-Lo-Jel** for hole cleaning as needed.
- LCM concentration and particle size should be taken into consideration depending on use of Down Hole Motors and Bit Jet sizes.
- LCM can be added as needed if losses occur (3 – 4 ppb of each).Ensure LCM totals are consulted with MWD and Directional prior to pumping with higher total concentrations
  - Safe-Carb 250
  - Tiger Bullets
  - Nut Plug F/M
  - M-I-X II F

Well Control:

- Monitor pits for gains and losses.
- Keep enough barite on location to increase active system mud weight by 1 pound per gallon.
- Have a load of sack barite along with the Bulk barite on location all the time.

Corrosion/H2S:

- Increase pH to ≥ 9.5 with lime (0.5 – 1.0 ppb) to combat corrosion and buffer H2S intrusions.
- Add corrosion inhibitor to mud system
- Use H2S Scavenger **SAFE-SCAV HSW** if necessary
- See the **SAFE-SCAVE HSW** Product Sheet for usage recommendations.

8.500 in HOLE, 7.000 in PRODUCTIONCASING, 14680.00 ft / 14680.00 ft	
FLUID SYSTEM	MEGADRIL OBM - Oil Based
OPERATION	Drilling run - Trip In
KEY PRODUCTS	Calcium Chloride, CLEAN UP, MUL P, MUL S, Lime, M-I WATE, VERSATROL HT, VERSAMOD, VG-PLUS
POTENTIAL PROBLEMS	
SOLIDS CONTROL	

INTERVAL DRILLING FLUID PROPERTIES (Rec / Min - Max)

Measured Depth (ft)	Density (lbm/gal)	Plastic Viscosity (cP)	Yield Point (lbf/100ft2)	6 RPM Dial Reading	Excess Lime (lbm/bbl)	Brine Salinity (wt%) @ Salt Type	Electrical Stability (V)	OWR (%)	HTHP Fluid Loss (mL/30min)	%LGS (%)

11690.00 - 14880.00	11.50 / 11.50 - 13.00	12.00 / 10.00 - 20.00	10.00 / 10.00 - 18.00	5.00 / 4.00 - 6.00	2.00 / 2.00 - 5.00	20.00 / 20.00 - 25.00 @ CaCl2 (Calcium Chloride)	650.00 - 1000.00	70.00 / 70.00 - 80.00	3.00 - 8.00	3.00 / 2.00 - 8.00

ININterval Recommendations

- *The objective of this interval is to drill the well from 11,690' to 14,880' with MEGADRIL OBM system where the 7" production casing will be set.*
- *After dumping WBM from the previous interval and cleaning pits displace to Megadril OBM, Have all OBM on location and weighted as per customer prior to displacement ~* ***11.5 ppg****. Same mud weight should be maintained till TD. We will check with Management and MPD teams if we need to adjust the Mud Weight up to 13.0 ppg before rigging down MPD equipment. Offset well have been analyzed with a final MW of 12.5 ppg with no kicking events.*
- *Run both centrifuges during drilling operations to remove drill solids.*
- *Stay on top of bulk barite consumption and orders through TD.*
- *No barite recovery will be run. Slow and steady strip on active fluid during circulation. Maintain proper PPG in active the additions of bulk barite.*
- *Maintain the following mud properties throughout the interval:*
  - *Oil/Water ratio at 70/30 – 80/20 with diesel and water*
  - *Salt concentration at 20-25% by weight with CALCIUM CHLORIDE.*
  - *Electrical stability at >650 volts (as long as no water appears in the filtrate) with additions of MUL P and MUL S @ 2.5 to 1 ratio*
  - *HTHP fluid loss at <10 ml/30min @ 250°F with VERSATROL M*
  - *Yield point at 10-18 lb/100ft² with VG-Plus*
  - *6 rpm readings in the 6 – 10 range with VERSAMOD*
  - *Maintain Excess Lime 2 – 3 ppb with Lime.Additional Excess Lime should be maintained while experiencing high gas units*

After reaching total depth (TD) and prior to pulling out of the hole (POOH), mix and spot a Csg-go Pill to enhance lubricity during the casing run. Incorporate 10 ppb of ALPINE DRILL BEADS into the mixture. The volume of the pill will be determined in coordination with the Company Man based on the required length.

5.875 in HOLE, OPENHOLE, 16400.00 ft / 16400.00 ft	
FLUID SYSTEM	Dispersed WBM - Water Based
OPERATION	Drilling run - Trip In
KEY PRODUCTS	M-I PAC UL, DUO-VIS, SAFE-CARB 250, SAFE-CARB 20
POTENTIAL PROBLEMS	
SOLIDS CONTROL	

INTERVAL DRILLING FLUID PROPERTIES (Rec / Min - Max)

Measured Depth (ft)	Density (lbm/gal)	Funnel Viscosity (s)	Plastic Viscosity (cP)	Yield Point (lbf/100ft2)	6 RPM Dial Reading	pH	Brine Salinity (wt%) @ Salt Type	Total Chlorides (mg/L)	API Fluid Loss (mL/30min)	%LGS (%)	MBT (lbm/bbl)	Total Hardness as Calcium (mg/L)
14880.00 - 16400.00	10.00 / - 10.00	45.00 / 35.00 - 50.00	5.00 / 5.00 - 10.00	12.00 / 10.00 - 15.00	6.00 / 4.00 - 6.00	9.00 - 10.00	0.00 / 0.00 - 0.00 @ KCl (Potassium Chloride)	0	- 8.00	2.00 / 2.00 - 4.00	- 5.00	- 1000.00

Interval Recommendations:

- The objective of this interval is to drill the 5.875" using Clear Brine to interval TD.
- Perform displacement prior to Csg Shoe depth to Clear Brine.
- Drill out the 7" casing with Clear Brine, 10.0 ppg MW.
-
- Maintain pH 10 with additions of **CAUSTIC SODA.**

- Monitor volumes closely and have plenty of reserve Brine in frac tanks during this interval. Refer to LCM Decision Tree as needed.
- Have some LCM ready to mix on location. LCM can be mixed with kill mud prior to pump or can be mixed and pumped before the kill mud if needed. This will mitigate fluid lost issues after pumping kill mud.
- If water flow occurs, recommend attack the issue ASAP and kill the well to prevent more produce water going to the system and create more contamination.
- Maintain hardness below 400 mg/l if possible at all times. This will allow the use of Duo-vis to increase the viscosity if needed.
- If H2S is present, treat system with H2S Scavenger.
- Upon reaching TD, sweep hole with a 50 bbl (80 sec/qt) sweep prior to pulling out of hole to run casing.
- Plan to spot Starch Pill in lower open hole prior POOH for casing unless active is already sufficiently treated.

Hole Cleaning & LCM Sweeps:

- Pump HI-Vis Sweeps with **Duo-Vis** for hole cleaning as needed.
- LCM concentration and particle size should be taken into consideration depending on use of Down Hole Motors and Bit Jet sizes.
- LCM can be added as needed If losses occur (3 – 5 ppb of each).Ensure LCM totals are consulted with MWD and Directional prior to pumping with higher total concentrations.
- Safe-Carb 250
- Safe-Carb 40
- Safe-Carb 20

Well Control:

- Monitor pits for gains and losses.
- Keep enough barite on location to increase active system mud weight by 1 pound per gallon.
- Have a load of sack barite along with the Bulk barite on location all the time.

Corrosion/H2S:

- Increase pH to ≥ 9.5 with lime (0.5 – 1.0 ppb) to combat corrosion and buffer H2S intrusions.
- Add corrosion inhibitor to mud system
- Use H2S Scavenger **SAFE-SCAV HSW** if necessary
- See the **SAFE-SCAVE HSW** Product Sheet for usage recommendations.

3.4.6 Formation Tests

Reference	Test Type	Test Equivalent Mud Weight (lbm/gal)	Fluid Density (lbm/gal)	Surface Test Pressure (psi)	Fracture Pressure (EMW) (lbm/gal)	Comments
22 in Sail Section Previous Casing Shoe MD/TVD: 1640.00 ft / 1640.00 ft Test Depth MD/TVD: 1660.00 ft / 1660.00 ft	FIT	14.50	10.00	383.38	14.81	Refer to the Formation Test Check and SOP List in the link below IWC-WC-CL-001 After - Review Formation Pressure Test Readiness CL IWC-WC-SOP-003 Formation Integrity and Leak Off Tests SOP
16.5 in Intermediate Section 1 Previous Casing Shoe MD/TVD: 3690.00 ft / 3690.00 ft Test Depth MD/TVD: 3710.00 ft / 3710.00 ft	FIT	13.00	9.20	728.42	13.28	
12.25 in Intermediate Section 2 Previous Casing Shoe MD/TVD: 5870.00 ft / 5870.00 ft Test Depth MD/TVD: 5890.00 ft / 5890.00 ft	FIT	12.30	9.50	853.82	11.36	
8.5 in Protection Section Previous Casing Shoe MD/TVD: 11680.00 ft / 11680.00 ft Test Depth MD/TVD: 11700.00 ft / 11700.00 ft	FIT	14.40	9.50	2973.09	14.61	
5.875 in Injection Section Previous Casing Shoe MD/TVD: 14870.00 ft / 14870.00 ft Test Depth MD/TVD: 14890.00 ft / 14890.00 ft	FIT	11.50	9.00	1931.17	14.71	

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division

1. OCD Conditions of Approval Referenced in Commission Order R-20694
The following conditions are detailed in Findings Paragraph 28:

a. Conduct a step-rate test and fall-off test on the completed well before commencing injection. The maximum injection pressure for the proposed well may be appropriately adjusted after a step-rate test with the approval of the Division Director.

b. Include a biocide and corrosion inhibited diesel in the annular fluid of the wells.

c. Incorporate temperature-activated controls to govern the temperatures of injected fluid within parameters set by the operator and provide an alarm system for those controls should the parameters be exceeded.

d. Equip the well with a pressure-limiting device as well as a one-way safety valve (with the proper interior drift diameter) on the tubing approximately 250 feet below the surface.

e. All well drilling logs (including mudlogs, electric logs and daily logs) and the static bottom-hole pressure measured at completion of drilling the well shall be submitted to the Division using the appropriate OCD form in E-permitting.

f. All casing should have cement circulated to the surface, with an additional casing string through the Salado formation at an estimated depth of 2,100 feet to 3,350 feet from the surface.

g. Well construction should be designed for exposure to corrosive environment including, but not limited to, casing, casing cement, and the packer in proximity of injection interval.

h. The final reservoir evaluation should confirm that the open-hole portion of the AGI well does not intersect the fault plane of any identified fault especially for those wells having the Devonian and Silurian sections for disposal intervals.

2. OCD Additional Conditions of Approval Standard to UIC Permits
a. Operator shall complete a cement bond log ("CBL") for the casing isolating the Salado Formation prior to drilling the next casing interval and submit to the Division prior to commencing injection.

b. If cement does not circulate on any casing string, operator shall run a CBL to determine the top of cement, then notify the OCD Engineering Bureau and the appropriate OCD Inspection Supervisor and submit the CBL prior to continuing with any further cementing on the Well. If the cement did not tie back into next higher casing shoe, Permittee shall perform remedial cement action to bring the cement to a minimum of two hundred (200) feet above the next higher casing shoe.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Operator:	OGRID:
DKL Field Services, LLC 310 Seven Springs Way Brentwood, TN 37027	372603
	Action Number: 506681
	Action Type: [C-103] NOI General Sundry (C-103X)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	None	9/17/2025