

District I1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720**District II**811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720**District III**1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170**District IV**1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462**State of New Mexico**Form C-101
Revised July 18, 2013**Energy Minerals and Natural Resources****Oil Conservation Division**☐ AMENDED REPORT**1220 South St. Francis Dr.****Santa Fe, NM 87505****APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

¹ Operator Name and Address Lucid Energy Delaware, LLC 201 South 4 th Street Artesia, NM 88210		² OGRID Number 372422
		³ API Number 30-025-49474
⁴ Property Code 319701	⁵ Property Name RED HILLS AGI	⁶ Well No. 2

⁷ Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	13	24S	33E		1800	SOUTH	150	EAST	LEA

⁸ Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	13	24S	33E		1800	SOUTH	150	EAST	LEA

⁹ Pool Information

Pool Name	Pool Code
ACID GAS INJECTION : DEVONIAN	97885

Additional Well Information

¹¹ Work Type N	¹² Well Type I	¹³ Cable/Rotary R	¹⁴ Lease Type P	¹⁵ Ground Level Elevation 3574.81
¹⁶ Multiple NO	¹⁷ Proposed Depth 17,600	¹⁸ Formation DEVONIAN	¹⁹ Contractor UNKNOWN	²⁰ Spud Date 03/01/2022
Depth to Ground water 650'	Distance from nearest fresh water well 0.31 MILES		Distance to nearest surface water > 5 MILE	

☒ 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	26	20	106.5	1350	2000	Surface
1 st INT	17.5	13.375	72	6100	3000	Surface
2 nd INT	12.25	9.625	47 & 53.5	12300	1800	Surface

Casing/Cement Program: Additional Comments

See attachment - Casing Program is continued on next page

²² Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
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: *Kim Hamlet*

Printed name: Kim Hamlet

Title: EHS & R Specialist

E-mail Address: KHamlet@lucid-energy.com

Date: 09-24-2021

Phone: 575-810-6055

OIL CONSERVATION DIVISION

Approved By:

P. Kautz

Title:

Approved Date: 10/26/2021

Expiration Date: 10/26/2023

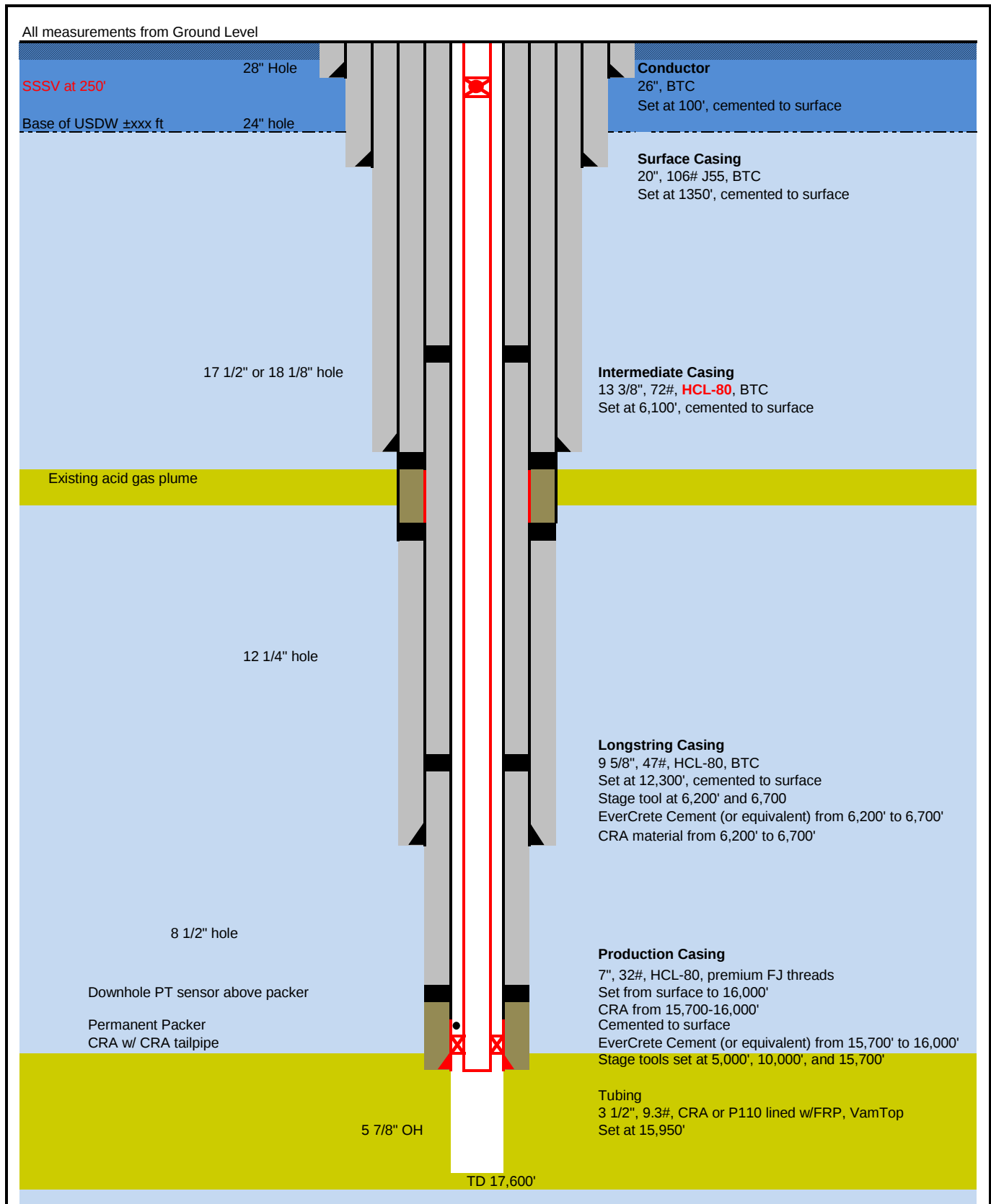
Conditions of Approval Attached

LUCID ENERGY DELAWARE, LLC

RED HILLS AGID #2

SEC 13-T24S-R33E

TYPE	HOLE SIZE in	CASING SIZE in	CASING WT lb/ft	SETTING DEPTH ft	SACKS OF CEMENT	EST. TOC FT
Conductor	36	30	118	100	100	surface
Surface	26	20	106.5	1350	2000	surface
1st Intermediate	17.5	13.375	72	6100	3000	surface
2nd Intermediate	12.25	9.625	47 & 53	12300	1800	surface
Production	8.625	7	32	16000	1500	surface
Open Hole	5.875	none	n/a	17600	none	



wsp		Lucid Energy		
WSP USA Inc.		Proposed AGI #2 - for estimating only (modified for constructability from provided schematic)		
API No.:	UIC No.:	Spud Date:	USDW:	Scale: None
Drawn: KK	Checked: TJJ	Date: 04/16/2021	Rev. 0	Job No.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-49474		² Pool Code 97887 97885		³ Pool Name ACID GAS INJECTION 3 DEVONIAN	
⁴ Property Code 319701		⁵ Property Name RED HILLS AGI			⁶ Well Number 2
⁷ OGRID No. 117831 372422		⁸ Operator Name LUCID ENERGY DELAWARE, LLC			⁹ Elevation 3,574.81'

¹⁰ Surface Location

UL or lot no. I	Section 13	Township 24 S	Range 33 E	Lot Idn	Feet from the 1,800	North/South line SOUTH	Feet from the 150	East/West line EAST	County LEA
---------------------------	----------------------	-------------------------	----------------------	---------	-------------------------------	----------------------------------	-----------------------------	-------------------------------	----------------------

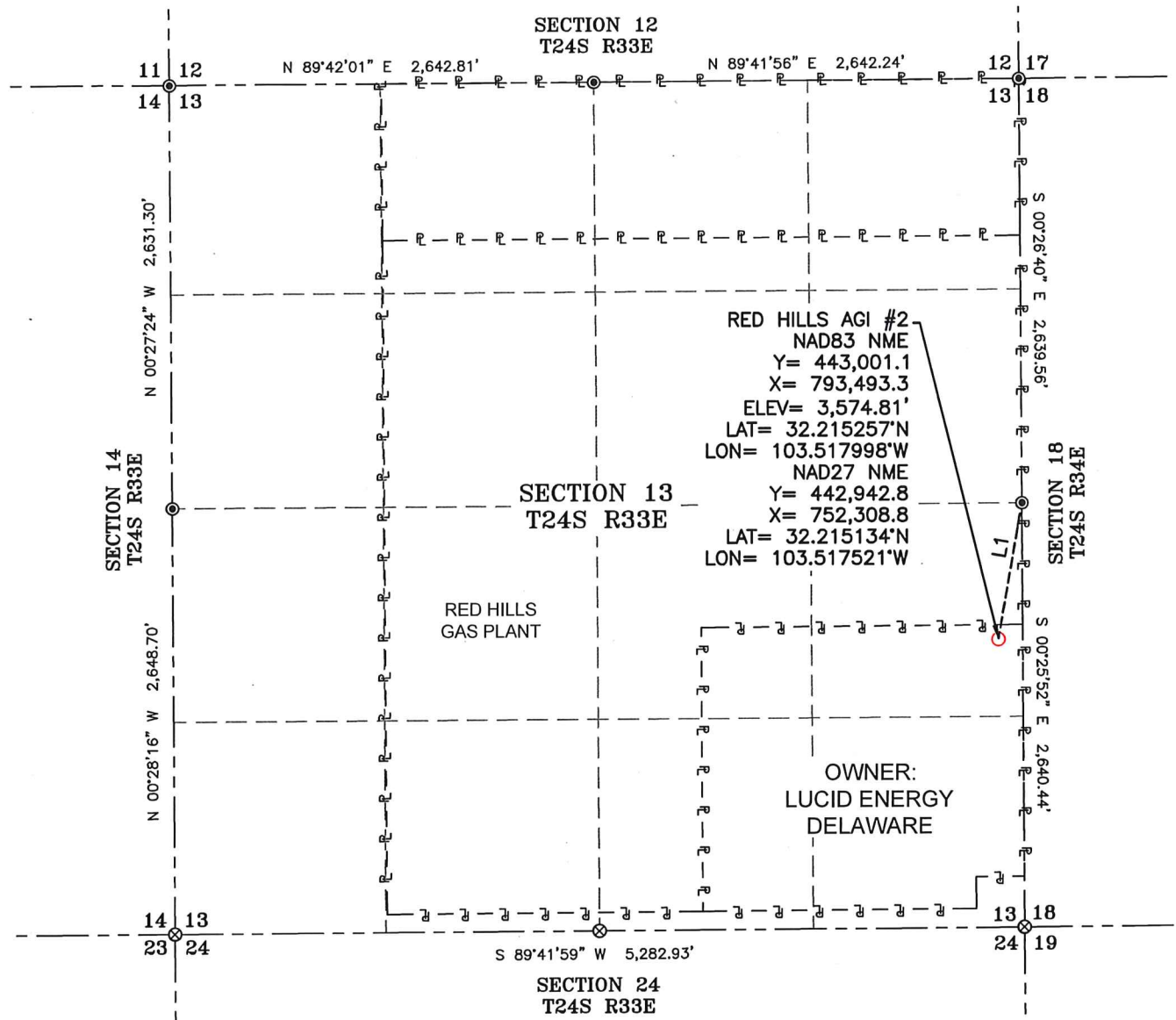
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. R-20916-H			

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.

¹⁶ 		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Kim Hamlet</u> Date: <u>09-22-21</u> Printed Name: <u>KIM HAMLET</u> E-mail Address: <u>KHamlet@lucid-energy.com</u>
NAD 83 NME SURFACE HOLE LOCATION Y= 443001.1 X= 793493.3 LAT= 32.215257°N LON= -103.517998°W NAD 27 NME SURFACE HOLE LOCATION Y= 442,942.8 X= 752,308.8 LAT= 32.215134°N LON= -103.517521°W		¹⁸ SURVEYOR CERTIFICATION 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. <u>09.21.2021</u> Date of Survey Signature and Seal of Professional Surveyor: <u>Stanley W. Drannon</u> STANLEY W. DRANNON 23002 Certificate Number TM LUC-264

SECTION 13, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M. LEA COUNTY, NEW MEXICO



RED HILLS AGI #2
SECTION LINE DISTANCE
SHL 1,800' FSL & 150' FEL

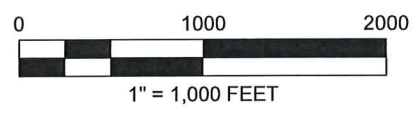
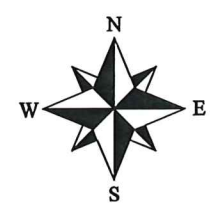
LINE	BEARING	DISTANCE
L1	N 09°41'33" E	853.38'

- BEGIN, END OR ANGLE POINT
- ⊙ FOUND USGLO BRASS CAP
- ⊕ CALCULATED CORNER
- R - R - PROPERTY LINE
- - - - SECTION LINE

I, Stanley W. Drannon, New Mexico PLS No. 23002, hereby certify this survey made on the ground under my supervision. This survey meet the minimum standards for surveying in New Mexico.

Stanley W. Drannon
STANLEY W. DRANNON
NEW MEXICO R.P.L.S. NO. 23002
9/21/19
Date

NOTES:
1. BEARINGS AND DISTANCES CONFORM TO THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD83, IN U.S. SURVEY FEET.



DRAWN BY: TM	SCALE: 1" = 1000'
CHECKED: SMD	W.O. No.: LUC-264
DATE: 08.21.2021	
AFE:	
REV:	

 **PROSPECT SURVEYING**
9231 BOAT CLUB ROAD, FORT WORTH TX 76179
PH: 817-999-7385 FIRM NO. 10194267

WELL LOCATION PLAT
RED HILLS AGI #2



LUCID ENERGY DELAWARE, LLC

RED HILLS AGID #2

SEC 13-T24S-R33E

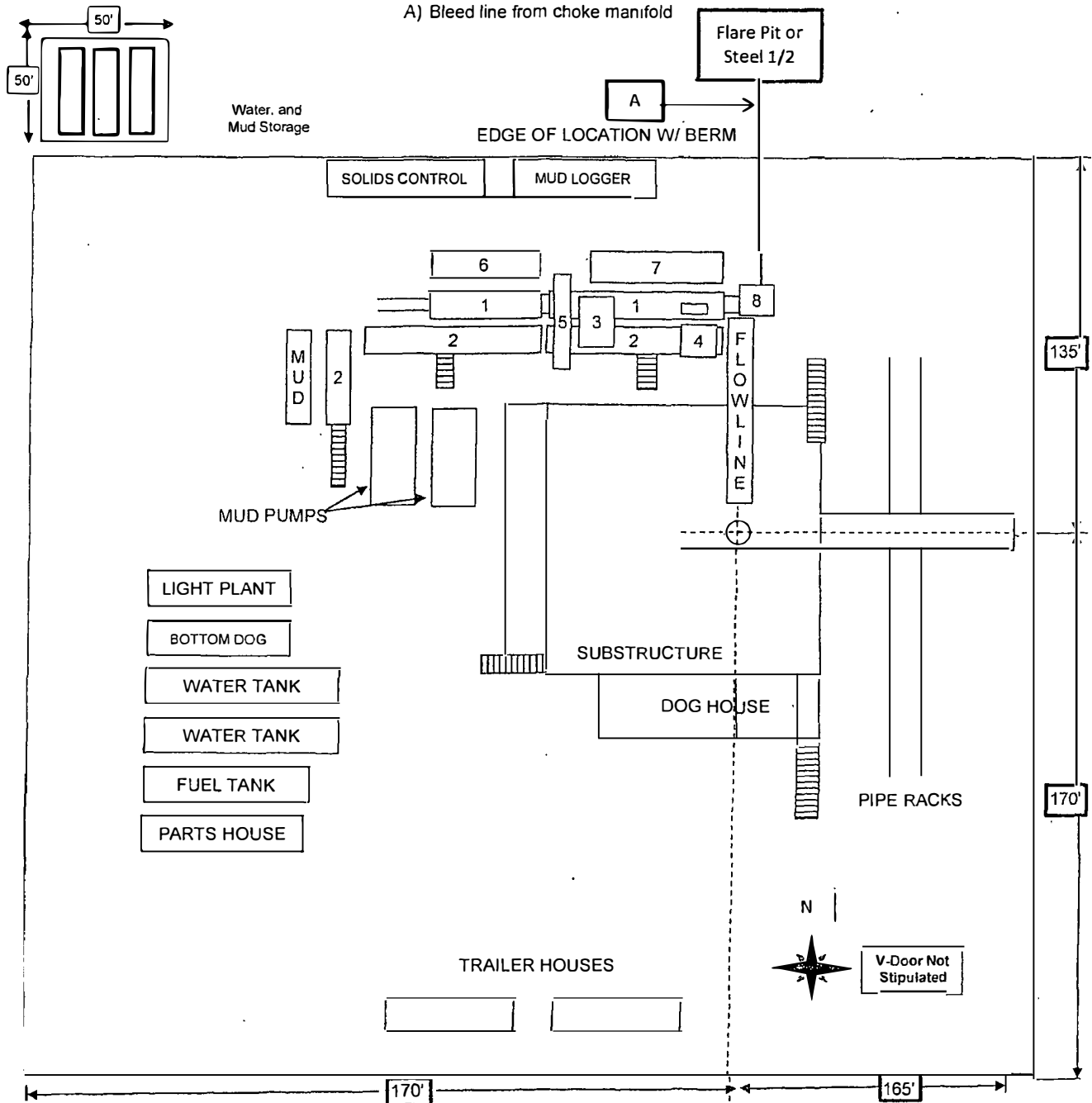
TYPE	HOLE SIZE in	CASING SIZE in	CASING WT lb/ft	SETTING DEPTH ft	SACKS OF CEMENT	EST. TOC FT
Conductor	36	30	118	100	100	surface
Surface	26	20	106.5	1350	2000	surface
1st Intermediate	17.5	13.375	72	6100	3000	surface
2nd Intermediate	12.25	9.625	47 & 53	12300	1800	surface
Production	8.625	7	32	16000	1500	surface
Open Hole	5.875	none	n/a	17600	none	

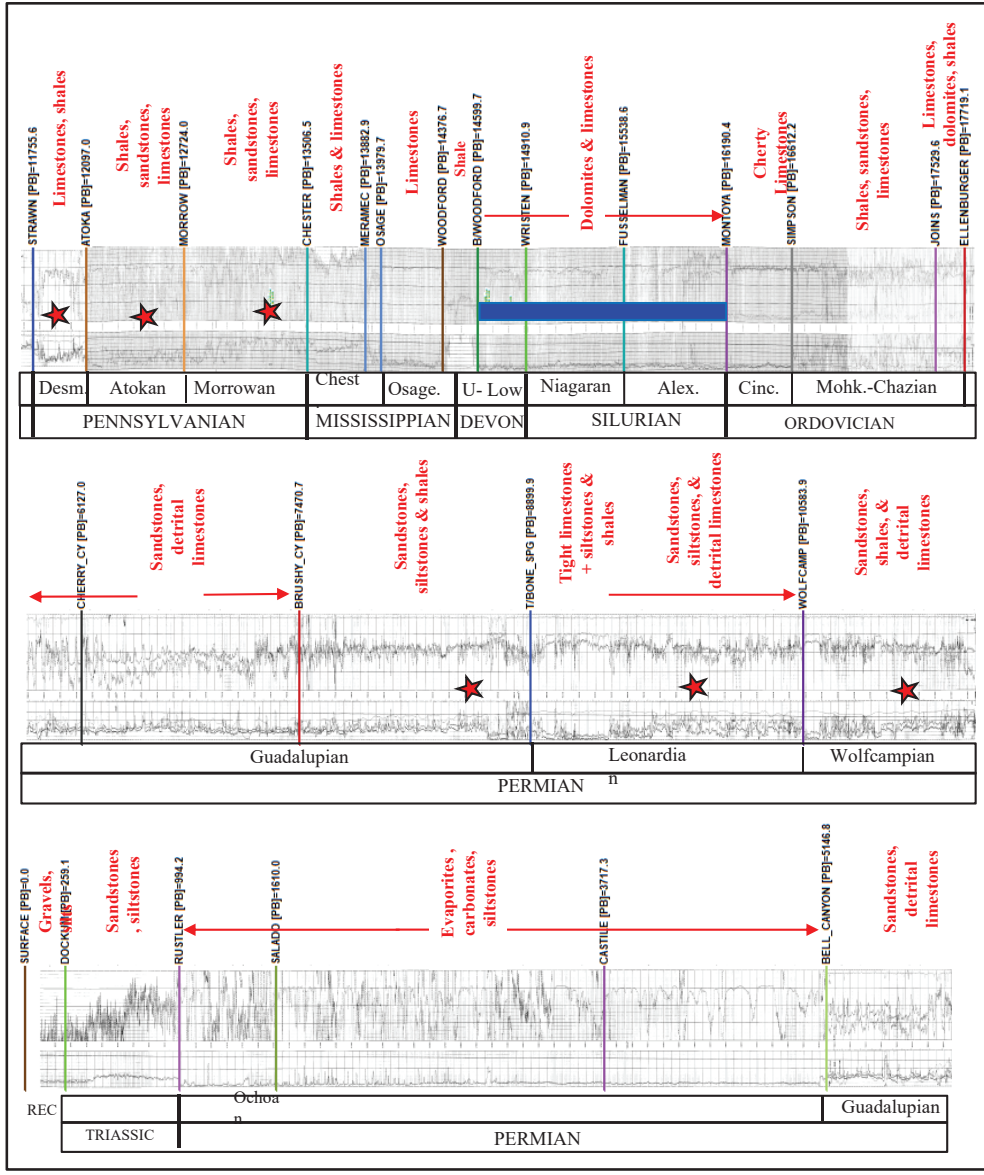
Figure 5 Rig Layout Schematic with Closed Loop System Design Plan

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

Solids Control Equipment Legend

- | | |
|-----------------------------------|--------------------|
| 1) Roll Off Bin | 5) Centrifuge |
| 2) Steel Tank | 6) Dewatering Unit |
| 3) Mud Cleaner | 7) Catch Tank |
| 4) Shaker | 8) Choke Manifold |
| A) Bleed line from choke manifold | |





Stratigraphy and generalized lithologies of the subsurface formations underlying the proposed AGI #2 location. Zones with active pay within the radii of investigation are shown by the red stars. The interval shown by the blue bar includes the Devonian (Thirtyone Formation), and Silurian Wriston and Fusselman Formations, which contain intervals of karst-related solution-enlarged and fracture porosity in dolomites that alternate with tight, dolomitic limestones. These formations are sufficiently isolated from the active pay zones by over 1,300 feet of tight, Mississippian (Chester through upper Woodford) limestones and shales.

Figure 7: Stratigraphy and Pay Zones Under Proposed AGI#2 Well Site



Map showing the only wells that penetrated below the Woodford shale in the area of the proposed Lucid AGI #2D (circled in red).

Because of the sparsity of deep well control, the map was drawn from extension of the structural trend of coming off the cluster of wells to the north-northeast.

These limited number of control wells seem to indicate steep dip to the west-southwest, and there are no doubt faults cutting the section as it comes off the Central Basin Platform margin to the east.

The faults could only be estimated from the irregular spacing of the well control. Cross-section D1-D1' is discussed on the next slides.

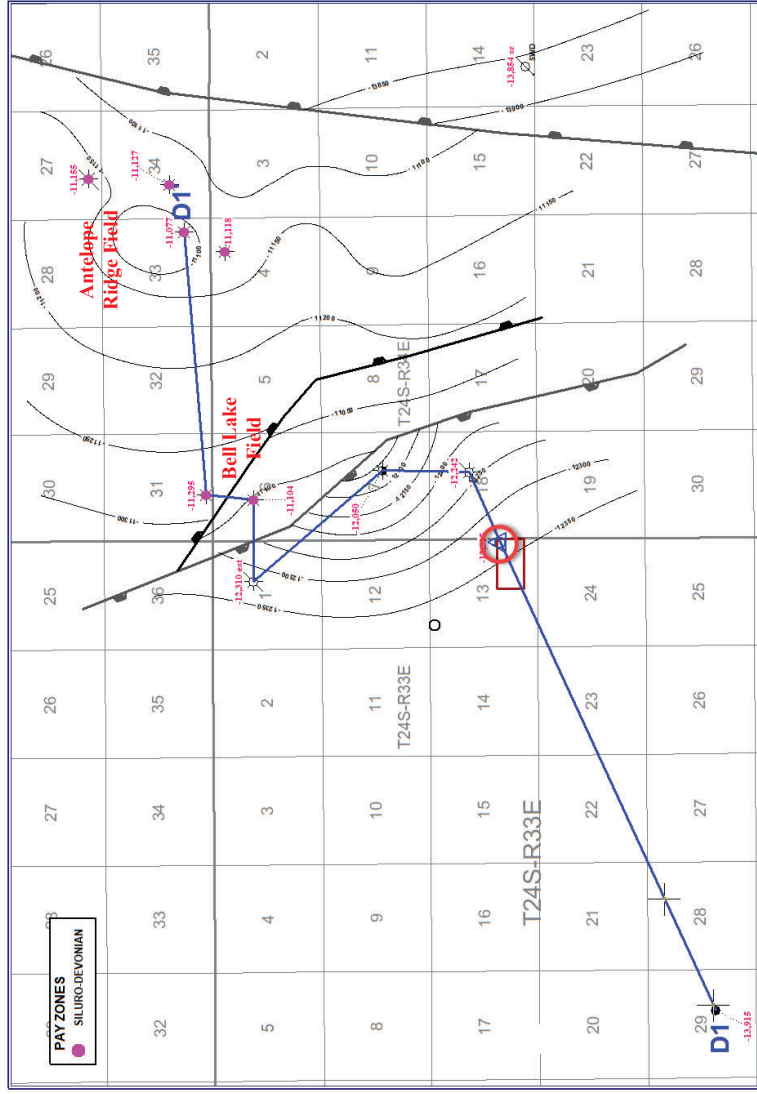
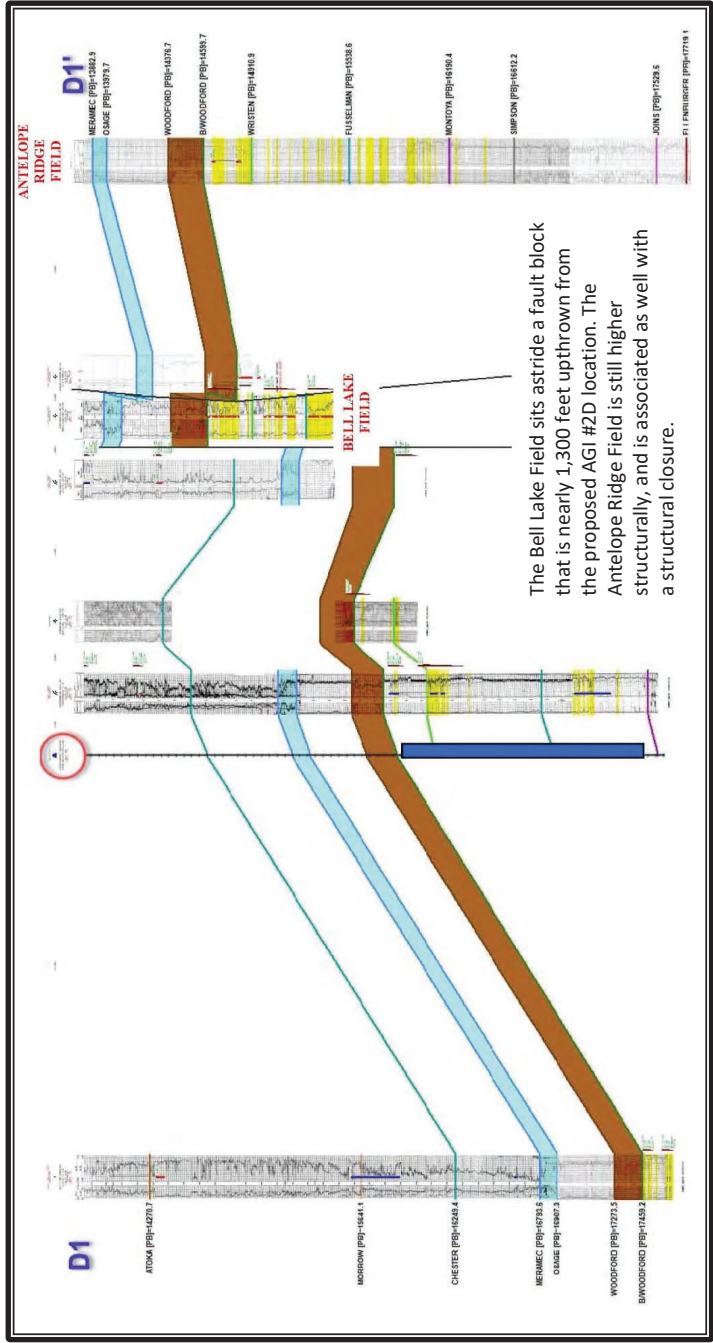


Figure 8: Structure on Top of the Devonian
and Location of Cross-Section
(C. 1. = 50 Feet)

GEOLEX
INCORPORATED

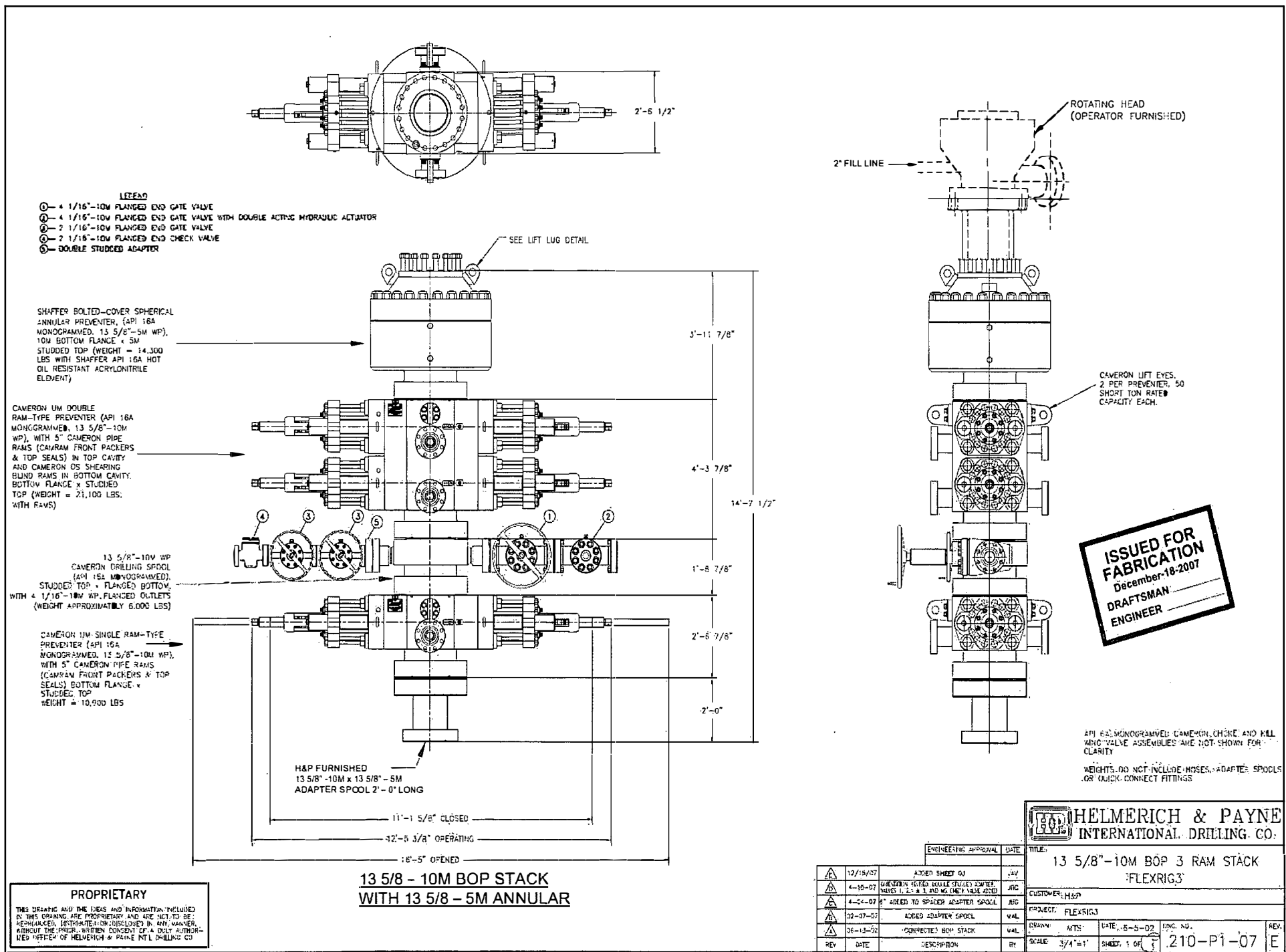


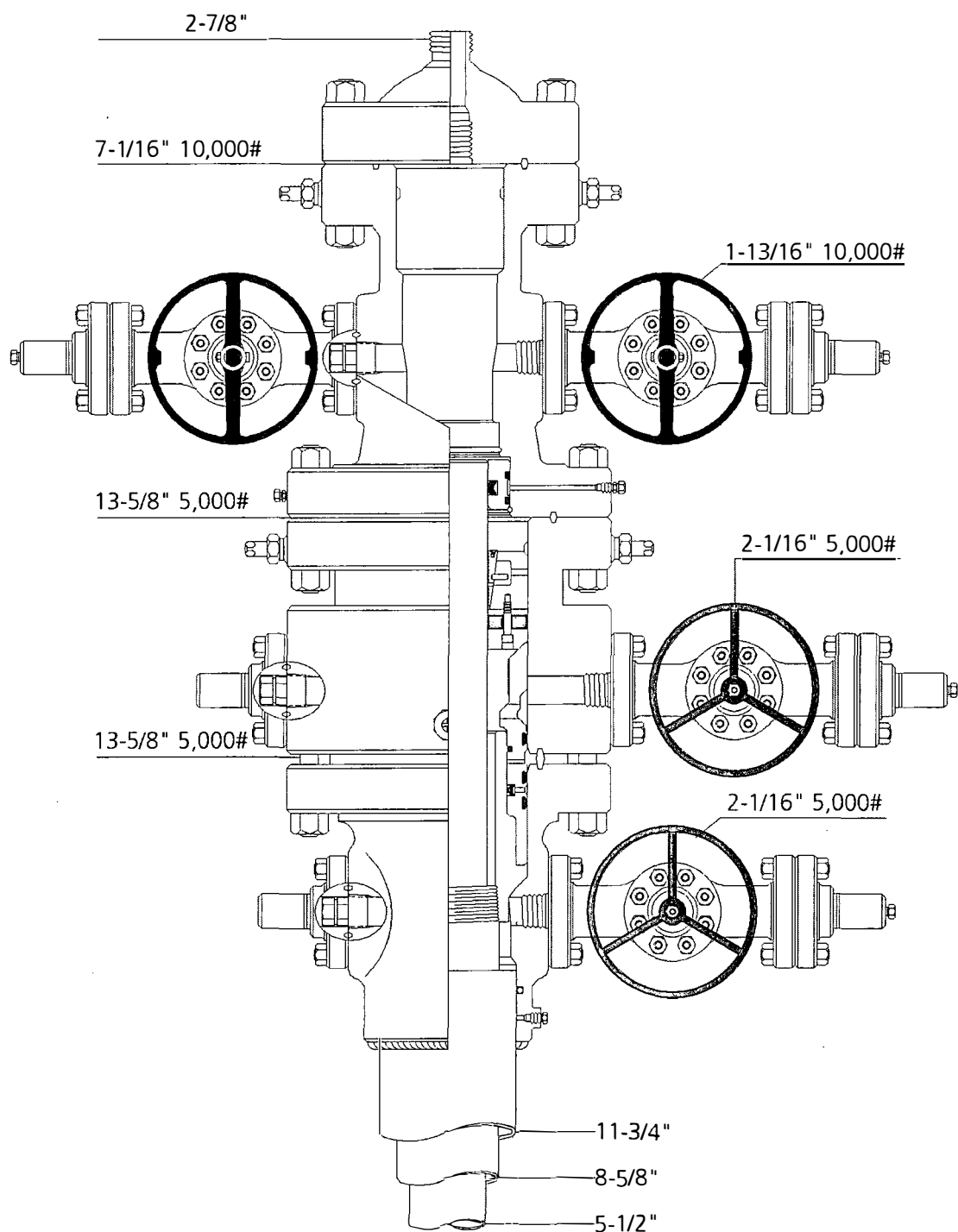


Yellow shading denotes porosity in the Siluro-Devonian section of 5% or greater, where it could be determined from porosity logs. Porosity is present in thin to thickly-bedded sequences that are separated by tight and/or fractured carbonates. The proposed injection interval (blue bar) would extend to the base of the Fusselman. The Siluro-Devonian interval is approximately 1,200 feet below the closest producing formation (Morrow) in the area, although there are no active producing Morrow wells within or immediately outside the one-mile radius around the proposed well.

Figure 9: Structural Cross-Section Through the Deeper Horizons Across the Red Hills Plant Site

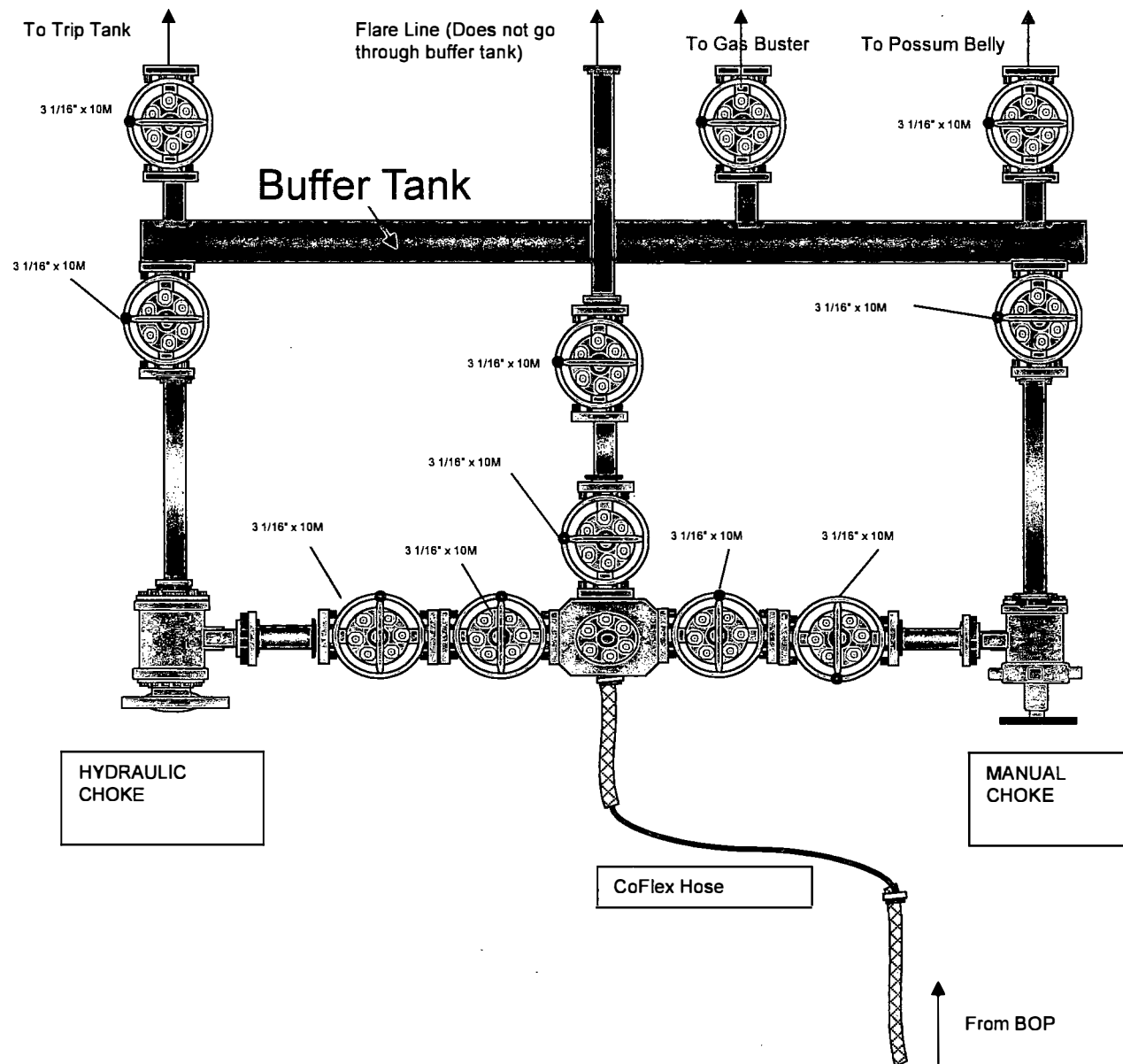




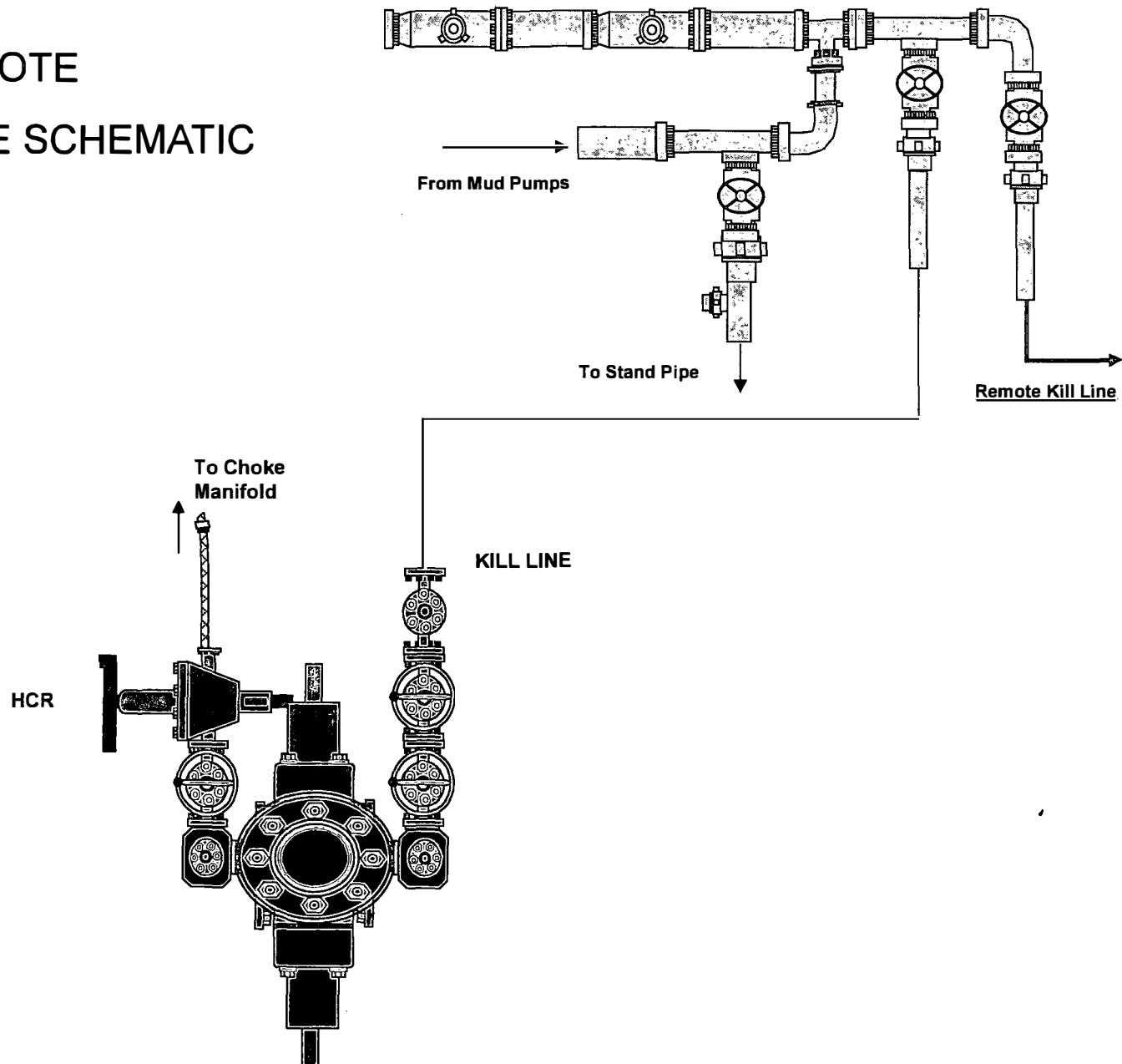


Name: Jeanette	Date: 1-31-13	Working / Reserve: #	21073221
----------------	---------------	----------------------	----------

FLEX3 STD CHOKE MANIFOLD (COMPREHENSIVE)



10M REMOTE KILL LINE SCHEMATIC



District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 57541

CONDITIONS

Operator: LUCID ENERGY DELAWARE, LLC 201 S. Fourth Street Artesia, NM 88210	OGRID: 372422
	Action Number: 57541
	Action Type: [C-101] Drilling Non-Federal/Indian (APD)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a deviation survey with Completion Report	10/26/2021
pkautz	Cement is required to circulate on all strings of casing	10/26/2021
pkautz	Must comply with all requirements of R-20916-H	10/26/2021