



David A. White, P.G.

February 14, 2022

VIA ELECTRONIC MAIL

Phillip Goetze
Director – Underground Injection Control Program
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: FORM C-101 AND C-102 SUBMITTAL FOR PIÑON MIDSTREAM, LLC PROPOSED INDEPENDENCE AGI WELL NO. 2

Dear Mr. Goetze,

Included as an attachment in this correspondence, you will find a complete Form C-101 Application for Permit to Drill and corresponding Form C-102 Well Location and Acreage Dedication Plat, which we are filing on behalf of Piñon Midstream, LLC (Piñon) for the proposed Independence AGI #2 well, which is to be located in Section 20, Township 25 South, Range 36 East, in Lea County, New Mexico.

Piñon has filed with the Oil Conservation Division (OCD) a C-108 Application for Authorization to Inject for the proposed well, which is currently undergoing final review. Currently, we anticipate spudding of the Independence AGI #2 by April 2022, in order to assure sufficient time is available to meet the NMOCC deadline to have this redundant well in operation by November 4, 2022, in accordance with special conditions of NMOCC Order No. 21455-A.

In this submission, a minor revision to the casing grade of the first intermediate casing string has been made, which differs from the program included in the submitted C-108 application. Specifically, this revision includes utilizing 133 lb/ft, K55, from a depth of 0 to 3,000 feet, followed by 163 lb/ft., K55, from a depth of 3,000 to 3,500 feet. This revision was initially made due to supply chain issues as the originally proposed NT80 casing is not anticipated to be available until August 2022. As a result of this revision, the first intermediate casing string will have a greater collapse rating than the originally presented design.

If you have any questions concerning this application, you may contact Alberto A. Gutiérrez, C.P.G. or David White, P.G. at Geolex, Inc.®; 500 Marquette Avenue NW, Suite 1350; Albuquerque, New Mexico.

Sincerely,
Geolex, Inc.®

David A. White, P.G.
Project Manager – Consultant to Piñon

Enclosure: Attachment A Complete Form C-101 application and Form C-102
Attachment B Independence AGI #2 Well Schematic
Attachment C Example Drilling Program

Y:\21-026 Pinon AGI #2 eval-permitting\Reports\C-101_102\C101_102 Cover Letter.docx

phone: 505-842-8000
fax: 505-842-7380

500 Marquette Avenue NW, Suite 1350
Albuquerque, New Mexico 87102

email: aag@geolex.com
web: www.geolex.com

ATTACHMENT A

NMOCD FORMS C-101 & C-102

Piñon Midstream, LLC
Independence AGI #2

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 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 PINON MIDSTREAM, LLC 465 W NM HIGHWAY 128; JAL, NM 88252		² OGRID Number 330718
		³ API Number
⁴ Property Code	⁵ Property Name INDEPENDENCE 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
C	20	25-S	36-E		1110	NORTH	1,443	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
N	20	25-S	36-E		1080	SOUTH	1978	WEST	LEA

9. Pool Information

Pool Name AGI; DEVONIAN-FUSSELMAN	Pool Code 97834
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Additional Well Information

¹¹ Work Type N	¹² Well Type I	¹³ Cable/Rotary R	¹⁴ Lease Type P	¹⁵ Ground Level Elevation 3,102'
¹⁶ Multiple NO	¹⁷ Proposed Depth 17,683'TVD/18,080'MD	¹⁸ Formation FUSSELMAN	¹⁹ Contractor	²⁰ Spud Date 04/01/2022
Depth to Ground water Approx. 280'		Distance from nearest fresh water well Approx. 1,795'		Distance to nearest surface water

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"	24"	186.4	1,230'	993	Surface
1st Int.	22"	20"	133/163	3,500'	1,864	Surface
2nd Int.	17.5"	13.625"	88.2	7,200'	3,581	Surface
3rd Int.	12.25"	9.625"	47	13,650'	4,107	Surface
Production	8.5"	7"	32	16,477'	1,792	Surface

Casing/Cement Program: Additional Comments

Additional casing and cementing details are included in the Attachment B - Independence AGI #2 well schematic

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	5,000	4,500	
Double Ram	10,000	9,500	

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 <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. Signature:	OIL CONSERVATION DIVISION Approved By:	
Printed name: David A. White, P.G.	Title:	
Title: Consultant to Piñon Midstream, LLC	Approved Date:	Expiration Date:
E-mail Address: dwhite@geolex.com		
Date: February 14, 2022 Phone: (505)842-8000	Conditions of Approval Attached	

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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		² Pool Code 97834		³ Pool Name AGI; DEVONIAN-FUSSELMAN	
⁴ Property Code		⁵ Property Name INDEPENDENCE AGI			⁶ Well Number 2
⁷ OGRID No. 330718		⁸ Operator Name PIÑON MIDSTREAM, LLC			⁹ Elevation 3102'

¹⁰Surface Location

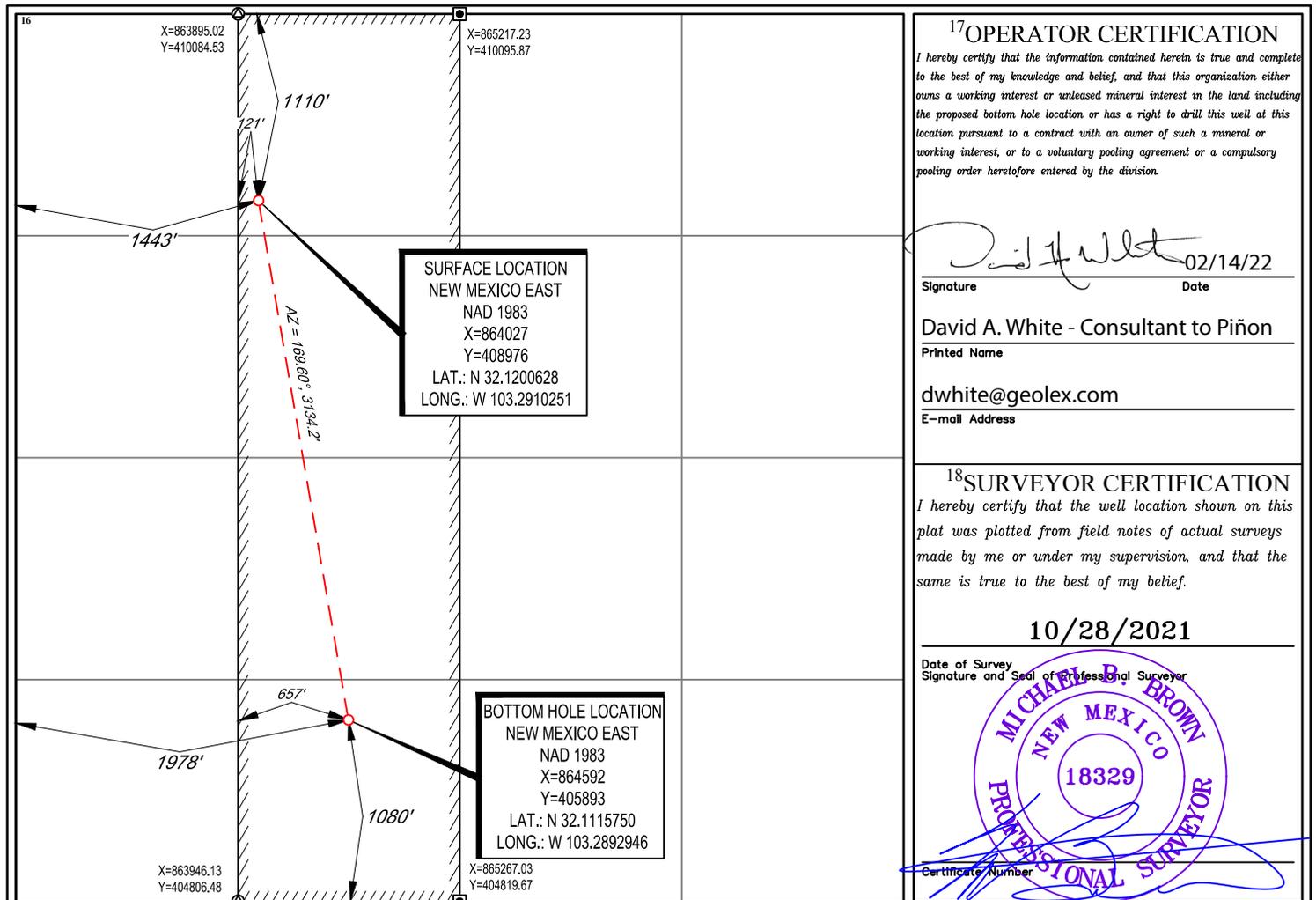
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	20	25-S	36-E	-	1110'	NORTH	1443'	WEST	LEA

¹¹Bottom Hole Location If Different From Surface

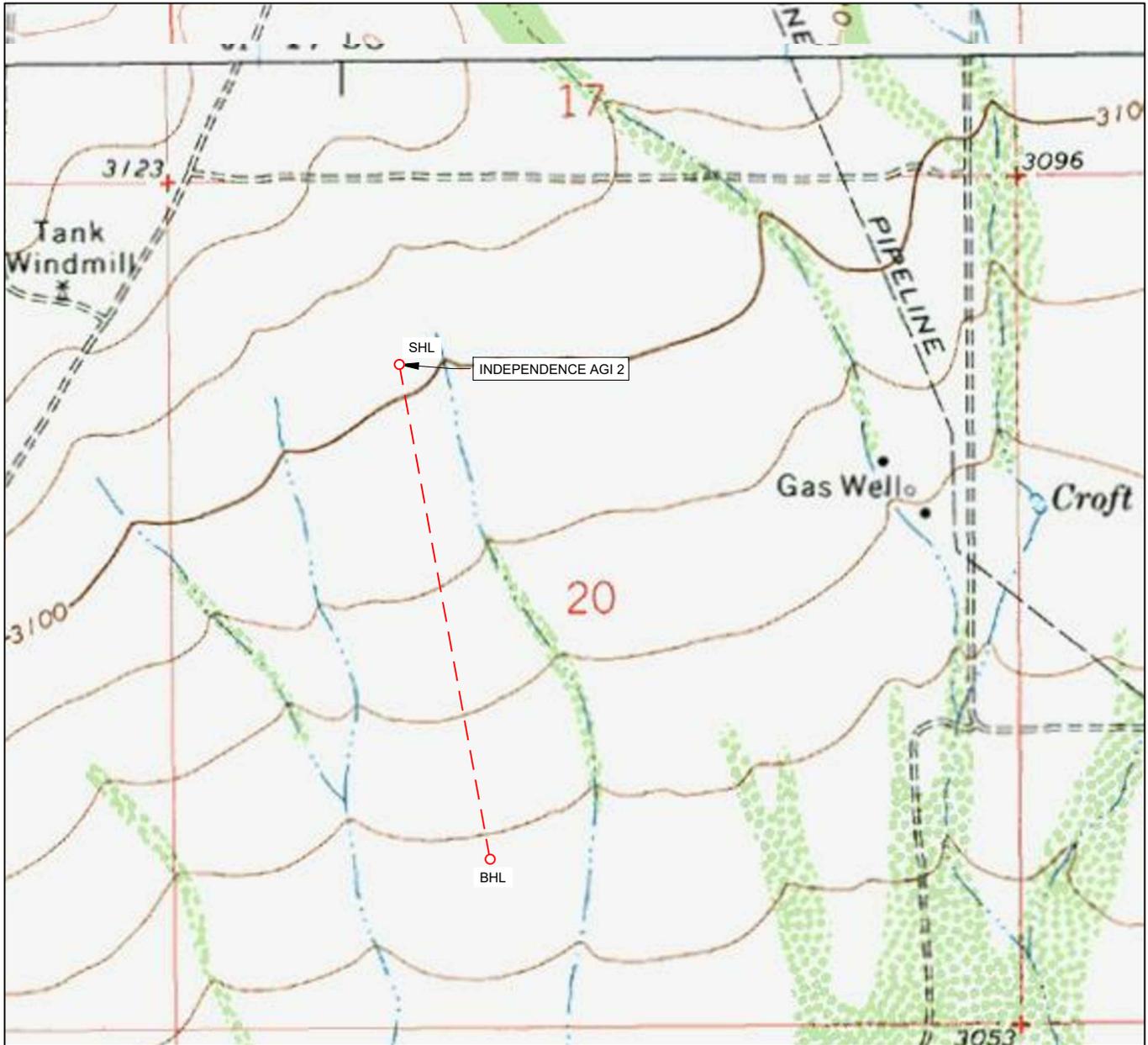
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	20	25-S	36-E	-	1080'	SOUTH	1978'	WEST	LEA

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.



LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: INDEPENDENCE AGI 2

SECTION 20 TWP 25-S RGE 36-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3102'
 DESCRIPTION 1110' FNL & 1443' FWL

LATITUDE N 32.1200628 LONGITUDE W 103.2910251



SCALE: 1" = 1000'
 0' 500' 1000'

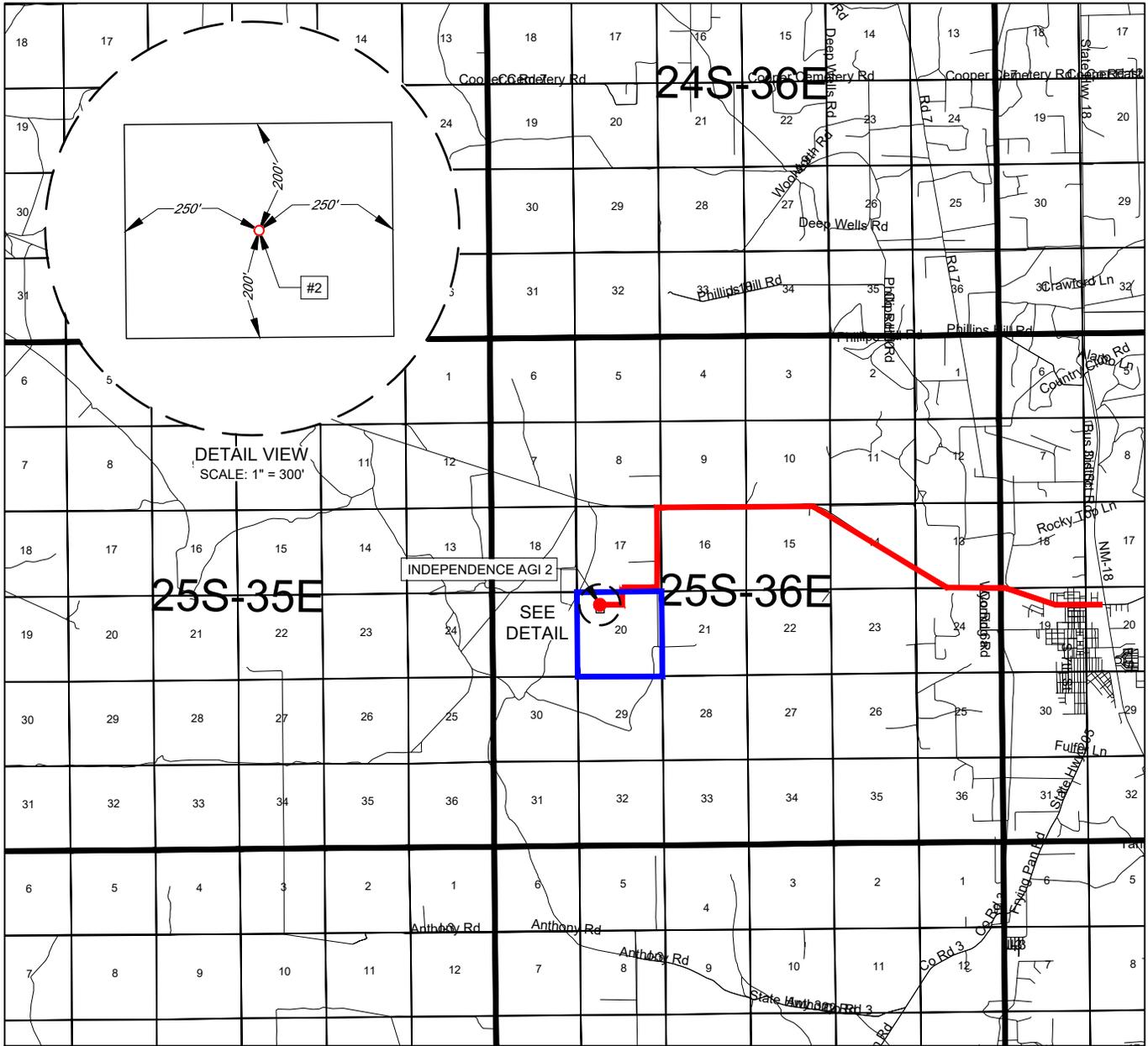
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY PIÑON MIDSTREAM, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
 WWW.TOPOGRAPHIC.COM

EXHIBIT 2
VICINITY MAP



LEASE NAME & WELL NO.: INDEPENDENCE AGI 2

SECTION 20 TWP 25-S RGE 36-E SURVEY N.M.P.M.

COUNTY LEA STATE NM

DESCRIPTION 1110' FNL & 1443' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-18 & NM-128, HEAD WEST ON NM-128 ±5.6 MILES,
THENCE SOUTH (LEFT) ON A LEASE RD ±1.0 MILE, THENCE WEST
(RIGHT) ON A PROPOSED RD ±3001 FEET, THENCE WEST (RIGHT) ON
A PROPOSED RD ±911 FEET TO A POINT ±529 FEET NORTHEAST OF
THE LOCATION.

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY PIÑON MIDSTREAM, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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SCALE: 1" = 10000'
 0' 5000' 10000'

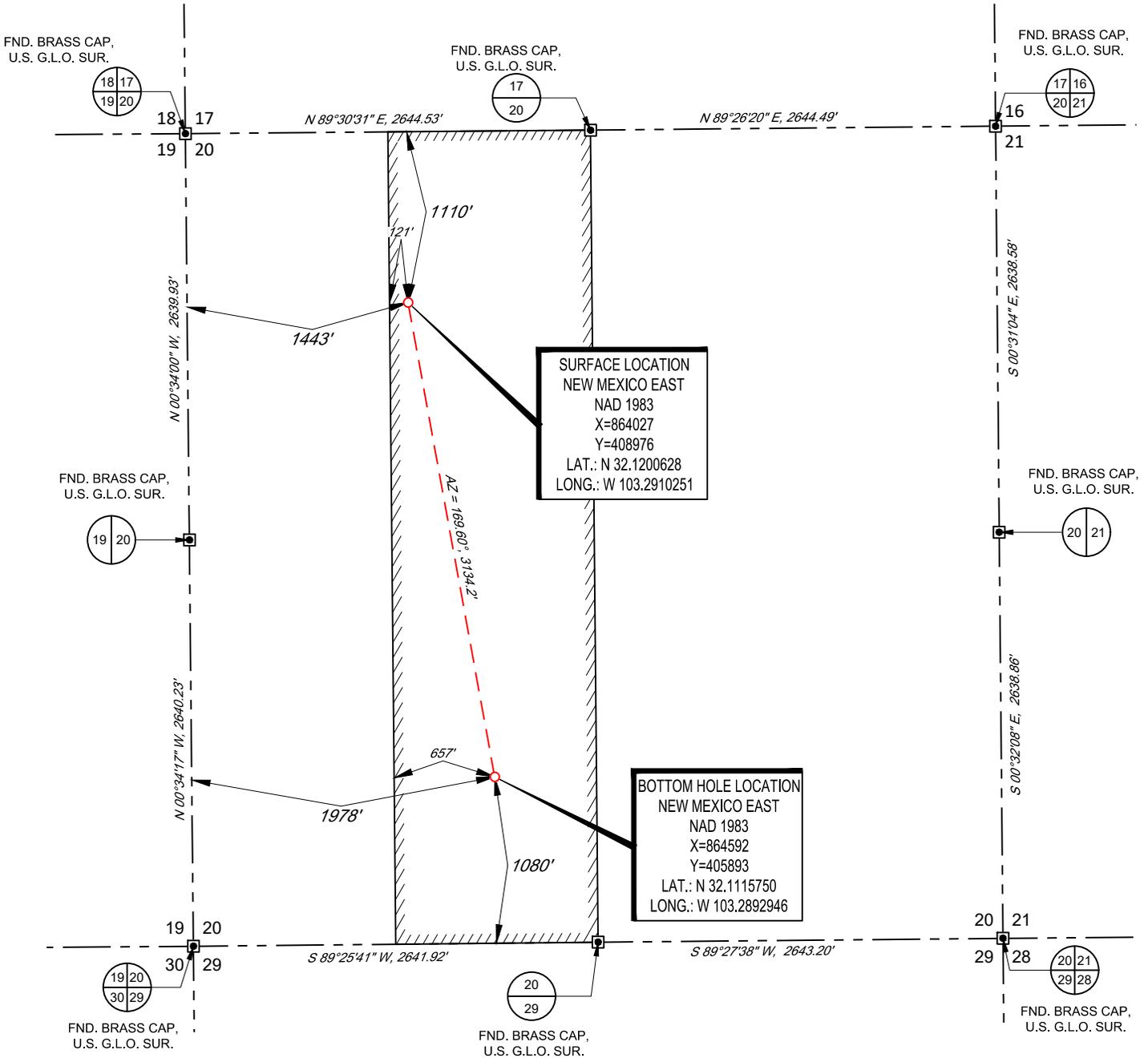


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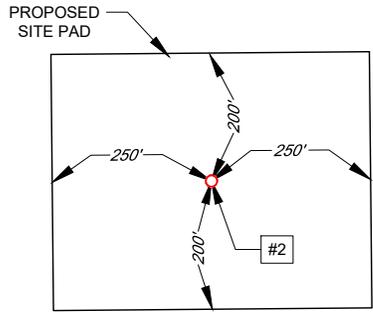
EXHIBIT 2A

SECTION 20, TOWNSHIP 25-S, RANGE 36-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

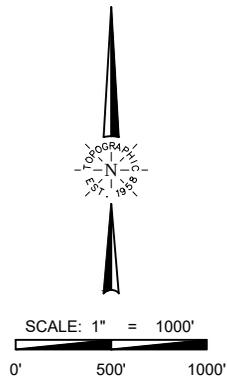


SURFACE LOCATION
NEW MEXICO EAST
NAD 1983
X=864027
Y=408976
LAT.: N 32.1200628
LONG.: W 103.2910251

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1983
X=864592
Y=405893
LAT.: N 32.1115750
LONG.: W 103.2892946



DETAIL VIEW
SCALE: 1" = 300'



LEASE NAME & WELL NO.: INDEPENDENCE AGI 2
SECTION 20 TWP 25-S RGE 36-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 1110' FNL & 1443' FWL

DISTANCE & DIRECTION
FROM INT. OF NM-18 & NM-128, HEAD WEST ON NM-128 ±5.6 MILES,
THENCE SOUTH (LEFT) ON A LEASE RD ±1.0 MILE, THENCE WEST
(RIGHT) ON A PROPOSED RD ±3001 FEET, THENCE WEST (RIGHT) ON
A PROPOSED RD ±911 FEET TO A POINT ±529 FEET NORTHEAST OF
THE LOCATION.



Michael Blake Brown, P.S. No. 18329
November 3, 2021



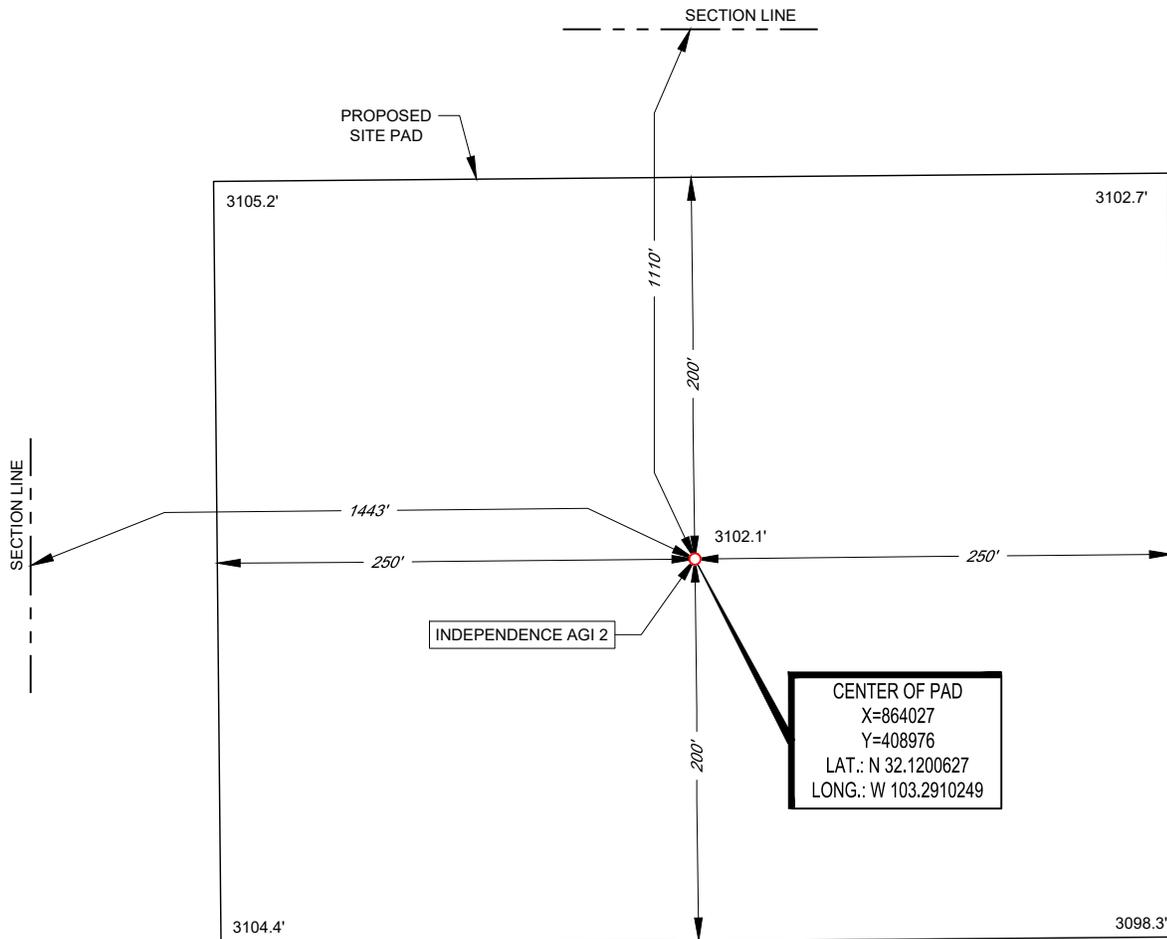
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
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ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID
BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY
FEET

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND
UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF
SURVEY, AND DATA PROVIDED BY PIÑON MIDSTREAM, LLC. THIS CERTIFICATION IS MADE AND LIMITED
TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE.
THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.



SECTION 20, TOWNSHIP 25-S, RANGE 36-E, N.M.P.M.
LEA COUNTY, NEW MEXICO
DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: INDEPENDENCE AGI 2
2 LATITUDE N 32.1200628 2 LONGITUDE W 103.2910251

CENTER OF PAD IS 1110' FNL & 1443' FWL



Michael Blake Brown, P.S. No. 18329
November 3, 2021



SCALE: 1" = 100'
0' 50' 100'

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION. THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY PIÑON MIDSTREAM, LLC. ONLY THE DATA SHOWN ABOVE IS BEING CERTIFIED TO, ALL OTHER INFORMATION WAS INTENTIONALLY OMITTED. THIS PLAT IS ONLY INTENDED TO BE USED FOR A PERMIT AND IS NOT A BOUNDARY SURVEY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

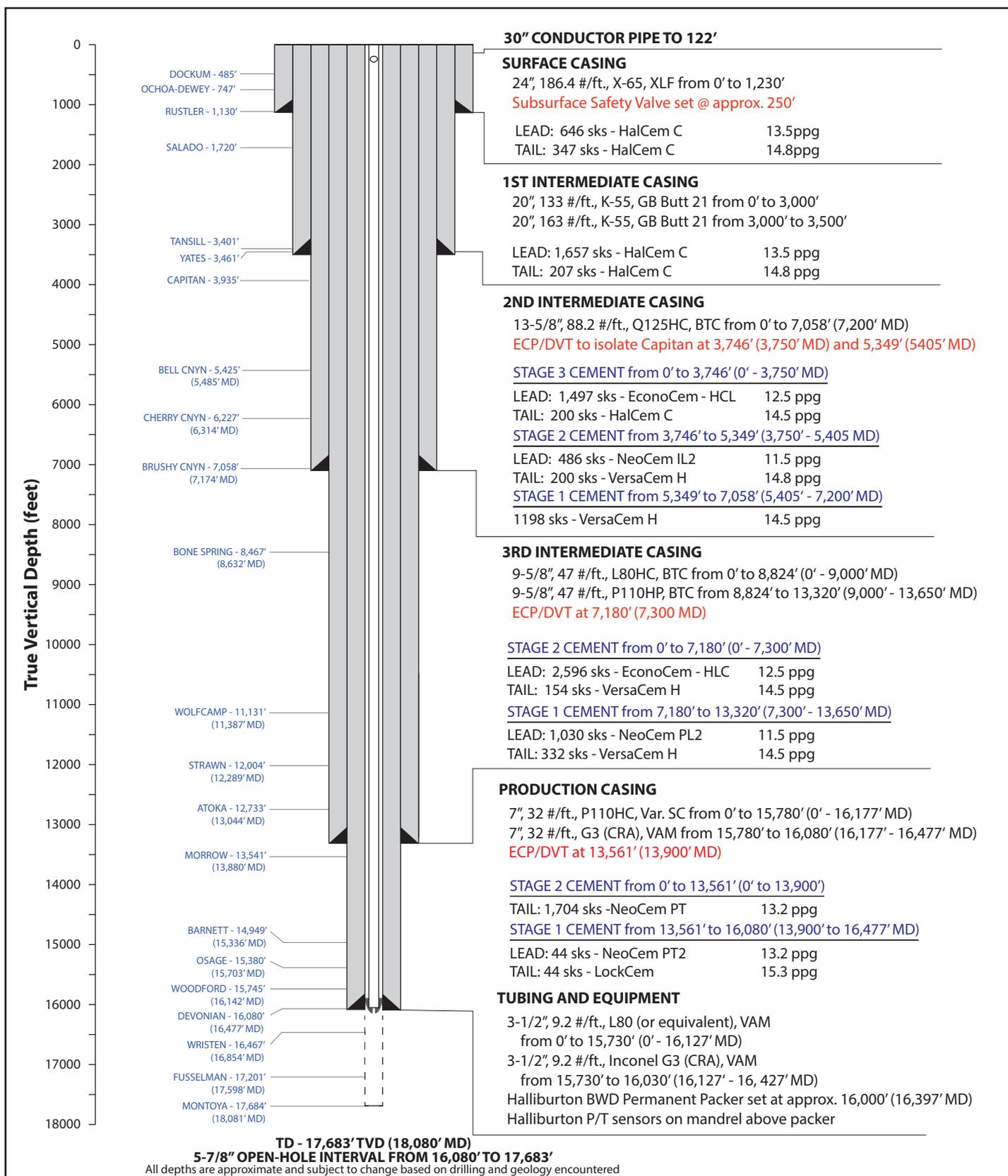
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LOYALTY INNOVATION LEGACY
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ATTACHMENT B

INDEPENDENCE AGI #2
DETAILED WELL SCHEMATIC



WELL SCHEMATIC INDEPENDENCE AGI #2 S20 - T25S - R36E



10/12/2020

Well design consisting of a surface string of casing, three intermediate strings, and a production string with associating tubing/equipment and cement types

ATTACHMENT C

INDEPENDENCE AGI #2

EXAMPLE DRILLING PROGRAM

EXAMPLE PRELIMINARY DRILLING PROGRAM INDEPENDENCE AGI #2

Location: Section 20
Township 25 South, Range 36 East
Lea County, New Mexico

Directions: From Jal, NM (intersection of 3rd Street and Highway NM-128), drive west on Highway NM-128 W and continue for 5.4 miles. Turn left (south) on lease road and continue for 1.1 miles. Turn right (west) on lease road to reach well site. Signage indicating direction to Piñon operations will be posted at worksite access roads and relevant lease road intersections.

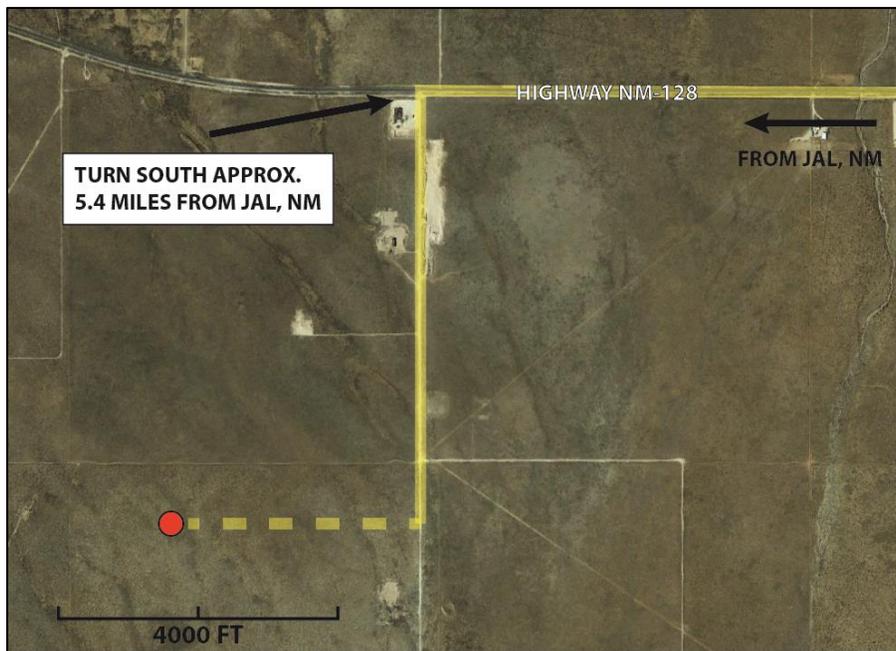


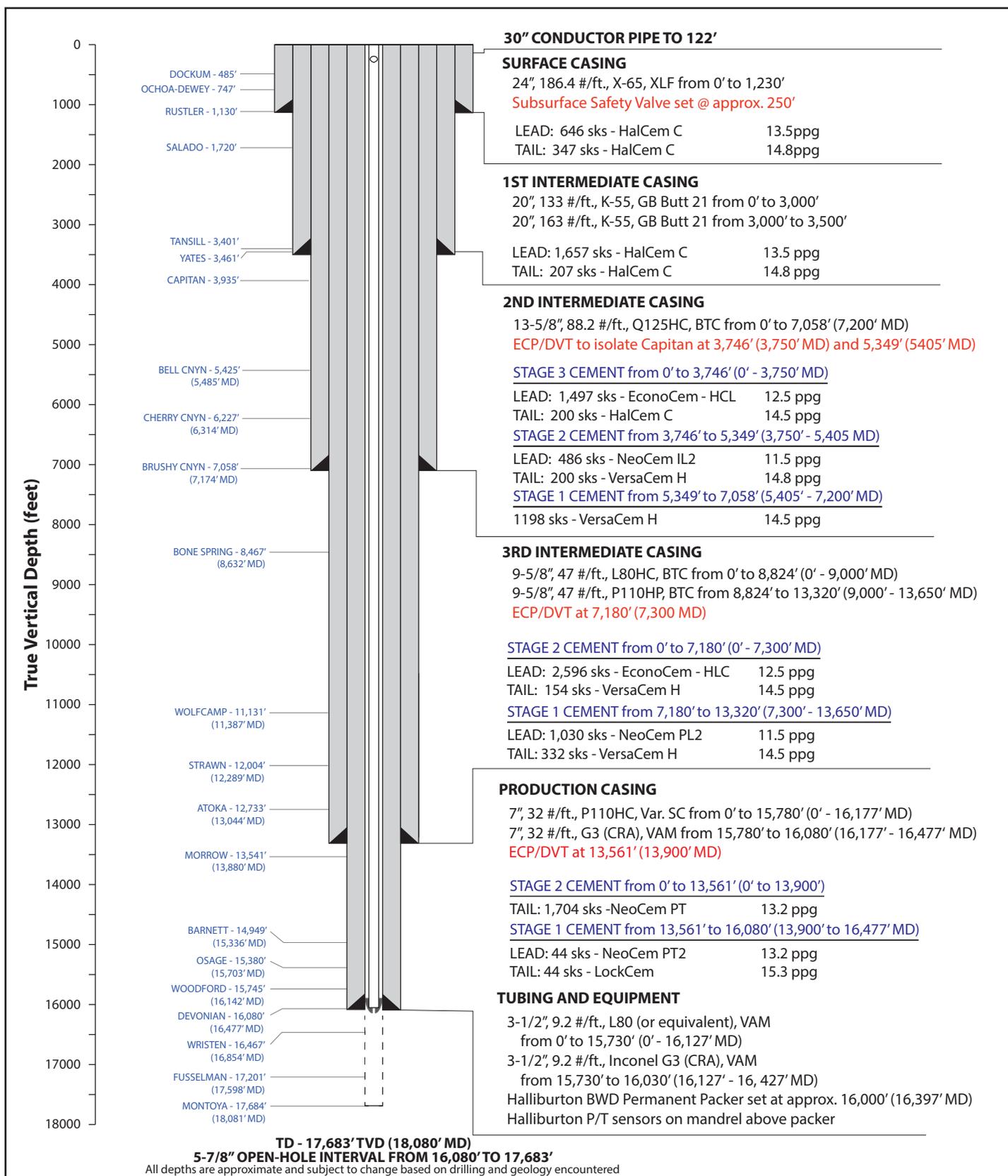
Figure 1. Anticipated access route for drilling & completion of Independence AGI #2

WELL SUMMARY DATA

County:	Lea	Field	SWD; DEV-SIL
API:	TBD	NMOCD Order No.	TBD
AFE Number:	TBD	Drilling Rig:	TBD
Elevation:	3102'	KB Elevation:	-
NAD83 Coordinates:	32.1200628, -103.2910251	Location:	1110 FNL, 1443 FWL S20-T25S-R36E



WELL SCHEMATIC INDEPENDENCE AGI #2 S20 - T25S - R36E



10/12/2020

Well design consisting of a surface string of casing, three intermediate strings, and a production string with associating tubing/equipment and cement types

CASING SUMMARY

Hole Section	Hole Size	Casing	Depth	Depth Criteria
Surface	26"	24", 186.4 #/ft., X65, FJ	0' – 1,230'	Competent strata in Rustler Form.
1 st Intermediate	22"	20", 133 #/ft., K55, BTC 20", 163#, K55, BTC	0' – 3,000' 3,000' – 3,500'	Competent strata below Salado
2 nd Intermediate	17.5"	13.625", 88.2 #/ft., Q125HC, BTC	0' – 7,200' (MD)	Competent strata in Brush Cnyn.
3 rd Intermediate	12.25"	9.625", 47 #/ft., L80HC, BTC 9.625", 47 #/ft., P110HP, BTC	0' -9,000' 9,000 – 13,650' (MD)	-
Production	8.5"	7", 32 #/ft., P110HC, BTC 7", 32 #/ft., G3 (CRA), VAM	0' – 16,177' 16,177' – 16,477' (MD)	-

CEMENT PROGRAM

Casing String	Stage #	Cement Type	# Sacks	Density (#/gallon)	Coverage Interval (MD)
Conductor	1	Redimix	-	-	0' – 122'
Surface	1	Lead: HalCem Tail: HalCem	Lead: 646 Tail: 347	Lead: 13.5 Tail: 14.8	0' – 1,230'
1 st Intermediate	1	Lead: HalCem Tail: HalCem	Lead: 1,657 Tail: 207	Lead: 13.5 Tail: 14.8	0' – 3,500'
2 nd Intermediate	1	Tail: VersaCem H	Tail: 1,198	Tail: 14.5	5,405' – 7,200'
	2	Lead: NeoCem IL2 Tail: VersaCem H	Lead: 486 Tail: 200	Lead: 11.5 Tail: 14.5	3,750' – 5,405'
	3	Lead: EconoCem HLC Tail: HalCem C	Lead: 1,497 Tail: 200	Lead: 12.5 Tail: 14.5	0' – 3,750'
3 rd Intermediate	1	Lead: NeoCem PL2 Tail: VersaCem H	Lead: 1035 Tail: 332	Lead: 11.5 Tail: 14.5	7,300' – 13,650'
	2	Lead: EconoCem HLC Tail: VersaCem H	Lead: 2,586 Tail: 154	Lead: 12.5 Tail: 14.5	0' – 7,300'
Production	1	Lead: NeoCem PT2 Tail: LockCem	Lead: 44 Tail: 44	Lead: 13.2 Tail: 15.3	13,900' – 16,477'
	2	Tail: NeoCem PT	Tail: 1,704	Lead: 13.2	0' -13,900'

PRE-SPUD OPERATIONS

Notify regulatory agency (NMOCD – Hobbs District) 24 hours prior to spud. Document notification on IADC and morning report

1. Level and grade the location with caliche or comparable material, as required
2. Install a corrugated steel cellar around well site
3. Auger conductor pipe hole to approximately 122 feet and set 36-inch beveled conductor pipe
4. Cement conductor pipe to the surface using Redi-mix cement
5. Install a 4-inch outlet for draining the conductor pipe after cementing the surface casing
6. Drill a mouse hole per drilling contractor. Ensure rat hole contractor is using correct layout.
7. Prior to moving rig, drive to location and note any road hazards and/or power lines
8. Move in and rig up drilling rig and associated equipment
 - a. Move in and rig up a closed-loop system for handling drill cuttings and drilling fluid
 - b. Make sure all drill pipe has been inspected with paperwork in hand before spud and all pipe on location is counted prior to spud. Keep an up-to-date and correct account (OD, ID, length) of all tubulars on location at all times, including 3rd-party equipment.
 - c. Perform a pre-spud rig inspection prior to accepting the rig on daywork.

26" SURFACE INTERVAL: 0' – 1,230'

Objective: Drill a 26" hole to approximately 1,230' and set 24" casing to protect usable water intervals and to isolate potentially problematic intervals of flowing sand. Casing string will be cemented to surface and cement must be circulated to surface.

Notes: Notify NMOCD – Hobbs District Office 24 hours prior to running and cementing surface casing string.

Procedure:

1. Weld a flange to the 36-inch conductor pipe and install at least a 3K annular blowout preventer (BOP)
2. Install a riser pipe with bell nipple and flowline to the BOP
3. Mix a spud mud for the surface hole
4. Make up a bottom-hole assembly (BHA) with a 26" PDC bit (or equivalent)
5. Drill ahead to 1,230' (top of Rustler Formation) taking deviation surveys at approximately 250' intervals and maintaining deviation below 2°
6. Monitor cellar to ensure ground is not washing out
7. Vary RPM, differential psi, and WOB to optimize ROP. Ream each stand 2-3 times on surface hole.
8. Monitor pickup, slack off, torque, returns, and standpipe pressure to evaluate hole cleaning
9. Sweep the hole with paper/MF-55 sweeps and drop a soap stick every connection.
10. Circulate and condition mud for running casing
11. Sweep the hole with a high-viscosity, fresh gel sweep at surface casing TD and spot a high-viscosity sweep at TD
12. Run fluid caliper
13. TOOH to run surface casing
14. Move in and rig up casing crew and run centralized 24", 186.4 #/ft, X65, XLF surface casing to approximately 1,230'. Run two bow spring centralizers on the float joint (1 in center of joint on a stop ring and 1 on collar) and one centralizer per every third joint at the collars back to surface
15. Dimensional data and minimum performance properties of the surface casing are presented on page 7.

16. Move in and rig up cementing equipment. Cement the surface casing as follows:
 - a. Pump a freshwater spacer followed by a tuned spacer designed for the rheology of the drilling fluid and lead cement.
 - b. Pump 993 sks HalCem C with additives according to the current cement program
 - c. Drop wiper plug and displace with drilling fluid according to the cementing program
 - d. Bump wiper plug and pressurize over final circulating pressure
 - e. Monitor pressure for five (5) minutes and bleed off to cement unit to ensure floats are holding
 - f. Wait on cement at least eight (8) hours. Actual cement volumes will be based on calipered hole volume, plus 25% excess)
17. Rig up logging operations to run cement bond log to verify integrity of surface casing cementing operations
18. After waiting at least 8 hours for cement to set, release the 24" surface casing and lift the stack to make a rough cut on the 24" surface casing. Nipple down the bell nipple, flow line, and BOP. If necessary, perform a top out operation between the 36" and 24" casings using a 1" pipe to place up to 200 sks of standard cement. Cut the 36" conductor and make a final cut on the 24" casing. Weld a temporary flange to the 24" casing. Re-install a 10k double ram BOP. Nipple up the bell nipple with flow line and riser pipe to the top of the BOP and test. Pressure test and function test the BOP.

Casing and Cementing – 24” Section

CASING						
Hole Size	Wt./ft.	Grade	Connection	Top Set	Bottom Set	Length
26”	186.4	X65	XLF	0'	1,230'	1,230'
CASING DETAILS						
ID: 22.500 inches			Internal Yield Pressure: 3,750 psi			
Drift: N/A			Pipe Body Strength: 3,577,000 lbs/ft			
Coupling OD: FJ			Joint Strength: 2,450,000 lbs/ft			
Collapse: 1083 psi			Capacity: 0.4918 bbl/ft			

Float Equipment & Accessories				
Item	Model	Depth	Qty	Remarks
Float Collar	HOWCO	1,190'	1	
Shoe	HOWCO	1,230'	1	
Casing				
Centralizers	HOWCO		-	2 on float joint, and 1 every 3 rd joint to surface
Stop ring		1,189'	1	

Cement	
Spacer:	20 bbl gel spacer with red dye
Type:	Halcem C (993 sks total)

22" FIRST INTERMEDIATE INTERVAL: 0' – 3,500'

Objective: Drill a 22" hole to 3,500' and set 20" 1st intermediate casing. Commence mudlogging of interval below the surface casing.

Notes: Notify NMOCD – Hobbs District Office 24 hours prior to running and cementing 1st intermediate casing string.

Procedure:

1. RU mud loggers
2. Make up 22" PDC drill bit and trip in the hole to the float collar. Drill out the float collar and approximately 30' of cement in the shoe track joint.
3. Trip in hole with 22" bit and BHA which includes a straight-hole motor. Pressure test the 24" surface casing to 1,000 psi for at least 30 minutes and record the test on a chart recorder. Drill the remainder of the shoe track cement and float shoe. Drill 10 feet of formation and perform a Formation Integrity Test (FIT) to 100 psi for 30 minutes.
4. Continue drilling a 22" hole to approximately 3,500', maintaining a low fluid loss mud system as per attached mud program.
5. Move in and rig up casing crew and run centralized 20", 133 #/ft. casing to 3,500'
6. Run two bow spring centralizers on the float joint (1 in center of joint on a stop ring and 1 on collar) and one centralizer per every third joint at the collars back to surface. The float joint will consist of a float shoe, one joint of casing, and a float collar. Circulate and condition the mud for cementing.
7. Dimensional data and minimum performance properties of the production casing are presented on page 9.
8. Cement the 20" casing back to the surface according to the cement plan outlined on page 3 and page 9.
9. Allow a minimum of 8 hours to wait on cement. After waiting on cement, ND BOP and cut off 20" casing.
10. Rig up logging operations to run cement bond log to verify integrity of 1st intermediate casing cementing operations

Casing and Cementing – 20” Casing Section

CASING						
Hole Size	Wt./ft.	Grade	Connection	Top Set	Bottom Set	Length
22	133	K55	GB BUT 21	0'	3,000'	3,000'
22	163	K55	GB BUT 21	3,000'	3,500'	500'
CASING DETAILS						
ID: 18.73 inches Drift: 18.54 inches 18.188 inches Coupling OD: 21 inches Collapse: 1,500 psi 2,500 psi			Internal Yield Pressure: 3,060 psi 3,230 psi Pipe Body Strength: 2,125,000 lbs. 2,692,000 Joint Strength: 1,453,000 lbs 1,402,000 lbs Capacity: 0.3408 bbl/ft 0.3280 bbl/ft			

Float Equipment & Accessories				
Item	Model	Depth	Qty	Remarks
Float Collar	HOWCO	3,460'	1	
Float Shoe	HOWCO	3,500'	1	
Casing				
Centralizers	HOWCO		-	2 on float joint and 1 every 3 rd joint to surface
Stop ring	HOWCO	3,459'	1	

Final design will utilize external casing packers to separately isolate Salado Salt and Capitan Reef formations.

Cement	
Spacer:	20 bbls gel spacer with red dye
Type:	Lead: HalCem – 1,657 sks Tail: HalCem – 207 sks

17.5" SECOND INTERMEDIATE INTERVAL: 0' – 7,200'

Objective: Drill a 17.5" hole to 7,200' and set 13.625" intermediate casing.

Notes: Notify NMOCD – Hobbs District Office 24 hours prior to running and cementing second intermediate casing string.

Procedure:

1. Make up 17.5" PDC drill bit and trip in the hole to the float collar. Drill out the float collar and approximately 30' of cement in the shoe track joint.
2. Trip in hole with 17.5" bit and BHA which includes a MWD and bent motor. Pressure test the 20" casing to 1,000 psi for at least 30 minutes and record the test on a chart recorder. Drill the remainder of the shoe track cement and float shoe. Drill 10 feet of formation and perform a Formation Integrity Test (FIT) to 100 psi for 30 minutes.
3. Orient the BHA to an azimuth of 169.48°. Directionally drill a 17.5" hole maintaining the 169.48° azimuth and a build rate of 14.82° to approximately 7,200' MD maintaining a low fluid loss mud system as per mud program.
4. Move in and rig up casing crew and run centralized 13.625", 88.2 #/ft. casing to 7,200' with an external casing packer (ECP) and DV tool to be set at base of Capitan (+/- 5349') another ECP and DV tool to land above Capitan (+/- 3,750').
5. Run two bow spring centralizers on the float joint (1 in center of joint on a stop ring and 1 on collar) and one centralizer per every third joint at the collars back to surface. The float joint will consist of a float shoe, one joint of casing, and a float collar. Circulate and condition the mud for cementing.
6. Dimensional data and minimum performance properties of the production casing are presented on page 11.
7. Cement the 13.625" casing back to the surface according to the cement plan outlined on page 3 and page 11. Pump stage 1 through the float collar. Drop plug and flush cement to collar. Pressure up on casing to set ECP at 5,349'. Drop dart and open DV tool set just above ECP. Pump stage 2 through DV tool. Drop closing tool and flush cement. Pressure up on casing to set second ECP set at 3,750'. Pump stage 3 through DV tool circulating cement back to surface. Drop closing tool and flush cement to tool.
8. Allow a minimum of 8 hours to wait on cement. After waiting on cement, ND BOP and cut off 13.625" casing.

Casing and Cementing – 13.625” Casing Section

CASING						
Hole Size	Wt./ft.	Grade	Connection	Top Set	Bottom Set	Length
17.5	88.2	HCQ125	BTC	0'	7,200'	7,200'
CASING DETAILS						
ID: 12.375 inches			Internal Yield Pressure: 10,040 psi			
Drift: 12.250 inches			Pipe Body Strength: 2,399,000 lbs.			
Coupling OD: 14.375 inches			Joint Strength: 3,191,000 lbs			
Collapse: 5,650 psi			Capacity: 0.1488 bbl/ft			

Float Equipment & Accessories				
Item	Model	Depth	Qty	Remarks
Float Collar	HOWCO	7,160	1	
Float Shoe	HOWCO	7,200	1	
Casing				
Centralizers	HOWCO		-	2 on float joint and 1 every 3 rd joint to surface
Stop ring	HOWCO	7,159	1	

Cement	
Stage 1	
Spacer:	40 bbls gel spacer with red dye
Type:	VersaCem H – 1,198 sks
Stage 2	
Spacer:	40 bbl gel spacer with red dye
Type:	Lead: NeoCem IL2 – 486 sks Tail: VersaCem H – 200 sks
Stage 3	
Spacer:	40 bbl gel spacer with red dye
Type:	Lead: EconoCem – 1497 sks Tail: HalCem C – 200 sks

12.25" THIRD INTERMEDIATE INTERVAL: 0' – 13,200'

Objective: Drill at 12.25" hole to approximately 13,650' and set and cement 9.625" casing string to 13,650'.

Notes: Notify the NMOCD – Hobbs District Office 24 hours prior to running and cementing the second intermediate casing string.

Procedure:

1. Make up a 12.25" PDC drill bit and trip in the hole to the float collar. Drill out the float collar and approximately 30' of cement in the shoe track joint.
2. Pressure test the 13.625" 2nd intermediate casing to 1,000 psi for at least 30 minutes and record the test on a chart recorder. Drill the remainder of the shoe track cement and float shoe. Drill 10 feet of formation and perform a Formation Integrity Test (FIT) to 100 psi for 30 minutes.
3. Continue directionally drilling a 12.25" hole to approximately 13,650', keeping a 14.82° inclination and an azimuth of 169.48°. Maintain a low fluid loss mud system as per planned mud program (TBD)
4. Move in and rig up geophysical logging crew and run triple combo tool from 13,650' to base of 2nd intermediate casing interval. Rig down logging personnel.
5. Move in and rig up casing crew and run centralized 9.625", 47 #/ft casing to 13,650'.
6. Run two bow spring centralizers on the float joint (1 in center of joint on a stop ring and 1 on collar) and one centralizer per every third joint at the collars back to 13,650'. The float joint will consist of a float shoe, one joint of casing, and a float collar. Circulate and condition the mud for cementing.
7. Dimensional data and minimum performance properties are presented on page 13.
8. Move in and rig up cementing equipment. Cement the 9.625" third intermediate string as follows:
 - a. Stage 1
 - i. Lead: NeoCem PL2 (11.5 ppg) – 1035 sks
 - ii. Tail: VersaCem H (14.5 ppg) – 332 sks
 - b. Stage 2
 - i. EconoCem HLC (12.5 ppg) – 2,586 sks
 - ii. VersaCem H (14.5 ppg) – 154 sks
9. Wait on cement at least eight (8) hours (cement volumes are based on bit size plus 100% excess for open-hole section. Actual cement volumes will be based on calipered hole volume, plus 25% excess)
10. Rig up logging operations to run cement bond log to verify integrity of 3rd intermediate casing cementing operations

11. Casing and Cementing – 9.625” Casing Section

CASING						
Hole Size	Wt./ft.	Grade	Connection	Top Set	Bottom Set	Length
12.25”	47	L80HC	BTC	0’	9,000’	9,000’
12.25”	47	P110HP	BTC	9,000’	13,650’	4,650’
CASING DETAILS (L80HC)						
ID: 8.681 inches Drift: 8.525 inches Coupling OD: 10.625 inches Collapse: 7,100 psi			Internal Yield Pressure: 6,870 psi Pipe Body Strength: 1,086,000 lbs. Joint Strength: 1,027,000 Capacity: 0.0732 bbl/ft			
CASING DETAILS (P110HP)						
ID: 8.681 inches Drift: 8.525 inches Coupling OD: 10.625 Collapse: 7,100 psi			Internal Yield Pressure: 9,440 psi Pipe Body Strength: 1,493,000 lbs. Joint Strength: TBD Capacity: 0.0732 bbl/ft			

Float Equipment & Accessories				
Item	Model	Depth	Qty	Remarks
Float Collar	HOWCO	13,610’	1	
Float Shoe	HOWCO	13,650’	1	
Casing				
Centralizers	HOWCO		-	2 on float joint and 1 every 3 rd joint to surface
Stop ring	HOWCO	13,609’	1	

Cement	
Stage 1	
Spacer:	20 bbls gel spacer with red dye
Type:	Lead: NeoCem PL2 (11.5 ppg) – 1035 sks Tail: VersaCem H (14.5 ppg) – 332 sks
Stage 2	
Spacer:	20 bbls gel spacer with red dye
Type:	Lead: EconoCem HLC (12.5 ppg) – 2,586 sks Tail: VersaCem H (14.5 ppg) – 154 sks

8.5" PRODUCTION INTERVAL: 0' – 16,230'

Objective: Drill a 8.5" hole to approximately 16,477' and set and cement 7" production casing at 16,477'. Mudlogging operations will continue in this interval. Open-hole geophysical logs will be collected for the interval underlying the 3rd intermediate casing string, prior to completion of cementing operations.

Notes: Notify the NMOCD – Hobbs District Office 24 hours prior to running and cementing the production string.

Procedure:

1. Make up a 8.5" PDC drill bit with MWD and bent motor and trip in the hole to the float collar. Drill out the float collar and approximately 30' of cement in the shoe track joint.
2. Pressure test the 9.625" 3rd intermediate casing to 1,000 psi for at least 30 minutes and record the test on a chart recorder. Drill the remainder of the shoe track cement and float shoe. Drill 10 feet of formation and perform a Formation Integrity Test (FIT) to 100 psi for 30 minutes.
3. Continue directional drilling a 8.5" hole to approximately 15,400 MD maintaining the 14.82° inclination and a 169.48° azimuth, keeping a low fluid loss mud system as per planned mud program (TBD).
4. At 15,400' MD while maintaining a 169.48° azimuth, begin dropping inclination so back to vertical by approximately 16,000' TVD (approx. 16,397' MD).
5. Continue drilling vertically to TVD of 16,080' (approx. 16,477 MD).
6. Move in and rig up geophysical logging crew and run triple combo tool from 16,477' to base of 3rd intermediate casing interval. Rig down logging personnel.
7. Collected geophysical logs will be evaluated to identify sampling points in which collection of cap rock sidewall cores will be completed
8. Move in and rig up sidewall coring personnel and collect sidewall cores in accordance with results of geophysical log evaluation
9. Move in and rig up casing crew and run centralized 7", 32 #/ft G3 corrosion resistant alloy casing from 16,177' to 16,477' and 7", 32 #/ft., P110HC, casing from 0' to 16,177'.
10. Run two bow spring centralizers on the float joint (1 in center of joint on a stop ring and 1 on collar) and one centralizer per every third joint at the collars back to surface. The float joint will consist of a float shoe, one joint of casing, and a float collar. Circulate and condition the mud for cementing.
11. Dimensional data and minimum performance properties are presented on page 16.

12. Move in and rig up cementing equipment. Cement the 7" production casing as follows:
 - a. Stage 1
 - i. Lead: NeoCem PT2 (12.5 ppg) – 44 sks
 - ii. Tail: LockCem (15.3 ppg) – 44 sks
 - b. Stage 2
 - i. NeoCem PT (13.2 ppg) – 1,704 sks
13. Wait on cement at least eight (8) hours (cement volumes are based on bit size plus 100% excess for open-hole section. Actual cement volumes will be based on calipered hole volume, plus 25% excess)
14. Rig up logging operations to run cement bond log to verify integrity of production casing cementing operations

Casing and Cementing – 7” Casing Section

CASING						
Hole Size	Wt./ft.	Grade	Connection	Top Set	Bottom Set	Length
8.5	32	P110HC	BTC	0'	16,177'	16,177'
8.5	32	G3	VAM	16,177'	16,477'	300'
CASING DETAILS						
ID: 6.094 inches			Internal Yield Pressure: 12,450 psi			
Drift: 5.969 inches			Pipe Body Strength: 1,025,000 lbs.			
Coupling OD: 7.65 inches			Joint Strength: 1,165,000 lbs.			
Collapse: 11,890 psi			Capacity: 0.0361 bbl/ft			

Float Equipment & Accessories				
Item	Model	Depth	Qty	Remarks
Float Collar	HOWCO	16,190'	1	
Float Shoe	HOWCO	16,230'	1	
Casing				
Centralizers	HOWCO		-	2 on float joint and 1 every 3 rd joint to surface
Stop ring	HOWCO	16,189'	1	

Cement	
Stage 1	
Spacer:	40 bbls gel spacer with red dye
Type:	Lead: NeoCem PT2 (12.5 ppg) – 44 sks Tail: LockCem (15.3 ppg) – 44 sks
Stage 2	
Spacer:	40 bbls gel spacer with red dye
Type:	NeoCem PT (13.2 ppg) – 1,704 sks

OPEN-HOLE SECTION FROM 16,230' TO 17,900'

Objective: Drill a 5.875" open-hole interval from 16,477' to 18,080' (MD). Mudlogging operations will continue in this interval and open-hole geophysical logs will be collected.

Notes: Potential for lost circulation may be present in upper intervals of the injection zone and at various additional points within the zone.

Procedure:

1. Make up a 5.875" PDC drill bit and trip in the hole to the float collar. Drill out the float collar and approximately 30' of cement in the shoe track joint.
2. Pressure test the 7" production casing to 1,000 psi for at least 30 minutes and record the test on a chart recorder. Drill the remainder of the shoe track cement and float shoe. Drill 10 feet of formation and perform a Formation Integrity Test (FIT) to 100 psi for 30 minutes.
3. Continue drilling a 5.875" hole to approximately 18,080', maintaining a low fluid loss mud system as per planned mud program (TBD)
4. Move in and rig up geophysical logging crew and run planned geophysical logging suite from TD to base of production liner interval (triple-combo, sonic, FMI)
5. Rig down logging crew
6. WO evaluation of geophysical logs to identify sidewall coring points
7. Move in and rig up sidewall coring personnel and collect core samples per results of geophysical log evaluation.
8. Rig down sidewall coring operations
9. Rig down and release drilling rig and all associated equipment

Geophysical Logging and Coring Plans

Casing String	Log Interval	Open-hole Logs	Closed-hole Logs	Sidewall Coring
Surface	0' – 1,230' (MD)	-	1. Cement Bond Log	-
1 st Intermediate	0' – 3,500' (MD)	1. Mudlog	2. Cement Bond Log	-
2 nd Intermediate	0' – 7,200' (MD)	1. Mudlog	2. Cement Bond Log	-
3 rd Intermediate	0' – 13,650' (MD)	1. Mudlog	2. Cement Bond Log	-
Production	13,650' – 16,477' (MD) (CBL will be run to surface)	1. Mudlog 2. Gamma Ray 3. Triple Combo Tool 4. Sonic Density 5. Formation MicroImager	1. Cement Bond Log	1. Cap Rock
Open-hole interval	16,477' – 18,080' (MD)	1. Mudlog 2. Triple Combo Tool 3. Sonic Density 4. Formation MicroImager	-	1. Various points within injection reservoir

NOTE: Formation micro-imager log will be recorded along permitted injection interval and overlying caprock only.

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 81490

CONDITIONS

Operator: Pinon Midstream LLC 465 W. NM Highway 128 Jal, NM 88252	OGRID: 330718
	Action Number: 81490
	Action Type: [C-101] Drilling Non-Federal/Indian (APD)

CONDITIONS

Created By	Condition	Condition Date
pgoetze	Notify OCD 24 hours prior to casing & cement	4/5/2022