

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 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

Form C-101

August 1, 2011

Permit 290430

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. 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 CHISHOLM ENERGY OPERATING, LLC 801 Cherry Street Fort Worth, TX 76102		2. OGRID Number 372137
		3. API Number 30-025-48285
4. Property Code 329917	5. Property Name GRAMA RIDGE EAST 34 STATE COM AVLN	6. Well No. 012H

7. Surface Location

UL - Lot P	Section 34	Township 21S	Range 34E	Lot Idn P	Feet From 226	N/S Line S	Feet From 1243	E/W Line E	County Lea
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	-------------------	---------------	---------------

8. Proposed Bottom Hole Location

UL - Lot B	Section 34	Township 21S	Range 34E	Lot Idn B	Feet From 100	N/S Line N	Feet From 1730	E/W Line E	County Lea
---------------	---------------	-----------------	--------------	--------------	------------------	---------------	-------------------	---------------	---------------

9. Pool Information

GRAMA RIDGE;BONE SPRING, NE	28435
-----------------------------	-------

Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3616
16. Multiple N	17. Proposed Depth 13745	18. Formation Bone Spring	19. Contractor	20. Spud Date 5/30/2021
Depth to Ground water		Distance from nearest fresh water well		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
Surf	17.5	13.375	54.5	5600	1390	0
Int1	12.25	9.675	40	5600	2045	0
Prod	8.75	5.5	20	13745	1505	4500

Casing/Cement Program: Additional Comments

--

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	2500	2500	CAMERON
Double Ram	5000	5000	CAMERON
Pipe	5000	5000	CAMERON

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
 I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

OIL CONSERVATION DIVISION

Signature:

Printed Name: Electronically filed by Jennifer Elrod

Title: Sr. Regulatory Tech

Email Address: jelrod@chisholmenergy.com

Date: 12/18/2020

Phone: 817-953-3728

Approved By: Paul F Kautz

Title: Geologist

Approved Date: 1/3/2021

Expiration Date: 1/3/2023

Conditions of Approval Attached

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
1226 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1226 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 28435	Pool Name GRAMA RIDGE; BONE SPRING, NE
Property Code	Property Name GRAMA RIDGE EAST 34 STATE COM AVLN	Well Number 12H
OGRID No. 372137	Operator Name CHISHOLM ENERGY OPERATING, LLC	Elevation 3617'

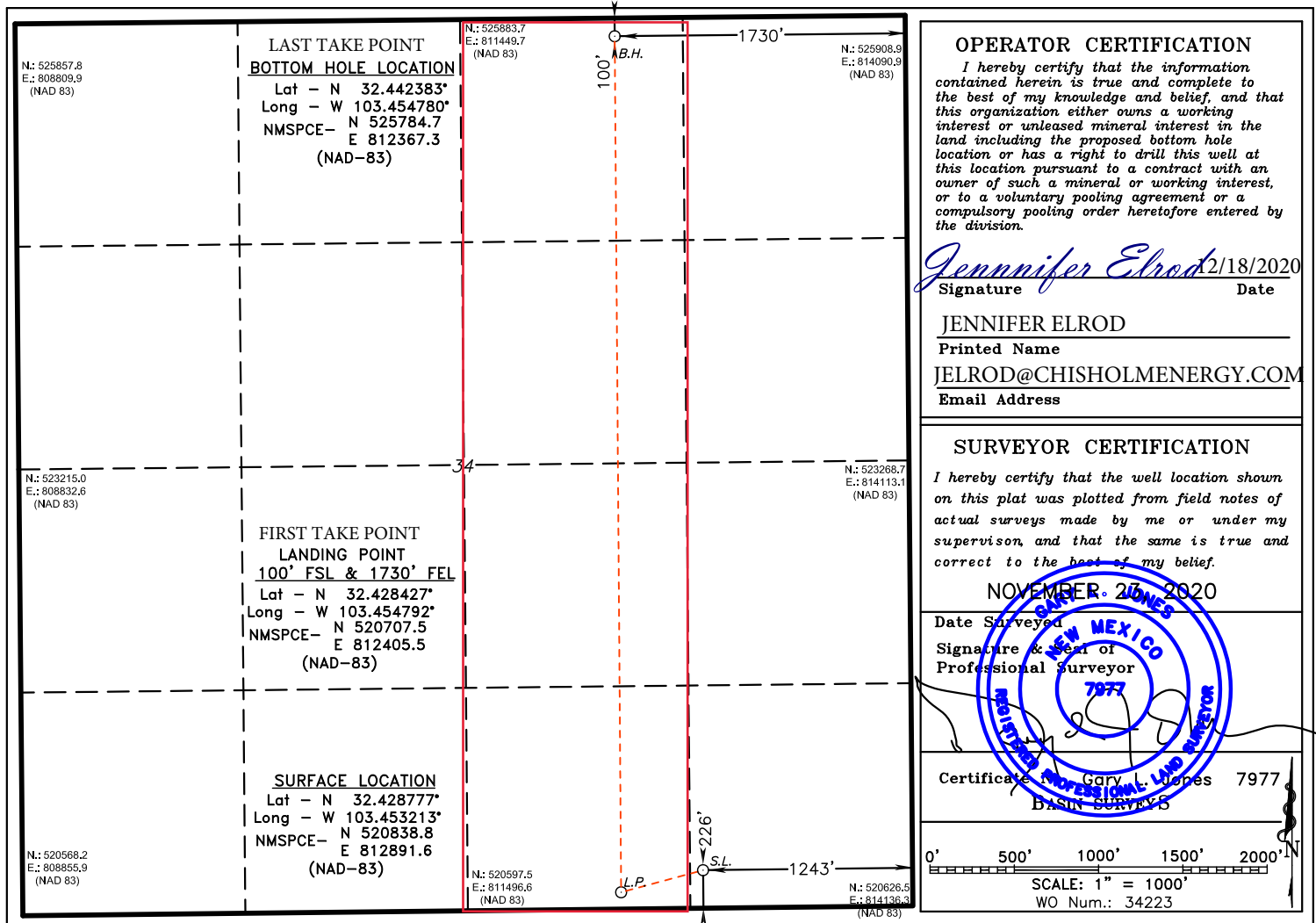
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/South line	FEET from the	East/West line	County
P	34	21 S	34 E		226	SOUTH	1243	EAST	LEA

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
B	34	21 S	34 E		100	NORTH	1730	EAST	LEA
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.						

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



Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number
	GRAMA RIDGE EAST 34 STATE COM AVLN	12H

Kick Off Point (KOP)

UL P	Section 34	Township 21S	Range 34E	Lot	Feet 226	From N/S SOUTH	Feet 1243	From E/W EAST	County LEA
Latitude 32.428777					Longitude -103.453213			NAD 83	

First Take Point (FTP)

UL O	Section 34	Township 21S	Range 34E	Lot	Feet 100	From N/S SOUTH	Feet 1730	From E/W EAST	County LEA
Latitude 32.428427					Longitude -103.454792			NAD 83	

Last Take Point (LTP)

UL B	Section 34	Township 21S	Range 34E	Lot	Feet 100	From N/S NORTH	Feet 1730	From E/W EAST	County LEA
Latitude 32.442383					Longitude -103.454780			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

☐ NO

Is this well an infill well?

☐ YES

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-025-43823		
Operator Name:	Property Name:	Well Number
CHISHOLM ENERGY OPERATING, LLC	GRAMA RIDGE EAST 34 STATE COM 2BS	8H

KZ 06/29/2018

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

GAS CAPTURE PLAN

Date: 1/4/2021

☒ Original

Operator & OGRID No.: [372137] CHISHOLM ENERGY OPERATING, LLC

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
GRAMA RIDGE EAST 34 STATE COM AVLN #012H	30-025-48285	P-34-21S-34E	0226S 1243E	1200	Flared	FLARED ONLY WHEN NEEDED

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to 3BEAR FIELD SERVICES, LLC and will be connected to 3BEAR FIELD SERVICES, LLC Low Pressure gathering system located in Lea County, New Mexico. It will require 50' of pipeline to connect the facility to Low Pressure gathering system. CHISHOLM ENERGY OPERATING, LLC provides (periodically) to 3BEAR FIELD SERVICES, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, CHISHOLM ENERGY OPERATING, LLC and 3BEAR FIELD SERVICES, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at 3BEAR FIELD SERVICES, LLC Processing Plant located in Sec. 26, Twn. 20S, Rng. 34E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on 3BEAR FIELD SERVICES, LLC system at that time. Based on current information, it is CHISHOLM ENERGY OPERATING, LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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

Form APD Comments

Permit 290430

PERMIT COMMENTS

Operator Name and Address: CHISHOLM ENERGY OPERATING, LLC [372137] 801 Cherry Street Fort Worth, TX 76102		API Number: 30-025-48285
		Well: GRAMA RIDGE EAST 34 STATE COM AVLN #012H
Created By	Comment	Comment Date

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

Form APD Conditions

Permit 290430

PERMIT CONDITIONS OF APPROVAL

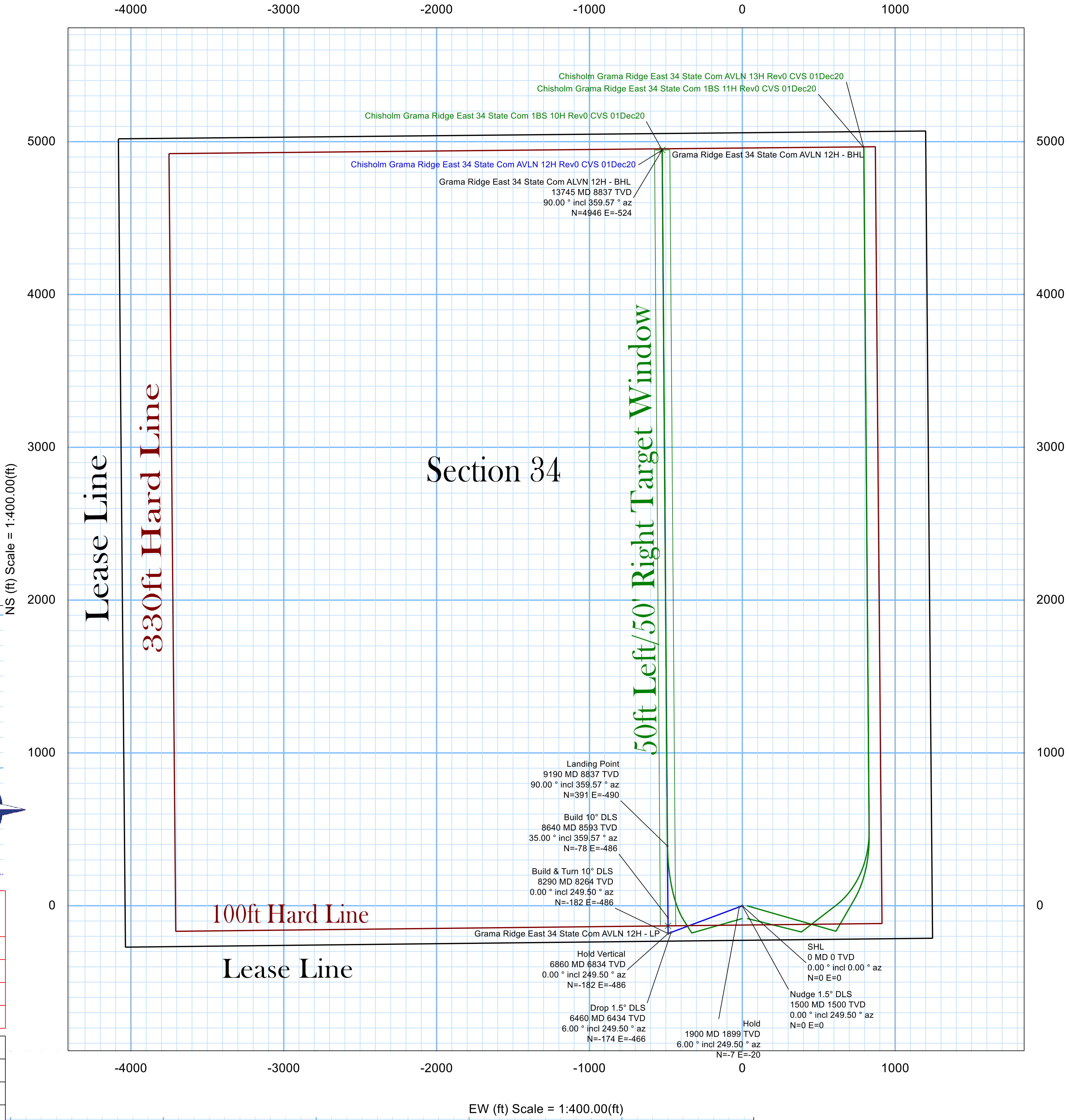
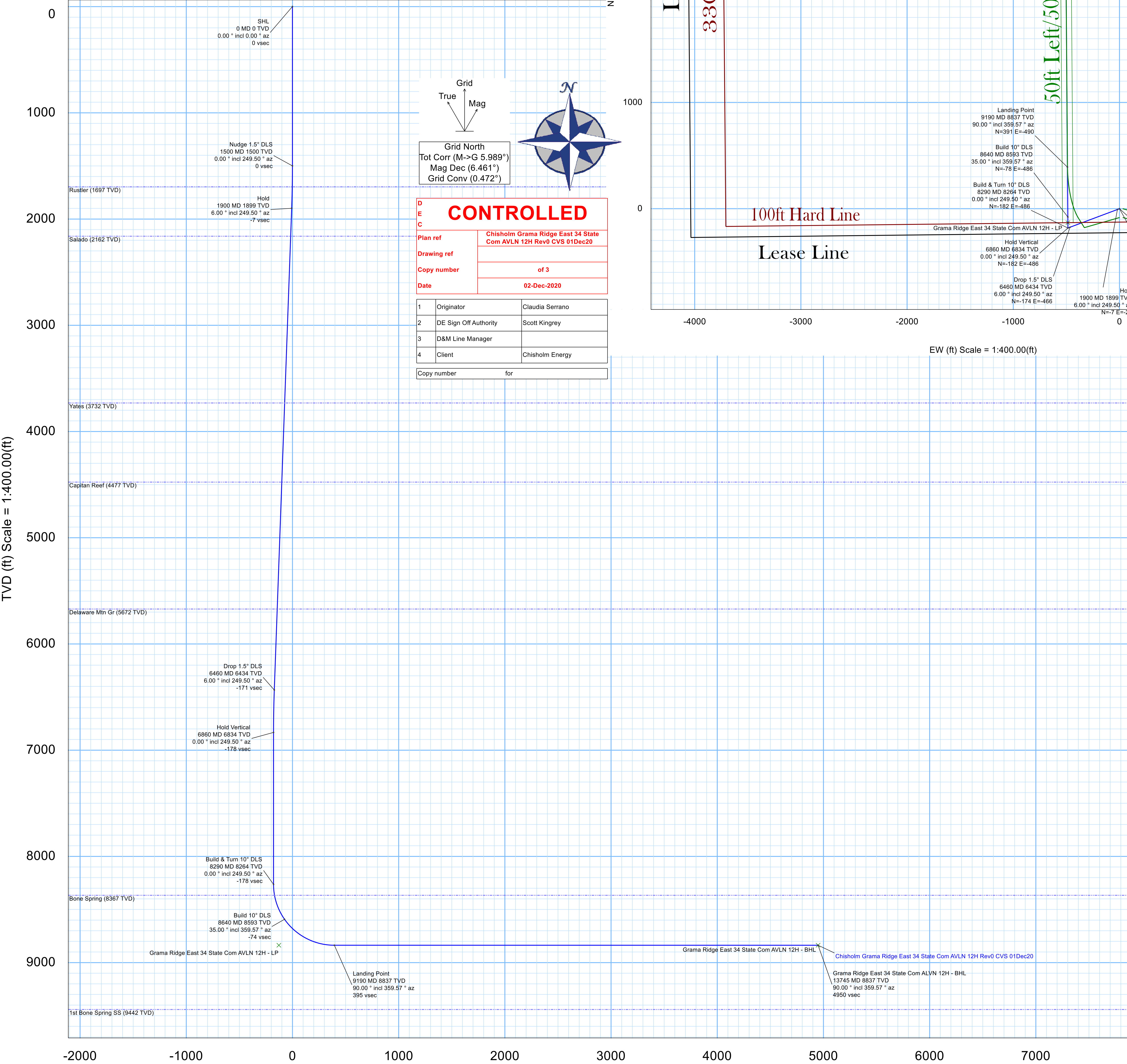
Operator Name and Address: CHISHOLM ENERGY OPERATING, LLC [372137] 801 Cherry Street Fort Worth, TX 76102	API Number: 30-025-48285
	Well: GRAMA RIDGE EAST 34 STATE COM AVLN #012H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	1)- The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
pkautz	It is the operator's responsibility to monitor cancellation dates of approved APDs. APD's are good for 2 years and may be extended for one year. Only one 1 year extension will be granted if submitted by C-103 before expiration date. After expiration date or after a 1 year extension must submit new APD. If an APD expires and if site construction has occurred, site remediation is required.
pkautz	Stage Tool 1) Must notify OCD Hobbs Office prior to running Stage Tool at 5753703186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.

Borehole:	Well:	Field:	Structure:
Grama Ridge East 34 State Com AVLN 12H	Grama Ridge East 34 State Com AVLN 12H	NM Lea County (NAD 83)	Chisholm Grama Ridge East 34 State Com AVLN Pad

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	HDGM 2020	Dip:	60.214°	Date:	01-Dec-2020	Lat:	N 32 25 43.60	Northings:	520838.8ftUS	Grid Conv:	0.472°
MagDec:	6.461°	FS:	47876.369nT	Gravity FS:	998.48mgn (9.80665 Based)	Lon:	W 103 27 11.57	Easting:	812891.6ftUS	Scale Fact:	0.99999354
								Plan: Chisholm Grama Ridge East 34 State Com AVLN 12H Rev0 CVS 01Dec20			

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nudge 1.5° DLS	1500.00	0.00	249.50	1500.00	0.00	0.00	0.00	0.00
Rustler	1697.09	2.96	249.50	1697.00	-1.74	-1.78	-4.76	1.50
Hold	1900.00	6.00	249.50	1899.27	-7.18	-7.33	-19.60	1.50
Salado	2164.18	6.00	249.50	2162.00	-16.66	-17.00	-45.47	0.00
Yates	3742.83	6.00	249.50	3732.00	-73.28	-74.79	-200.03	0.00
Capitan Reef	4491.93	6.00	249.50	4477.00	-100.16	-102.21	-273.37	0.00
Delaware Mtn Gr	5693.51	6.00	249.50	5672.00	-143.26	-146.20	-391.02	0.00
Drop 1.5° DLS	6460.00	6.00	249.50	6434.29	-170.75	-174.25	-466.06	0.00
Hold Vertical	6860.00	0.00	249.50	6833.56	-177.93	-181.58	-485.66	1.50
Build & Turn 10° DLS	8290.48	0.00	249.50	8264.04	-177.93	-181.58	-485.66	0.00
Bone Spring	8394.00	10.35	359.57	8367.00	-168.61	-172.26	-485.73	10.00
Build 10° DLS	8640.48	35.00	359.57	8592.68	-74.31	-77.97	-486.44	10.00
Landing Point	9190.48	90.00	359.57	8837.00	395.03	391.36	-489.97	10.00
Grama Ridge East 34 State Com ALVN 12H - BHL	13745.19	90.00	359.57	8837.00	4949.74	4945.94	-524.30	0.00
3rd Bone Spring SS	NaN			10907.00				
2nd Bone Spring SS	NaN			10012.00				
Wolfcamp	NaN			11202.00				
1st Bone Spring SS	NaN			9442.00				





Chisholm Grama Ridge East 34 State Com AVLN 12H Rev0 CVS 01Dec20 Proposal Geodetic Report (Def Plan)



Report Date: December 02, 2020 - 09:48 AM
Client: Chisholm
Field: NM Lea County (NAD 83)
Structure / Slot: Chisholm Grama Ridge East 34 State Com AVLN Pad / Grama Ridge East 34 State Com AVLN 12H
Well: Grama Ridge East 34 State Com AVLN 12H
Borehole: Grama Ridge East 34 State Com AVLN 12H
UWI / API#: Unknown / Unknown
Survey Name: Chisholm Grama Ridge East 34 State Com AVLN 12H Rev0 CVS 01Dec20
Survey Date: December 01, 2020
Tort / AHD / DDI / ERD Ratio: 102.000 ° / 5646.169 ft / 5.952 / 0.639
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 25' 43.59820", W 103° 27' 11.56663"
Location Grid N/E Y/X: N 520838.800 ftUS, E 812891.600 ftUS
CRS Grid Convergence Angle: 0.4720 °
Grid Scale Factor: 0.99999354
Version / Patch: 2.10.821.3

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.570 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3643.000 ft above MSL
Seabed / Ground Elevation: 3617.000 ft above MSL
Magnetic Declination: 6.461 °
Total Gravity Field Strength: 998.4796mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47876.369 nT
Magnetic Dip Angle: 60.214 °
Declination Date: December 01, 2020
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.4720 °
Total Corr Mag North->Grid North: 5.9889 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
Nudge 1.5° DLS	1500.00	0.00	249.50	1500.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
Hold	1900.00	6.00	249.50	1899.27	-7.18	-7.33	-19.60	1.50	520831.47	812872.00	N 32 25 43.53	W 103 27 11.80
Drop 1.5° DLS	6460.00	6.00	249.50	6434.29	-170.75	-174.25	-466.06	0.00	520664.55	812425.54	N 32 25 41.91	W 103 27 17.02
Hold Vertical	6860.00	0.00	249.50	6833.56	-177.93	-181.58	-485.66	1.50	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
Build & Turn 10° DLS	8290.48	0.00	249.50	8264.04	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
Build 10° DLS	8640.48	35.00	359.57	8592.68	-74.31	-77.97	-486.44	10.00	520760.83	812405.16	N 32 25 42.87	W 103 27 17.25
Landing Point Grama Ridge	9190.48	90.00	359.57	8837.00	395.03	391.36	-489.97	10.00	521230.16	812401.63	N 32 25 47.51	W 103 27 17.25
East 34 State Com AVLN 12H - BHL	13745.19	90.00	359.57	8837.00	4949.74	4945.94	-524.30	0.00	525784.70	812367.30	N 32 26 32.58	W 103 27 17.21

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	17.500	13.375		NAL_MWD_1.0_DEG-Depth Only	Grama Ridge East 34 State Com AVLN 12H / Chisholm Grama Ridge East 34 State Com AVLN
	1	26.000	1500.000	1/100.000	17.500	13.375		NAL_MWD_1.0_DEG	Grama Ridge East 34 State Com AVLN 12H / Chisholm Grama
	1	1500.000	8640.000	1/100.000	12.250	9.625		NAL_MWD_1.0_DEG	Grama Ridge East 34 State Com AVLN 12H / Chisholm Grama
	1	8640.000	9190.000	1/100.000	8.750	7.000		NAL_MWD_1.0_DEG	Grama Ridge East 34 State Com AVLN 12H / Chisholm Grama
	1	9190.000	13745.193	1/100.000	8.500	5.500		NAL_MWD_1.0_DEG	Grama Ridge East 34 State Com AVLN 12H / Chisholm Grama



Chisholm Grama Ridge East 34 State Com AVLN 12H Rev0 CVS 01Dec20 Proposal Geodetic Report (Def Plan)



Report Date: December 02, 2020 - 09:48 AM Client: Chisholm Field: NM Lea County (NAD 83) Structure / Slot: Chisholm Grama Ridge East 34 State Com AVLN Pad / Grama Ridge East 34 State Com AVLN 12H Well: Grama Ridge East 34 State Com AVLN 12H Borehole: Grama Ridge East 34 State Com AVLN 12H UWI / API#: Unknown / Unknown Survey Name: Chisholm Grama Ridge East 34 State Com AVLN 12H Rev0 CVS 01Dec20 Survey Date: December 01, 2020 Tort / AHD / DDI / ERD Ratio: 102.000 ° / 5646.169 ft / 5.952 / 0.639 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 25' 43.59820", W 103° 27' 11.56663" Location Grid N/E Y/X: N 520838.800 ftUS, E 812891.600 ftUS CRS Grid Convergence Angle: 0.4720 ° Grid Scale Factor: 0.99999354 Version / Patch: 2.10.821.3	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 359.570 ° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 3643.000 ft above MSL Seabed / Ground Elevation: 3617.000 ft above MSL Magnetic Declination: 6.461 ° Total Gravity Field Strength: 998.4796mgn (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 47876.369 nT Magnetic Dip Angle: 60.214 ° Declination Date: December 01, 2020 Magnetic Declination Model: HDGM 2020 North Reference: Grid North Grid Convergence Used: 0.4720 ° Total Corr Mag North->Grid North: 5.9889 ° Local Coord Referenced To: Well Head	
--	---	--

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	100.00	0.00	249.50	100.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	200.00	0.00	249.50	200.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	300.00	0.00	249.50	300.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	400.00	0.00	249.50	400.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	500.00	0.00	249.50	500.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	600.00	0.00	249.50	600.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	700.00	0.00	249.50	700.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	800.00	0.00	249.50	800.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	900.00	0.00	249.50	900.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	1000.00	0.00	249.50	1000.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	1100.00	0.00	249.50	1100.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	1200.00	0.00	249.50	1200.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	1300.00	0.00	249.50	1300.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	1400.00	0.00	249.50	1400.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
Nudge 1.5° DLS	1500.00	0.00	249.50	1500.00	0.00	0.00	0.00	0.00	520838.80	812891.60	N 32 25 43.60	W 103 27 11.57
	1600.00	1.50	249.50	1599.99	-0.45	-0.46	-1.23	1.50	520838.34	812890.37	N 32 25 43.59	W 103 27 11.58
Rustler	1697.09	2.96	249.50	1697.00	-1.74	-1.78	-4.76	1.50	520837.02	812886.84	N 32 25 43.58	W 103 27 11.62
	1700.00	3.00	249.50	1699.91	-1.80	-1.83	-4.90	1.50	520836.97	812886.70	N 32 25 43.58	W 103 27 11.62
	1800.00	4.50	249.50	1799.69	-4.04	-4.12	-11.03	1.50	520834.68	812880.57	N 32 25 43.56	W 103 27 11.70
Hold	1900.00	6.00	249.50	1899.27	-7.18	-7.33	-19.60	1.50	520831.47	812872.00	N 32 25 43.53	W 103 27 11.80
	2000.00	6.00	249.50	1998.72	-10.77	-10.99	-29.39	0.00	520827.81	812862.21	N 32 25 43.49	W 103 27 11.91
	2100.00	6.00	249.50	2098.17	-14.35	-14.65	-39.18	0.00	520824.15	812852.42	N 32 25 43.46	W 103 27 12.03
Salado	2164.18	6.00	249.50	2162.00	-16.66	-17.00	-45.47	0.00	520821.80	812846.14	N 32 25 43.43	W 103 27 12.10
	2200.00	6.00	249.50	2197.63	-17.94	-18.31	-48.97	0.00	520820.49	812842.63	N 32 25 43.42	W 103 27 12.14
	2300.00	6.00	249.50	2297.08	-21.53	-21.97	-58.76	0.00	520816.83	812832.84	N 32 25 43.39	W 103 27 12.25
	2400.00	6.00	249.50	2396.53	-25.12	-25.63	-68.55	0.00	520813.17	812823.05	N 32 25 43.35	W 103 27 12.37
	2500.00	6.00	249.50	2495.98	-28.70	-29.29	-78.35	0.00	520809.51	812813.26	N 32 25 43.31	W 103 27 12.48
	2600.00	6.00	249.50	2595.43	-32.29	-32.95	-88.14	0.00	520805.85	812803.46	N 32 25 43.28	W 103 27 12.60
	2700.00	6.00	249.50	2694.89	-35.88	-36.61	-97.93	0.00	520802.19	812793.67	N 32 25 43.24	W 103 27 12.71
	2800.00	6.00	249.50	2794.34	-39.46	-40.27	-107.72	0.00	520798.53	812783.88	N 32 25 43.21	W 103 27 12.83
	2900.00	6.00	249.50	2893.79	-43.05	-43.93	-117.51	0.00	520794.87	812774.09	N 32 25 43.17	W 103 27 12.94
	3000.00	6.00	249.50	2993.24	-46.64	-47.60	-127.30	0.00	520791.21	812764.30	N 32 25 43.14	W 103 27 13.06
	3100.00	6.00	249.50	3092.70	-50.23	-51.26	-137.09	0.00	520787.54	812754.51	N 32 25 43.10	W 103 27 13.17
	3200.00	6.00	249.50	3192.15	-53.81	-54.92	-146.88	0.00	520783.88	812744.72	N 32 25 43.07	W 103 27 13.29
	3300.00	6.00	249.50	3291.60	-57.40	-58.58	-156.67	0.00	520780.22	812734.93	N 32 25 43.03	W 103 27 13.40
	3400.00	6.00	249.50	3391.05	-60.99	-62.24	-166.46	0.00	520776.56	812725.14	N 32 25 43.00	W 103 27 13.51
	3500.00	6.00	249.50	3490.50	-64.57	-65.90	-176.25	0.00	520772.90	812715.35	N 32 25 42.96	W 103 27 13.63
	3600.00	6.00	249.50	3589.96	-68.16	-69.56	-186.04	0.00	520769.24	812705.56	N 32 25 42.93	W 103 27 13.74
	3700.00	6.00	249.50	3689.41	-71.75	-73.22	-195.84	0.00	520765.58	812695.77	N 32 25 42.89	W 103 27 13.86
Yates	3742.83	6.00	249.50	3732.00	-73.28	-74.79	-200.03	0.00	520764.01	812691.57	N 32 25 42.87	W 103 27 13.91
	3800.00	6.00	249.50	3788.86	-75.34	-76.88	-205.63	0.00	520761.92	812685.98	N 32 25 42.85	W 103 27 13.97
	3900.00	6.00	249.50	3888.31	-78.92	-80.54	-215.42	0.00	520758.26	812676.18	N 32 25 42.82	W 103 27 14.09
	4000.00	6.00	249.50	3987.77	-82.51	-84.20	-225.21	0.00	520754.60	812666.39	N 32 25 42.78	W 103 27 14.20
	4100.00	6.00	249.50	4087.22	-86.10	-87.86	-235.00	0.00	520750.94	812656.60	N 32 25 42.75	W 103 27 14.32
	4200.00	6.00	249.50	4186.67	-89.68	-91.52	-244.79	0.00	520747.28	812646.81	N 32 25 42.71	W 103 27 14.43
	4300.00	6.00	249.50	4286.12	-93.27	-95.18	-254.58	0.00	520743.62	812637.02	N 32 25 42.68	W 103 27 14.55
	4400.00	6.00	249.50	4385.57	-96.86	-98.84	-264.37	0.00	520739.96	812627.23	N 32 25 42.64	W 103 27 14.66
Capitan Reef	4491.93	6.00	249.50	4477.00	-100.16	-102.21	-273.37	0.00	520736.59	812618.23	N 32 25 42.61	W 103 27 14.77
	4500.00	6.00	249.50	4485.03	-100.44	-102.51	-274.16	0.00	520736.30	812617.44	N 32 25 42.61	W 103 27 14.77
	4600.00	6.00	249.50	4584.48	-104.03	-106.17	-283.95	0.00	520732.63	812607.65	N 32 25 42.57	W 103 27 14.89
	4700.00	6.00	249.50	4683.93	-107.62	-109.83	-293.74	0.00	520728.97	812597.86	N 32 25 42.54	W 103 27 15.00
	4800.00	6.00	249.50	4783.38	-111.21	-113.49	-303.54	0.00	520725.31	812588.07	N 32 25 42.50	W 103 27 15.12
	4900.00	6.00	249.50	4882.84	-114.79	-117.15	-313.33	0.00	520721.65	812578.28	N 32 25 42.46	W 103 27 15.23
	5000.00	6.00	249.50	4982.29	-118.38	-120.81	-323.12	0.00	520717.99	812568.49	N 32 25 42.43	W 103 27 15.35
	5100.00	6.00	249.50	5081.74	-121.97	-124.47	-332.91	0.00	520714.33	812558.69	N 32 25 42.39	W 103 27 15.46
	5200.00	6.00	249.50	5181.19	-125.55	-128.13	-342.70	0.00	520710.67	812548.90	N 32 25 42.36	W 103 27 15.58
	5300.00	6.00	249.50	5280.64	-129.14	-131.79	-352.49	0.00	520707.01	812539.11	N 32 25 42.32	W 103 27 15.69
	5400.00	6.00	249.50	5380.10	-132.73	-135.45	-362.28	0.00	520703.35	812529.32	N 32 25 42.29	W 103 27 15.81
	5500.00	6.00	249.50	5479.55	-136.32	-139.11	-372.07	0.00	520699.69	812519.53	N 32 25 42.25	W 103 27 15.92
	5600.00	6.00	249.50	5579.00	-139.90	-142.77	-381.86	0.00	520696.03	812509.74	N 32 25 42.22	W 103 27 16.04
Delaware Mtn Gr	5693.51	6.00	249.50	5672.00	-143.26	-146.20	-391.02	0.00	520692.61	812500.59	N 32 25 42.18	W 103 27 16.14
	5700.00	6.00	249.50	5678.45	-143.49	-146.43	-391.65	0.00	520692.37	812499.95	N 32 25 42.18	W 103 27 16.15
	5800.00	6.00	249.50	5777.90	-147.08	-150.09	-401.44	0.00	520688.71	812490.16	N 32 25 42.15	W 103 27 16.26
	5900.00	6.00	249.50	5877.36	-150.66	-153.75	-411.24	0.00	520685.05	812480.37	N 32 25 42.11	W 103 27 16.38
	6000.00	6.00	249.50	5976.81	-154.25	-157.42	-421.03	0.00	520681.39	812470.58	N 32 25 42.07	W 103 27 16.49
	6100.00	6.00	249.50	6076.26	-157.84	-161.08	-430.82	0.00	520677.73	812460.79	N 32 25 42.04	W 103 27 16.61
	6200.00	6.00	249.50	6175.71	-161.43	-164.74	-440.61	0.00	520674.06	812451.00	N 32 25 42.00	W 103 27 16.72
	6300.00	6.00	249.50	6275.17	-165.01	-168.40	-450.40	0.00	520670.40	812441.20	N 32 25 41.97	W 103 27 16.84

...Chisholm Grama Ridge East 34 State Com AVLN 12H Rev0 CVS 01Dec20

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Drop 1.5° DLS	6400.00	6.00	249.50	6374.62	-168.60	-172.06	-460.19	0.00	520666.74	812431.41	N 32 25 41.93	W 103 27 16.95
	6460.00	6.00	249.50	6434.29	-170.75	-174.25	-466.06	0.00	520664.55	812425.54	N 32 25 41.91	W 103 27 17.02
	6500.00	5.40	249.50	6474.09	-172.11	-175.65	-469.79	1.50	520663.16	812421.82	N 32 25 41.90	W 103 27 17.06
	6600.00	3.90	249.50	6573.76	-174.90	-178.48	-477.38	1.50	520660.32	812414.23	N 32 25 41.87	W 103 27 17.15
	6700.00	2.40	249.50	6673.61	-176.78	-180.41	-482.53	1.50	520658.39	812409.08	N 32 25 41.85	W 103 27 17.21
	6800.00	0.90	249.50	6773.56	-177.77	-181.42	-485.22	1.50	520657.38	812406.38	N 32 25 41.84	W 103 27 17.24
	6860.00	0.00	249.50	6833.56	-177.93	-181.58	-485.66	1.50	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	6900.00	0.00	249.50	6873.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7000.00	0.00	249.50	6973.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7100.00	0.00	249.50	7073.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
Hold Vertical	7200.00	0.00	249.50	7173.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7300.00	0.00	249.50	7273.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7400.00	0.00	249.50	7373.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7500.00	0.00	249.50	7473.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7600.00	0.00	249.50	7573.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7700.00	0.00	249.50	7673.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7800.00	0.00	249.50	7773.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	7900.00	0.00	249.50	7873.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	8000.00	0.00	249.50	7973.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	8100.00	0.00	249.50	8073.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
Build & Turn 10° DLS	8200.00	0.00	249.50	8173.56	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
	8290.48	0.00	249.50	8264.04	-177.93	-181.58	-485.66	0.00	520657.22	812405.94	N 32 25 41.84	W 103 27 17.25
Bone Spring	8300.00	0.95	359.57	8273.56	-177.85	-181.50	-485.66	10.00	520657.30	812405.94	N 32 25 41.84	W 103 27 17.25
	8394.00	10.35	359.57	8367.00	-168.61	-172.26	-485.73	10.00	520666.55	812405.87	N 32 25 41.93	W 103 27 17.25
	8400.00	10.95	359.57	8372.89	-167.50	-171.15	-485.74	10.00	520667.65	812405.86	N 32 25 41.94	W 103 27 17.25
	8500.00	20.95	359.57	8468.92	-140.05	-143.70	-485.95	10.00	520695.10	812405.66	N 32 25 42.22	W 103 27 17.25
Build 10° DLS	8600.00	30.95	359.57	8558.72	-96.34	-100.00	-486.28	10.00	520738.81	812405.33	N 32 25 42.65	W 103 27 17.25
	8640.48	35.00	359.57	8592.68	-74.31	-77.97	-486.44	10.00	520760.83	812405.16	N 32 25 42.87	W 103 27 17.25
	8700.00	40.95	359.57	8639.57	-37.71	-41.36	-486.72	10.00	520797.44	812404.89	N 32 25 43.23	W 103 27 17.25
	8800.00	50.95	359.57	8709.01	34.08	30.42	-487.26	10.00	520869.22	812404.35	N 32 25 43.94	W 103 27 17.25
Landing Point	8900.00	60.95	359.57	8764.93	116.83	113.17	-487.88	10.00	520951.97	812403.73	N 32 25 44.76	W 103 27 17.25
	9000.00	70.95	359.57	8805.63	208.03	204.37	-488.56	10.00	521043.17	812403.04	N 32 25 45.66	W 103 27 17.25
	9100.00	80.95	359.57	8829.87	304.92	301.26	-489.29	10.00	521140.05	812402.31	N 32 25 46.62	W 103 27 17.25
	9190.48	90.00	359.57	8837.00	395.03	391.36	-489.97	10.00	521230.16	812401.63	N 32 25 47.51	W 103 27 17.25
	9200.00	90.00	359.57	8837.00	404.54	400.88	-490.05	0.00	521239.67	812401.56	N 32 25 47.60	W 103 27 17.25
	9300.00	90.00	359.57	8837.00	504.54	500.87	-490.80	0.00	521339.67	812400.80	N 32 25 48.59	W 103 27 17.24
	9400.00	90.00	359.57	8837.00	604.54	600.87	-491.55	0.00	521439.67	812400.05	N 32 25 49.58	W 103 27 17.24
	9500.00	90.00	359.57	8837.00	704.54	700.87	-492.31	0.00	521539.66	812399.30	N 32 25 50.57	W 103 27 17.24
	9600.00	90.00	359.57	8837.00	804.54	800.87	-493.06	0.00	521639.66	812398.54	N 32 25 51.56	W 103 27 17.24
	9700.00	90.00	359.57	8837.00	904.54	900.86	-493.81	0.00	521739.66	812397.79	N 32 25 52.55	W 103 27 17.24
	9800.00	90.00	359.57	8837.00	1004.54	1000.86	-494.57	0.00	521839.65	812397.04	N 32 25 53.54	W 103 27 17.24
	9900.00	90.00	359.57	8837.00	1104.54	1100.86	-495.32	0.00	521939.65	812396.28	N 32 25 54.53	W 103 27 17.24
	10000.00	90.00	359.57	8837.00	1204.54	1200.85	-496.08	0.00	522039.64	812395.53	N 32 25 55.52	W 103 27 17.24
	10100.00	90.00	359.57	8837.00	1304.54	1300.85	-496.83	0.00	522139.64	812394.78	N 32 25 56.51	W 103 27 17.24
	10200.00	90.00	359.57	8837.00	1404.54	1400.85	-497.58	0.00	522239.64	812394.02	N 32 25 57.50	W 103 27 17.24
	10300.00	90.00	359.57	8837.00	1504.54	1500.85	-498.34	0.00	522339.63	812393.27	N 32 25 58.49	W 103 27 17.24
	10400.00	90.00	359.57	8837.00	1604.54	1600.84	-499.09	0.00	522439.63	812392.51	N 32 25 59.48	W 103 27 17.24
	10500.00	90.00	359.57	8837.00	1704.54	1700.84	-499.84	0.00	522539.63	812391.76	N 32 26 0.47	W 103 27 17.23
	10600.00	90.00	359.57	8837.00	1804.54	1800.84	-500.60	0.00	522639.62	812391.01	N 32 26 1.46	W 103 27 17.23
	10700.00	90.00	359.57	8837.00	1904.54	1900.83	-501.35	0.00	522739.62	812390.25	N 32 26 2.45	W 103 27 17.23
	10800.00	90.00	359.57	8837.00	2004.54	2000.83	-502.11	0.00	522839.62	812389.50	N 32 26 3.44	W 103 27 17.23
	10900.00	90.00	359.57	8837.00	2104.54	2100.83	-502.86	0.00	522939.61	812388.75	N 32 26 4.43	W 103 27 17.23
	11000.00	90.00	359.57	8837.00	2204.54	2200.83	-503.61	0.00	523039.61	812387.99	N 32 26 5.42	W 103 27 17.23
	11100.00	90.00	359.57	8837.00	2304.54	2300.82	-504.37	0.00	523139.60	812387.24	N 32 26 6.40	W 103 27 17.23
	11200.00	90.00	359.57	8837.00	2404.54	2400.82	-505.12	0.00	523239.60	812386.48	N 32 26 7.39	W 103 27 17.23
	11300.00	90.00	359.57	8837.00	2504.54	2500.82	-505.87	0.00	523339.60	812385.73	N 32 26 8.38	W 103 27 17.23
	11400.00	90.00	359.57	8837.00	2604.54	2600.81	-506.63	0.00	523439.59	812384.98	N 32 26 9.37	W 103 27 17.23
	11500.00	90.00	359.57	8837.00	2704.54	2700.81	-507.38	0.00	523539.59	812384.22	N 32 26 10.36	W 103 27 17.23
	11600.00	90.00	359.57	8837.00	2804.54	2800.81	-508.14	0.00	523639.59	812383.47	N 32 26 11.35	W 103 27 17.23
	11700.00	90.00	359.57	8837.00	2904.54	2900.81	-508.89	0.00	523739.58	812382.72	N 32 26 12.34	W 103 27 17.23
	11800.00	90.00	359.57	8837.00	3004.54	3000.80	-509.64	0.00	523839.58	812381.96	N 32 26 13.33	W 103 27 17.22
	11900.00	90.00	359.57	8837.00	3104.54	3100.80	-510.40	0.00	523939.57	812381.21	N 32 26 14.32	W 103 27 17.22
	12000.00	90.00	359.57	8837.00	3204.54	3200.80	-511.15	0.00	524039.57	812380.45	N 32 26 15.31	W 103 27 17.22
	12100.00	90.00	359.57	8837.00	3304.54	3300.80	-511.90	0.00	524139.57	812379.70	N 32 26 16.30	W 103 27 17.22
	12200.00	90.00	359.57	8837.00	3404.54	3400.79	-512.66	0.00	524239.56	812378.95	N 32 26 17.29	W 103 27 17.22
	12300.00	90.00	359.57	8837.00	3504.54	3500.79	-513.41	0.00	524339.56	812378.19	N 32 26 18.28	W 103 27 17.22
	12400.00	90.00	359.57	8837.00	3604.54	3600.79	-514.17	0.00	5244377.			

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
		1	8640.000	9190.000	1/100.000	8.750	7.000		NAL_MWD_1.0_DEG		Grama Ridge East 34 State Com	
		1	9190.000	13745.193	1/100.000	8.500	5.500		NAL_MWD_1.0_DEG		AVLN 12H / Chisholm Grama	
											Grama Ridge East 34 State Com	
											AVLN 12H / Chisholm Grama	

Chisholm Energy Operating, LLC

801 Cherry St., Suite 1200-Unit 20

Fort Worth, TX 76102

H2S Contingency Plan

Lea County, NM

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crew should then block entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are NO homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'
100 ppm H₂S concentration shall trigger activation of this plan

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must:

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H₂S monitors and air packs in order to control the release.
- « Use the "buddy system" to ensure no injuries occur during the response.
- « Take precautions to avoid personal injury during this operation.
- « Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- « Have received training
 - in the: Detection of
 - H₂S, and
 - Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Chisholm Energy Operating personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Chisholm Energy Operating, LLC response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMERP).

Hydrogen Sulfide Drilling Operations Plan

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
 - A. Characteristics of H2S
 - B. Physical effects and hazards
 - C. Principal and operation of H2S detectors, warning system and briefing areas.
 - D. Evacuation procedure, routes and first aid.
 - E. Proper use of safety equipment & life support systems
 - F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs.
2. H2S Detection and Alarm Systems:
 - a. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary.
 - b. An audio alarm system will be installed on the derrick floor and in the top doghouse.
3. Windsock and/or wind streamers:
 - a. Windsock at mudpit area should be high enough to be visible.
 - b. Windsock on the rig floor and/ or top doghouse should be high enough to be visible.
4. Condition Flags and Signs
 - a. Warning sign on access road to location.
 - b. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H2S present in dangerous concentration). Only H2S trained and certified personnel

admitted to location.

5. Well control equipment:

- a. See exhibit BOP and Choke Diagrams

6. Communication:

- a. While working under masks chalkboards will be used for communication.
- b. Hand signals will be used where chalk board is inappropriate.
- c. Two-way radio will be used to communicate off location in case of emergency help is required. In most cases, cellular telephones will be available at most drilling foreman's trailer or living quarters.

7. Drill stem Testing:

No DSTs are planned at this time.

- 8. Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9. If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

Emergency Assistance Telephone List

Chisholm Energy Holdings, LLC

Chisholm Energy Operating, LLC

Vice President of Operations-Brad Grandstaff

Office: (817)953-6063

Office: (817)953-3150

Cell: (972)977-9221

Drilling Superintendent-Russell Simons

Cell: (830)285-7501

Production Superintendent-Paul Martinez

Cell: (325)206-1722

Public Safety:		911 or	
Lea County Sheriff's Department	Number:	(575)396-3611	
Lea County Emergency Management-Lorenzo Velasquez	Number:	(575)391-2983	
Lea County Fire Marshal			
Lorenzo Velasquez, Director	Number:	(575)391-2983	
Jeff Broom, Deputy Fire Marshal	Number:	(575)391-2988	
Fire Department:			
Knowles Fire Department	Number:	(505)392-2810	
City of Hobbs Fire Department	Number:	(505)397-9308	
Jal Volunteer Fire Department	Number:	(505)395-2221	
Lovington Fire Department	Number:	(575)396-2359	
Maljamar Fire Department	Number:	(505)676-4100	
Tatum Volunteer Fire Department	Number:	(505)398-3473	
Eunice Fire Department	Number:	(575)394-3258	
Hospital: Lea Regional Medical Center	Number:	(575)492-5000	
AirMed: Medevac	Number:	(888)303-9112	
Dept. of Public Safety	Number:	(505)827-9000	
New Mexico OCD-Dist. 1-Hobbs-	Office	Number:	(575)393-6161
	Emergency	Number:	(575)370-3186
Lea County Road Department	Number:	(575)391-2940	
NMDOT	Number:	(505)827-5100	