Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

[326095]

2. Name of Operator **[372137]**

9. API Well No. **30-025-48473**

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[97921]**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

GCP Rec 02/01/2021

02/09/2021

NSL

REQUIRES NSL

APPROVED WITH CONDITIONS

Approval Date: 11/23/2020

(Continued on page 2)

*(Instructions on page 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 & 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	[3] Pool Name
30-025-48473	97921	WC-025 G-06 S213215A; BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
326095	AZTEC 14-23 2BS FED COM	6H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372137	CHISHOLM ENERGY OPERATING, LLC	3846.0

[10] Surface Location

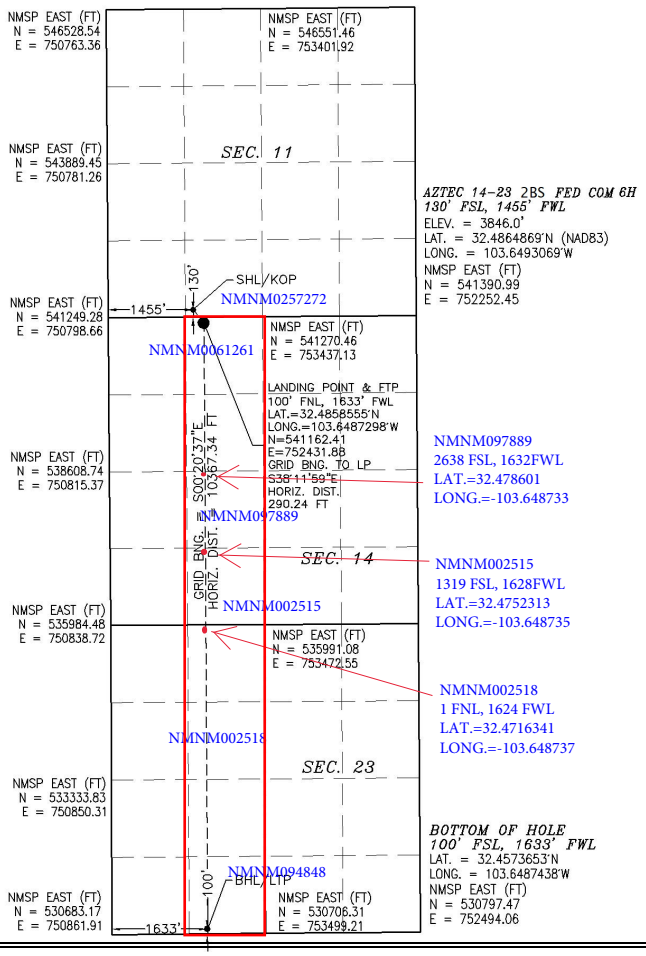
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	11	21 S	32 E		130	SOUTH	1455	WEST	LEA

[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
N	23	21 S	32 E		100	SOUTH	1633	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

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.



[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.

Jennifer Elrod 11/06/2019
Signature Date

JENNIFER ELROD
Printed Name

JELROD@CHISHOLMENERGY.COM
E-mail Address

[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.

OCTOBER 8, 2019
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number: FILIMON F. JARAMILLO, PLS 12797

SURVEY NO. 7591A

Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
CHISHOLM ENERGY OPERATING, LLC	**AZTEC 14-23 FED COM 2BS**	**6H**

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	**11**	**21S**	**32E**		**130**	**SOUTH**	**1455**	**WEST**	**LEA**

Latitude	Longitude	NAD
32.4864869	**103.6493069**	**83**

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	**14**	**21S**	**32E**		**100**	**NORTH**	**1633**	**WEST**	**LEA**

Latitude	Longitude	NAD
32.4858555	**103.6487298**	**83**

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	**23**	**21S**	**32E**		**100**	**SOUTH**	**1633**	**WEST**	**LEA**

Latitude	Longitude	NAD
32.4573653	**103.6487438**	**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 #
30-025-46350

Operator Name:	Property Name:	Well Number
CHISHOLM ENERGY OPERATING, LLC	AZTEC 14-23 3BS FED COM	2H

KZ 06/29/2018

District I
1625 N. French Dr., Hobbs, NM 88240
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1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original to Appropriate District Office

GAS CAPTURE PLAN

Date: 03/12/2019

☒ Original
☐ Amended - Reason for Amendment:

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

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete 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
AZTEC 14-23 FED COM 2BS 6H	30-025-48473	N-11-21S-32E	130 FSL 1455 FWL	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 3 Bear Delaware Operating-NM. LLC and will be connected to 3 Bear Delaware Operating-NM. LLC low/high pressure gathering system located in _LEA_ County, New Mexico. It will require Flowlines to connect the facility to low/high pressure gathering system. Chisholm Energy Operating, LLC provides (periodically) to 3 Bear Delaware Operating-NM. 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 3 Bear Delaware Operating-NM. LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at 3 Bear Delaware Operating-NM. LLC Libby Gas 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 3 Bear Delaware Operating-NM. LLC system at that time. Based on current information, it is Chisholm Energy Operating, LLC 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

Operator Name: CHISHOLM ENERGY OPERATING LLC

Well Name: AZTEC 14-23 2BS FED COM **Well Number:** 6H

5M_Choke_Manifold_Diagram_20191106091635.pdf

BOP Diagram Attachment:

5m_BOP_Diagram_2_20191106091640.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	26	20.0	NEW	API	N	0	1550	0	1550	3846	2296	1550	J-55	94	BUTT	2.1	2.85	DRY	11.2	DRY	11.82
2	INTERMEDIATE	17.5	13.375	NEW	API	N	0	3600	0	3600	3590	246	3600	J-55	54.5	BUTT	1.78	1.43	DRY	5.49	DRY	5.15
3	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5950	0	5950	3846	-2104	5950	J-55	40	LT&C	2.68	1.37	DRY	2.55	DRY	2.6
4	PRODUCTION	8.75	5.5	NEW	API	N	0	21125	0	11005		-7159	21125	P-110	20	BUTT	2.02	2.33	DRY	3.55	DRY	3.41

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Calculator____Aztec_14_23_Fed_Com_2BS_6H_20191108125018.pdf

Operator Name: CHISHOLM ENERGY OPERATING LLC

Well Name: AZTEC 14-23 2BS FED COM **Well Number:** 6H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1150	1720	2.02	12.8	3474	100	Class C	Sodium Metasilicate, Defoamer, KCL, Kol-Seal, Cellophane Flakes, ROF SealCheck
SURFACE	Tail		1150	1550	975	1.33	14.8	1297	100	Class C	Fluid Loss, Dispercent, Retarder
INTERMEDIATE	Lead		0	2900	1810	2.43	11.5	4398	200	Class C	Bentonite, Compressive Strength Enhancer, Silica Fume Alternative, Fluid Loss, Defoamer, Sodium Metasilicate, Retarder
INTERMEDIATE	Tail		2900	3600	1130	1.33	14.8	1503	200	Class C	Extender, Fluid Loss, Retarder, Defoamer, Dispersant
INTERMEDIATE	Lead		0	5000	900	2.43	11.5	2187	100	Class C	Sodium Metasilicate, Defoamer, KCL
INTERMEDIATE	Tail		5000	5950	465	1.33	14.8	618	100	Class C	none
PRODUCTION	Lead		4500	9500	560	2.62	11.3	1467	15	Class H	Sodium Metasilicate, Defoamer, KCl, Kol-Seal, Cellophane Flakes, ROF SealCheck
PRODUCTION	Tail		9500	21125	1855	1.82	13.2	3403	15	Class H	Fluid loss, Dispercent, Retarder

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: Pason PVT system will be in place throughout the well as well as visual checks

Circulating Medium Table

Operator Name: CHISHOLM ENERGY OPERATING LLC

Well Name: AZTEC 14-23 2BS FED COM **Well Number:** 6H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1550	SPUD MUD	8.5	9.2							32-38 FV; 4-6 PV; 2-5 YP
3600	5950	WATER-BASED MUD	9	9.5							15-20 PV; 8-12 YP
1550	3600	SALT SATURATED	10	10.3							28-32 FV
5950	21125	OIL-BASED MUD	9	9.5							15-20PV; 8-12YP

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None

List of open and cased hole logs run in the well:

CEMENT BOND LOG,DIRECTIONAL SURVEY,GAMMA RAY LOG,MEASUREMENT WHILE DRILLING,

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5436 **Anticipated Surface Pressure:** 3014

Anticipated Bottom Hole Temperature(F): 163

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Lea_County_H2S_plan_20191106095839.pdf

Casing Program: **Aztec 14-23 Fed Com 2BS 6H**

Open Hole Size (Inches)	Casing Depth; From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	Anticipated Mud Weight (ppg)	Burst (psi)	Burst SF (1.125)	Collapse (psi)	Collapse SF (1.125)	Pipe Body Tension (lbs)	Joint Tension (lbs)	Air Weight (lbs)	Bouyant Weight (lbs)	Pipe Body Tension SF (1.8)	Joint Tension SF (1.8)
Surface																			
26"	0'	1,550'	1,550'	20"	94.0	J-55	BTC	New	9.2	2,110	2.85	520	2.10	1,480,000	1,402,000	145,700	125,217	11.82	11.20
																0	0		
Intermediate 1																			
17.5	0'	3,600'	3,600'	13 3/8"	54.5	J-55	BTC	New	10.2	2,730	1.43	1,130	1.78	853,000	909,000	196,200	165,619	5.15	5.49
Intermediate 2																			
12.25"	0'	5,950'	5,950'	9 5/8"	40	J-55	LTC	New	9.3	3,950	1.37	2,570	2.68	530,000	520,000	238,000	204,177	2.60	2.55
Production																			
8.75"	0'	21,125'	11,005'	5 1/2"	20	P110	BTC	New	9.5	12,640	2.33	11,100	2.04	641,000	667,000	220,100	188,148	3.41	3.55

Casing Design Criteria and Casing Loading Assumptions:

Surface

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	9.2	ppg
Collapse	A 1.125 design factor with 1/3 TVD internal evacuation and collapse force equal to a mud gradient of:	9.2	ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	9.2	ppg

Intermediate 1

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	10.2	ppg
Collapse	A 1.125 design factor with 1/3 TVD internal evacuation and collapse force equal to a mud gradient of:	10.2	ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	10.2	ppg

Intermediate 2

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	9.3	ppg
Collapse	A 1.125 design factor with 1/3 TVD internal evacuation and collapse force equal to a mud gradient of:	9.3	ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	9.3	ppg

Production

Tension	A 1.8 design factor with effects of buoyancy with a fluid equal to a mud weight of:	9.5	ppg
Collapse	A 1.125 design factor with full internal evacuation and collapse force equal to a mud gradient of:	9.5	ppg
Burst	A 1.125 design factor with full external evacuation and burst force equal to a mud gradient of:	9.5	ppg

Schlumberger

Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19 Proposal Geodetic Report

(Def Plan)

CHISHOLM ENERGY

Report Date:	October 11, 2019 - 12:10 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.660 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Aztec 14-23 Fed Com 2BS 6H / New Slot	**TVD Reference Datum:**	RKB
Well:	Aztec 14-23 Fed Com 2BS 6H	**TVD Reference Elevation:**	3877.000 ft above MSL
Borehole:	Aztec 14-23 Fed Com 2BS 6H	**Seabed / Ground Elevation:**	3846.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.697 °
Survey Name:	Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19	**Total Gravity Field Strength:**	998.4614mgn (9.80665 Based)
Survey Date:	October 11, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	100.901 ° / 10730.940 ft / 6.318 / 0.975	**Total Magnetic Field Strength:**	48084.950 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.292 °
Location Lat / Long:	N 32° 29' 11.35298", W 103° 38' 57.50484"	**Declination Date:**	October 11, 2019
Location Grid N/E Y/X:	N 541390.990 ftUS, E 752252.450 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.3674 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99996004	**Grid Convergence Used:**	0.3674 °
Version / Patch:	2.10.782.0	**Total Corr Mag North->Grid North:**	6.3294 °
		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	105.00	0.00	0.00	0.00	0.00	N/A	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	100.00	0.00	105.00	100.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	200.00	0.00	105.00	200.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	300.00	0.00	105.00	300.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	400.00	0.00	105.00	400.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	500.00	0.00	105.00	500.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	600.00	0.00	105.00	600.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	700.00	0.00	105.00	700.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	800.00	0.00	105.00	800.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	900.00	0.00	105.00	900.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1000.00	0.00	105.00	1000.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1100.00	0.00	105.00	1100.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1200.00	0.00	105.00	1200.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1300.00	0.00	105.00	1300.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1400.00	0.00	105.00	1400.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1500.00	0.00	105.00	1500.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
Rustler	*1517.00*	*0.00*	*105.00*	*1517.00*	*0.00*	*0.00*	*0.00*	*0.00*	*541390.99*	*752252.45*	*N 32 29 11.35*	*W 103 38 57.50*
Nudge 1° DLS	1600.00	0.00	105.00	1600.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
	1700.00	1.00	105.00	1699.99	0.23	-0.23	0.84	1.00	541390.76	752253.29	N 32 29 11.35	W 103 38 57.50
	1800.00	2.00	105.00	1799.96	0.92	-0.90	3.37	1.00	541390.09	752255.82	N 32 29 11.34	W 103 38 57.47
	1900.00	3.00	105.00	1899.86	2.08	-2.03	7.58	1.00	541388.96	752260.03	N 32 29 11.33	W 103 38 57.42
Salado	*1946.21*	*3.46*	*105.00*	*1946.00*	*2.77*	*-2.71*	*10.10*	*1.00*	*541388.28*	*752262.55*	*N 32 29 11.33*	*W 103 38 57.39*
	2000.00	4.00	105.00	1999.68	3.69	-3.61	13.48	1.00	541387.38	752265.93	N 32 29 11.32	W 103 38 57.35
	2100.00	5.00	105.00	2099.37	5.77	-5.64	21.06	1.00	541385.35	752273.51	N 32 29 11.30	W 103 38 57.26
Hold	2200.00	6.00	105.00	2198.90	8.30	-8.12	30.32	1.00	541382.87	752282.77	N 32 29 11.27	W 103 38 57.15
	2300.00	6.00	105.00	2298.36	11.07	-10.83	40.41	0.00	541380.16	752292.86	N 32 29 11.24	W 103 38 57.03
	2400.00	6.00	105.00	2397.81	13.83	-13.53	50.51	0.00	541377.46	752302.96	N 32 29 11.22	W 103 38 56.92
	2500.00	6.00	105.00	2497.26	16.60	-16.24	60.61	0.00	541374.75	752313.06	N 32 29 11.19	W 103 38 56.80
	2600.00	6.00	105.00	2596.71	19.36	-18.95	70.70	0.00	541372.05	752323.15	N 32 29 11.16	W 103 38 56.68
	2700.00	6.00	105.00	2696.16	22.13	-21.65	80.80	0.00	541369.34	752333.25	N 32 29 11.13	W 103 38 56.56
	2800.00	6.00	105.00	2795.62	24.89	-24.36	90.90	0.00	541366.64	752343.34	N 32 29 11.11	W 103 38 56.45
	2900.00	6.00	105.00	2895.07	27.66	-27.06	100.99	0.00	541363.93	752353.44	N 32 29 11.08	W 103 38 56.33
	3000.00	6.00	105.00	2994.52	30.43	-29.77	111.09	0.00	541361.22	752363.54	N 32 29 11.05	W 103 38 56.21
	3100.00	6.00	105.00	3093.97	33.19	-32.47	121.19	0.00	541358.52	752373.63	N 32 29 11.02	W 103 38 56.09
	3200.00	6.00	105.00	3193.43	35.96	-35.18	131.28	0.00	541355.81	752383.73	N 32 29 11.00	W 103 38 55.97
	3300.00	6.00	105.00	3292.88	38.72	-37.88	141.38	0.00	541353.11	752393.83	N 32 29 10.97	W 103 38 55.86
Yates	*3346.38*	*6.00*	*105.00*	*3339.00*	*40.00*	*-39.14*	*146.06*	*0.00*	*541351.85*	*752398.51*	*N 32 29 10.96*	*W 103 38 55.80*
Drop 1° DLS	3365.00	6.00	105.00	3357.52	40.52	-39.64	147.94	0.00	541351.35	752400.39	N 32 29 10.95	W 103 38 55.78
	3400.00	5.65	105.00	3392.34	41.46	-40.56	151.38	1.00	541350.43	752403.82	N 32 29 10.94	W 103 38 55.74
	3500.00	4.65	105.00	3491.94	43.83	-42.88	160.05	1.00	541348.11	752412.49	N 32 29 10.92	W 103 38 55.64
	3600.00	3.65	105.00	3591.67	45.75	-44.76	167.04	1.00	541346.23	752419.48	N 32 29 10.90	W 103 38 55.56
Capitan Reef	*3653.42*	*3.12*	*105.00*	*3645.00*	*46.58*	*-45.57*	*170.08*	*1.00*	*541345.42*	*752422.52*	*N 32 29 10.89*	*W 103 38 55.52*
	3700.00	2.65	105.00	3691.52	47.20	-46.18	172.34	1.00	541344.81	752424.79	N 32 29 10.89	W 103 38 55.50
	3800.00	1.65	105.00	3791.45	48.19	-47.15	175.97	1.00	541343.84	752428.41	N 32 29 10.88	W 103 38 55.45
	3900.00	0.65	105.00	3891.43	48.72	-47.67	177.91	1.00	541343.32	752430.35	N 32 29 10.87	W 103 38 55.43
Hold	3965.00	0.00	105.00	3956.43	48.82	-47.77	178.26	1.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4000.00	0.00	105.00	3991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4100.00	0.00	105.00	4091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4200.00	0.00	105.00	4191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4300.00	0.00	105.00	4291.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4400.00	0.00	105.00	4391.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4500.00	0.00	105.00	4491.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4600.00	0.00	105.00	4591.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4700.00	0.00	105.00	4691.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4800.00	0.00	105.00	4791.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	4900.00	0.00	105.00	4891.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5000.00	0.00	105.00	4991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5100.00	0.00	105.00	5091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5200.00	0.00	105.00	5191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
Bell Canyon	*5248.57*	*0.00*	*105.00*	*5240.00*	*48.82*	*-47.77*	*178.26*	*0.00*	*541343.23*	*752430.70*	*N 32 29 10.87*	*W 103 38 55.43*
	5300.00	0.00	105.00	5291.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5400.00	0.00	105.00	5391.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5500.00	0.00	105.00	5491.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5600.00	0.00	105.00	5591.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
Cherry Canyon	*5670.57*	*0.00*	*105.00*	*5662.00*	*48.82*	*-47.77*	*178.26*	*0.00*	*541343.23*	*752430.70*	*N 32 29 10.87*	*W 103 38 55.43*
	5700.00	0.00	105.00	5691.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5800.00	0.00	105.00	5791.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	5900.00	0.00	105.00	5891.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6000.00	0.00	105.00	5991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6100.00	0.00	105.00	6091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6200.00	0.00	105.00	6191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6300.00	0.00	105.00	6291.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6400.00	0.00	105.00	6391.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6500.00	0.00	105.00	6491.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6600.00	0.00	105.00	6591.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6700.00	0.00	105.00	6691.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6800.00	0.00	105.00	6791.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	6900.00	0.00	105.00	6891.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43

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 ° ' ")
Brushy Canyon	*6988.57*	*0.00*	*105.00*	*6980.00*	*48.82*	*-47.77*	*178.26*	*0.00*	*541343.23*	*752430.70*	*N 32 29 10.87*	*W 103 38 55.43*
	7000.00	0.00	105.00	6991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7100.00	0.00	105.00	7091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7200.00	0.00	105.00	7191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7300.00	0.00	105.00	7291.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7400.00	0.00	105.00	7391.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7500.00	0.00	105.00	7491.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7600.00	0.00	105.00	7591.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7700.00	0.00	105.00	7691.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7800.00	0.00	105.00	7791.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	7900.00	0.00	105.00	7891.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8000.00	0.00	105.00	7991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8100.00	0.00	105.00	8091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8200.00	0.00	105.00	8191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8300.00	0.00	105.00	8291.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8400.00	0.00	105.00	8391.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8500.00	0.00	105.00	8491.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8600.00	0.00	105.00	8591.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8700.00	0.00	105.00	8691.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	8800.00	0.00	105.00	8791.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
Bone Spring	*8802.57*	*0.00*	*105.00*	*8794.00*	*48.82*	*-47.77*	*178.26*	*0.00*	*541343.23*	*752430.70*	*N 32 29 10.87*	*W 103 38 55.43*
	8900.00	0.00	105.00	8891.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9000.00	0.00	105.00	8991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9100.00	0.00	105.00	9091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9200.00	0.00	105.00	9191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9300.00	0.00	105.00	9291.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9400.00	0.00	105.00	9391.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9500.00	0.00	105.00	9491.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9600.00	0.00	105.00	9591.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9700.00	0.00	105.00	9691.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	9800.00	0.00	105.00	9791.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
1st Bone Spring SS	*9851.57*	*0.00*	*105.00*	*9843.00*	*48.82*	*-47.77*	*178.26*	*0.00*	*541343.23*	*752430.70*	*N 32 29 10.87*	*W 103 38 55.43*
	9900.00	0.00	105.00	9891.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	10000.00	0.00	105.00	9991.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	10100.00	0.00	105.00	10091.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	10200.00	0.00	105.00	10191.43	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
KOP, Build 10° DLS	10249.57	0.00	105.00	10241.00	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
	10300.00	5.04	179.66	10291.36	51.04	-49.98	178.28	10.00	541341.01	752430.72	N 32 29 10.85	W 103 38 55.43
2nd Bone Spring SS	*10366.38*	*11.68*	*179.66*	*10357.00*	*60.69*	*-59.63*	*178.33*	*10.00*	*541331.36*	*752430.78*	*N 32 29 10.75*	*W 103 38 55.43*
	10400.00	15.04	179.66	10389.70	68.46	-67.40	178.38	10.00	541323.59	752430.82	N 32 29 10.67	W 103 38 55.43
	10500.00	25.04	179.66	10483.53	102.68	-101.63	178.59	10.00	541289.37	752431.03	N 32 29 10.34	W 103 38 55.43
	10600.00	35.04	179.66	10569.98	152.68	-151.63	178.89	10.00	541239.37	752431.33	N 32 29 9.84	W 103 38 55.43
	10700.00	45.04	179.66	10646.44	216.94	-215.88	179.27	10.00	541175.12	752431.71	N 32 29 9.21	W 103 38 55.43
HL Crossing	*10719.62*	*47.00*	*179.66*	*10660.07*	*231.06*	*-230.00*	*179.36*	*10.00*	*541161.00*	*752431.80*	*N 32 29 9.07*	*W 103 38 55.43*
	10800.00	55.04	179.66	10710.58	293.49	-292.43	179.73	10.00	541098.57	752432.17	N 32 29 8.45	W 103 38 55.43
	10900.00	65.04	179.66	10760.46	380.02	-378.96	180.25	10.00	541012.05	752432.69	N 32 29 7.59	W 103 38 55.43
	11000.00	75.04	179.66	10794.54	473.90	-472.83	180.82	10.00	540918.18	752433.26	N 32 29 6.66	W 103 38 55.43
	11100.00	85.04	179.66	10811.81	572.27	-571.20	181.41	10.00	540819.81	752433.85	N 32 29 5.69	W 103 38 55.43
Landing Point	11138.57	88.90	179.66	10813.85	610.78	-609.71	181.64	10.00	540781.30	752434.08	N 32 29 5.31	W 103 38 55.43
	11200.00	88.90	179.66	10815.03	672.20	-671.13	182.01	0.00	540719.89	752434.45	N 32 29 4.70	W 103 38 55.43
	11300.00	88.90	179.66	10816.95	772.18	-771.11	182.61	0.00	540619.92	752435.05	N 32 29 3.71	W 103 38 55.43
	11400.00	88.90	179.66	10818.87	872.16	-871.09	183.21	0.00	540519.94	752435.65	N 32 29 2.72	W 103 38 55.43
	11500.00	88.90	179.66	10820.79	972.14	-971.07	183.81	0.00	540419.96	752436.25	N 32 29 1.73	W 103 38 55.43
	11600.00	88.90	179.66	10822.71	1072.12	-1071.05	184.41	0.00	540319.99	752436.85	N 32 29 0.74	W 103 38 55.43
	11700.00	88.90	179.66	10824.63	1172.10	-1171.03	185.01	0.00	540220.01	752437.45	N 32 28 59.75	W 103 38 55.43
	11800.00	88.90	179.66	10826.55	1272.08	-1271.01	185.61	0.00	540120.04	752438.05	N 32 28 58.77	W 103 38 55.43
	11900.00	88.90	179.66	10828.47	1372.07	-1370.99	186.21	0.00	540020.06	752438.65	N 32 28 57.78	W 103 38 55.43
	12000.00	88.90	179.66	10830.39	1472.05	-1470.97	186.81	0.00	539920.09	752439.25	N 32 28 56.79	W 103 38 55.43
	12100.00	88.90	179.66	10832.31	1572.03	-1570.94	187.41	0.00	539820.11	752439.85	N 32 28 55.80	W 103 38 55.43
	12200.00	88.90	179.66	10834.23	1672.01	-1670.92	188.01	0.00	539720.14	752440.46	N 32 28 54.81	W 103 38 55.44
	12300.00	88.90	179.66	10836.15	1771.99	-1770.90	188.61	0.00	539620.16	752441.06	N 32 28 53.82	W 103 38 55.44
	12400.00	88.90	179.66	10838.07	1871.97	-1870.88	189.21	0.00	539520.18	752441.66	N 32 28 52.83	W 103 38 55.44
	12500.00	88.90	179.66	10839.99	1971.96	-1970.86	189.82	0.00	539420.21	752442.26	N 32 28 51.84	W 103 38 55.44
	12600.00	88.90	179.66	10841.91	2071.94	-2070.84	190.42	0.00	539320.23	752442.86	N 32 28 50.85	W 103 38 55.44
	12700.00	88.90	179.66	10843.82	2171.92	-2170.82	191.02	0.00	539220.26	752443.46	N 32 28 49.86	W 103 38 55.44
	12800.00	88.90	179.66	10845.74	2271.90	-2270.80	191.62	0.00	539120.28	752444.06	N 32 28 48.87	W 103 38 55.44
	12900.00	88.90	179.66	10847.66	2371.88	-2370.78	192.22	0.00	539020.31	752444.66	N 32 28 47.88	W 103 38 55.44
	13000.00	88.90	179.66	10849.58	2471.86	-2470.76	192.82	0.00	538920.33	752445.26	N 32 28 46.89	W 103 38 55.44
	13100.00	88.90	179.66	10851.50	2571.85	-2570.74	193.42	0.00	538820.36	752445.86	N 32 28 45.90	W 103 38 55.44
	13200.00	88.90	179.66	10853.42	2671.83	-2670.72	194.02	0.00	538720.38	752446.46	N 32 28 44.92	W 103 38 55.44
	13300.00	88.90	179.66	10855.34	2771.81	-2770.70	194.62	0.00	538620.40	752447.06	N 32 28 43.93	W 103 38 55.44
	13400.00	88.90	179.66	10857.26	2871.79	-2870.68	195.22	0.00	538520.43	752447.66	N 32 28 42.94	W 103 38 55.44
	13500.00	88.90	179.66	10859.18	2971.77	-2970.66	195.82	0.00	538420.45	752448.26	N 32 28 41.95	W 103 38 55.44
	13600.00	88.90	179.66	10861.10	3071.75	-3070.64	196.42	0.00	538320.48	752448.86	N 32 28 40.96	W 103 38 55.44
	13700.00	88.90	179.66	10863.02	3171.73	-3170.62	197.02	0.00	538220.50	752449.46	N 32 28 39.97	W 103 38 55.44
	13800.00	88.90	179.66	10864.94	3271.72	-3270.60	197.62	0.00	538120.53	752450.07	N 32 28 38.98	W 103 38 55.44
	13900.00	88.90	179.66	10866.86	3371.70	-3370.58	198.22	0.00	538020.55	752450.67	N 32 28 37.99	W 103 38 55.44
	14000.00	88.90	179.66	10868.77	3471.68	-3470.56	198.82	0.00	537920.58	752451.27	N 32 28 37.00	W 103 38 55.44
	14100.00	88.90	179.66	10870.69	3571.66	-3570.54	199.43	0.00	537820.60	752451.87	N 32 28 36.01	W 103 38 55.44
	14200.00	88.90	179.66	10872.61	3671.64	-3670.52	200.03	0.00	537720.62	752452.47	N 32 28 35.02	W 103 38 55.44
	14300.00	88.90	179.66	10874.53	3771.62	-3770.50	200.63	0.00	537620.65	752453.07	N 32 28 34.03	W 103 38 55.45
	14400.00	88.90	179.66	10876.45	3871.61	-3870.48	201.23	0.00	537520.67	752453.67	N 32 28 33.04	W 103 38 55.45
	14500.00	88.90	179.66	10878.37	3971.59	-3970.46	201.83	0.00	537420.70	752454.27	N 32 28 32.05	W 103 38 55.45
	14600.00	88.90	179.66	10880.29	4071.57	-4070.44	202.43	0.00	537320.72	752454.87	N 32 28 31.07	W 103 38 55.45
	14700.00	88.90	179.66	10882.21	4171.55	-4170.42	203.03	0.00	537220.75	752455.47	N 32 28 30.08	W 103 38 55.45
	14800.00	88.90	179.66	10884.13	4271.53	-4270.40	203.63	0.00	537120.77	752456.07	N 32 28 29.09	W 103 38 55.45
	14900.00	88.90	179.66	10886.04	4371.51	-4370.38	204.23	0.00	537020.79	752456.67	N 32 28 28.10	W 103 38 55.45
	15000.00	88.90	179.66	10887.96	4471.50	-4470.36	204.83	0.00	536920.82	752457.27	N 32 28 27.11	W 103 38 55.45
	15100.00	88.90	179.66	10889.88	4571.48	-4570.34	205.43	0.00	536820.84	752457.87	N 32 28 26.12	W 103 38 55.45
	15200.00	88.90	179.66	10891.80	4671.46	-4670.32	206.03	0.00	536720.87	752458.47	N 32 28 25.13	W 103 38 55.45
	15300.00	88.90	179.66	10893.72	4771.44	-4770.30	206.63	0.00	536620.89	752459.07	N 32 28 24.14	W 103 38 55.45
	15400.00	88.90	179.66	10895.64	4871.42	-4870.28	207.23	0.00	536520.92	752459.68	N 32 28 23.15	W 103 38 55.45
	15500.00	88.90	179.66	10897.56	4971.40	-4970.26	207.83	0.00	536420.94	752460.28	N 32 28 22.16	W 103 38 55.45
	15600.00	88.90	179.66	10899.48	5071.38	-5070.24	208.44	0.00	536320.97	752460.88	N 32 28 21.17	W 103 38 55.45
	15700.00	88.90	179.66	10901.39	5171.37	-5170.22	209.04	0.00	536220.99	752461.48	N 32 28 20.18	W 103 38 55.45
	15800.00	88.90	179.66	10903.31	5271.35	-5270.20	209.64	0.00	536121.01	752462.08	N 32 28 19.19	W 103 38 55.45
	15900.00	88.90	179.66	10905.23	5371.33	-5370.18	210.24	0.00	536021.04	752462.68	N 32 28 18.20	W 103 38 55.45
	16000.00	88.90	179.66	10907.15	5471.31	-5470.16	210.84	0.00	535921.06	752463.28	N 32 28 17.21	W 103 38 55.45
	16100.00	88.90	179.66	10909.07	5571.29	-5570.14	211.44	0.00	535821.09	752463.88	N 32 28 16.23	W 103 38 55.45
	16200.00	88.90	179.66	10910.99	5671.27	-5670.12	212.04	0.00	535721.11	752464.48	N 32 28 15.24	W 103 38 55.45
	16300.00	88.90	179.66	10912.91	5771.26	-5770.10	212.64	0.00	535621.14	752465.08	N 32 28 14.25	W 103 38 55.45
	16400.00	88.90	179.66	10914.82	5871.24	-5870.08	213.24	0.00	535521.16	752465.68	N 32 28 13.26	W 103 38 55.46
	16500.00	88.90	179.66	10916.74	5971.22	-5970.06	213.84	0.00	535421.19	752466.28	N 32 28 12.27	W 103 38 55.46
	16600.00	88.90	179.66	10918.66	6071.20	-6070.04	214.44	0.00	535321.21	752466.88	N 32 28 11.28	W 103 38 55.46
	16700.00	88.90	179.66	10920.58	6171.18	-6170.01	215.04	0.00	535221.23	752467.48	N 32 28 10.29	W 103 38 55.46
	16800.00	88.90	179.66	10922.50	6271.16	-6269.99	215.64	0.00	535121.26	752468.08	N 32 28 9.30	W 103 38 55.46

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 ° ' ")
	16900.00	88.90	179.66	10924.42	6371.15	-6369.97	216.24	0.00	535021.28	752468.68	N 32 28 8.31	W 103 38 55.46
	17000.00	88.90	179.66	10926.33	6471.13	-6469.95	216.84	0.00	534921.31	752469.29	N 32 28 7.32	W 103 38 55.46
	17100.00	88.90	179.66	10928.25	6571.11	-6569.93	217.44	0.00	534821.33	752469.89	N 32 28 6.33	W 103 38 55.46
	17200.00	88.90	179.66	10930.17	6671.09	-6669.91	218.05	0.00	534721.36	752470.49	N 32 28 5.34	W 103 38 55.46
	17300.00	88.90	179.66	10932.09	6771.07	-6769.89	218.65	0.00	534621.38	752471.09	N 32 28 4.35	W 103 38 55.46
	17400.00	88.90	179.66	10934.01	6871.05	-6869.87	219.25	0.00	534521.40	752471.69	N 32 28 3.36	W 103 38 55.46
	17500.00	88.90	179.66	10935.92	6971.04	-6969.85	219.85	0.00	534421.43	752472.29	N 32 28 2.38	W 103 38 55.46
	17600.00	88.90	179.66	10937.84	7071.02	-7069.83	220.45	0.00	534321.45	752472.89	N 32 28 1.39	W 103 38 55.46
	17700.00	88.90	179.66	10939.76	7171.00	-7169.81	221.05	0.00	534221.48	752473.49	N 32 28 0.40	W 103 38 55.46
	17800.00	88.90	179.66	10941.68	7270.98	-7269.79	221.65	0.00	534121.50	752474.09	N 32 27 59.41	W 103 38 55.46
	17900.00	88.90	179.66	10943.60	7370.96	-7369.77	222.25	0.00	534021.53	752474.69	N 32 27 58.42	W 103 38 55.46
	18000.00	88.90	179.66	10945.52	7470.94	-7469.75	222.85	0.00	533921.55	752475.29	N 32 27 57.43	W 103 38 55.46
	18100.00	88.90	179.66	10947.43	7570.92	-7569.73	223.45	0.00	533821.58	752475.89	N 32 27 56.44	W 103 38 55.46
	18200.00	88.90	179.66	10949.35	7670.91	-7669.71	224.05	0.00	533721.60	752476.49	N 32 27 55.45	W 103 38 55.46
	18300.00	88.90	179.66	10951.27	7770.89	-7769.69	224.65	0.00	533621.62	752477.09	N 32 27 54.46	W 103 38 55.46
	18400.00	88.90	179.66	10953.19	7870.87	-7869.67	225.25	0.00	533521.65	752477.69	N 32 27 53.47	W 103 38 55.46
	18500.00	88.90	179.66	10955.11	7970.85	-7969.65	225.85	0.00	533421.67	752478.29	N 32 27 52.48	W 103 38 55.47
	18600.00	88.90	179.66	10957.02	8070.83	-8069.63	226.45	0.00	533321.70	752478.90	N 32 27 51.49	W 103 38 55.47
	18700.00	88.90	179.66	10958.94	8170.81	-8169.61	227.06	0.00	533221.72	752479.50	N 32 27 50.50	W 103 38 55.47
	18800.00	88.90	179.66	10960.86	8270.80	-8269.59	227.66	0.00	533121.75	752480.10	N 32 27 49.51	W 103 38 55.47
	18900.00	88.90	179.66	10962.78	8370.78	-8369.57	228.26	0.00	533021.77	752480.70	N 32 27 48.53	W 103 38 55.47
	19000.00	88.90	179.66	10964.69	8470.76	-8469.55	228.86	0.00	532921.80	752481.30	N 32 27 47.54	W 103 38 55.47
	19100.00	88.90	179.66	10966.61	8570.74	-8569.53	229.46	0.00	532821.82	752481.90	N 32 27 46.55	W 103 38 55.47
	19200.00	88.90	179.66	10968.53	8670.72	-8669.51	230.06	0.00	532721.84	752482.50	N 32 27 45.56	W 103 38 55.47
	19300.00	88.90	179.66	10970.45	8770.70	-8769.49	230.66	0.00	532621.87	752483.10	N 32 27 44.57	W 103 38 55.47
	19400.00	88.90	179.66	10972.37	8870.69	-8869.47	231.26	0.00	532521.89	752483.70	N 32 27 43.58	W 103 38 55.47
	19500.00	88.90	179.66	10974.28	8970.67	-8969.45	231.86	0.00	532421.92	752484.30	N 32 27 42.59	W 103 38 55.47
	19600.00	88.90	179.66	10976.20	9070.65	-9069.43	232.46	0.00	532321.94	752484.90	N 32 27 41.60	W 103 38 55.47
	19700.00	88.90	179.66	10978.12	9170.63	-9169.41	233.06	0.00	532221.97	752485.50	N 32 27 40.61	W 103 38 55.47
	19800.00	88.90	179.66	10980.04	9270.61	-9269.39	233.66	0.00	532121.99	752486.10	N 32 27 39.62	W 103 38 55.47
	19900.00	88.90	179.66	10981.95	9370.59	-9369.37	234.26	0.00	532022.01	752486.70	N 32 27 38.63	W 103 38 55.47
	20000.00	88.90	179.66	10983.87	9470.58	-9469.35	234.86	0.00	531922.04	752487.30	N 32 27 37.64	W 103 38 55.47
	20100.00	88.90	179.66	10985.79	9570.56	-9569.33	235.46	0.00	531822.06	752487.90	N 32 27 36.65	W 103 38 55.47
	20200.00	88.90	179.66	10987.71	9670.54	-9669.31	236.07	0.00	531722.09	752488.51	N 32 27 35.66	W 103 38 55.47
	20300.00	88.90	179.66	10989.62	9770.52	-9769.29	236.67	0.00	531622.11	752489.11	N 32 27 34.68	W 103 38 55.47
	20400.00	88.90	179.66	10991.54	9870.50	-9869.27	237.27	0.00	531522.14	752489.71	N 32 27 33.69	W 103 38 55.47
	20500.00	88.90	179.66	10993.46	9970.48	-9969.25	237.87	0.00	531422.16	752490.31	N 32 27 32.70	W 103 38 55.47
	20600.00	88.90	179.66	10995.38	10070.46	-10069.23	238.47	0.00	531322.19	752490.91	N 32 27 31.71	W 103 38 55.48
	20700.00	88.90	179.66	10997.29	10170.45	-10169.21	239.07	0.00	531222.21	752491.51	N 32 27 30.72	W 103 38 55.48
	20800.00	88.90	179.66	10999.21	10270.43	-10269.19	239.67	0.00	531122.23	752492.11	N 32 27 29.73	W 103 38 55.48
	20900.00	88.90	179.66	11001.13	10370.41	-10369.17	240.27	0.00	531022.26	752492.71	N 32 27 28.74	W 103 38 55.48
	21000.00	88.90	179.66	11003.05	10470.39	-10469.15	240.87	0.00	530922.28	752493.31	N 32 27 27.75	W 103 38 55.48
	21100.00	88.90	179.66	11004.96	10570.37	-10569.13	241.47	0.00	530822.31	752493.91	N 32 27 26.76	W 103 38 55.48
Chisholm Aztec 14-23 Fed Com 6H - BHL	21124.84	88.90	179.66	11005.44	10595.21	-10593.96	241.62	0.00	530797.47	752494.06	N 32 27 26.52	W 103 38 55.48

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	31.000	1/100.000	30.000	30.000		NAL_MWD_1.0_DEG-Depth Only	Aztec 14-23 Fed Com 2BS 6H / Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19
	1	31.000	21124.843	1/100.000	30.000	30.000		NAL_MWD_1.0_DEG	Aztec 14-23 Fed Com 2BS 6H / Chisholm Aztec 14-23 Fed Com

Schlumberger

Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19 Proposal Geodetic Report

(Def Plan)

CHISHOLM ENERGY

Report Date:	October 11, 2019 - 12:10 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.660 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Aztec 14-23 Fed Com 2BS 6H / New Slot	**TVD Reference Datum:**	RKB
Well:	Aztec 14-23 Fed Com 2BS 6H	**TVD Reference Elevation:**	3877.000 ft above MSL
Borehole:	Aztec 14-23 Fed Com 2BS 6H	**Seabed / Ground Elevation:**	3846.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.697 °
Survey Name:	Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19	**Total Gravity Field Strength:**	998.4614mgn (9.80665 Based)
Survey Date:	October 11, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	100.901 ° / 10730.940 ft / 6.318 / 0.975	**Total Magnetic Field Strength:**	48084.950 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.292 °
Location Lat / Long:	N 32° 29' 11.35298", W 103° 38' 57.50484"	**Declination Date:**	October 11, 2019
Location Grid N/E Y/X:	N 541390.990 ftUS, E 752252.450 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.3674 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99996004	**Grid Convergence Used:**	0.3674 °
Version / Patch:	2.10.782.0	**Total Corr Mag North->Grid North:**	6.3294 °
		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	105.00	0.00	0.00	0.00	0.00	N/A	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
Nudge 1° DLS	1600.00	0.00	105.00	1600.00	0.00	0.00	0.00	0.00	541390.99	752252.45	N 32 29 11.35	W 103 38 57.50
Hold	2200.00	6.00	105.00	2198.90	8.30	-8.12	30.32	1.00	541382.87	752282.77	N 32 29 11.27	W 103 38 57.15
Drop 1° DLS	3365.00	6.00	105.00	3357.52	40.52	-39.64	147.94	0.00	541351.35	752400.39	N 32 29 10.95	W 103 38 55.78
Hold	3965.00	0.00	105.00	3956.43	48.82	-47.77	178.26	1.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
KOP, Build 10° DLS	10249.57	0.00	105.00	10241.00	48.82	-47.77	178.26	0.00	541343.23	752430.70	N 32 29 10.87	W 103 38 55.43
Landing Point	11138.57	88.90	179.66	10813.85	610.78	-609.71	181.64	10.00	540781.30	752434.08	N 32 29 5.31	W 103 38 55.43
Chisholm Aztec 14-23 Fed Com 6H - BHL	21124.84	88.90	179.66	11005.44	10595.21	-10593.96	241.62	0.00	530797.47	752494.06	N 32 27 26.52	W 103 38 55.48

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	31.000	1/100.000	30.000	30.000		NAL_MWD_1.0_DEG-Depth Only	Aztec 14-23 Fed Com 2BS 6H / Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19
	1	31.000	21124.843	1/100.000	30.000	30.000		NAL_MWD_1.0_DEG	Aztec 14-23 Fed Com 2BS 6H / Chisholm Aztec 14-23 Fed Com

Schlumberger

JDC 7

Chisholm

Rev0

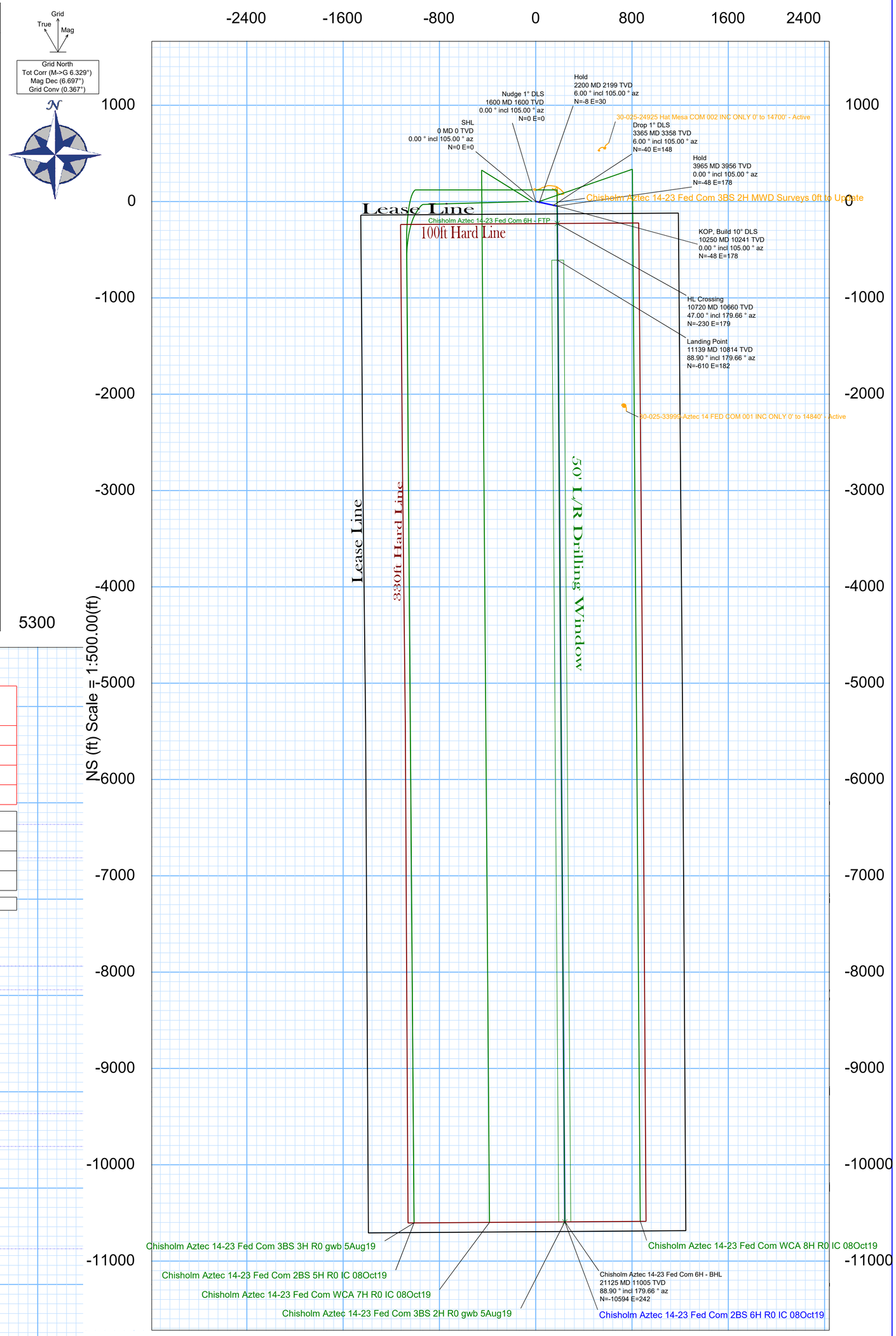
CHISHOLM ENERGY

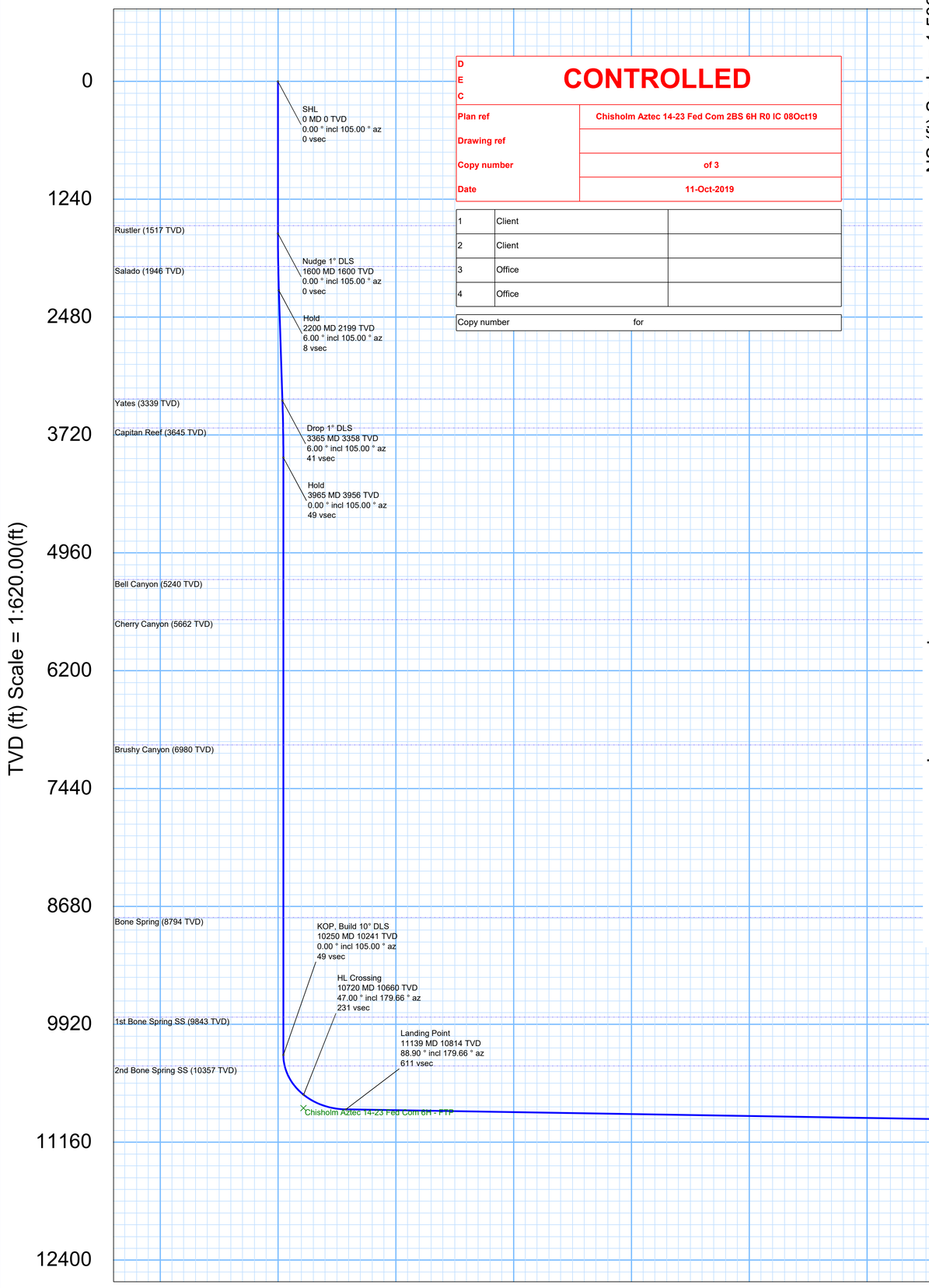
Borehole:	Well:	Field:	Structure:
Aztec 14-23 Fed Com 2BS 6H	Aztec 14-23 Fed Com 2BS 6H	NM Lea County (NAD 83)	Chisholm Aztec 14-23 Fed Com 2BS 6H

Gravity & Magnetic Parameters						Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet					Miscellaneous			
Model:	HDGM 2019	Dip:	60.292°	Date:	11-Oct-2019	Lat:	N 32 29 11.35	Northing:	541390.99ftUS	Grid Conv:	0.3674°	Slot:	New Slot	TVD Ref:	RKB(3877ft above MSL)
MagDec:	6.697°	FS:	48084.95nT	Gravity FS:	998.461mgn (9.80665 Based)	Lon:	W 103 38 57.50	Easting:	752252.45ftUS	Scale Fact:	0.99996004	Plan:	Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19		

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL	0.00	0.00	105.00	0.00	0.00	0.00	0.00	
Rustler	1517.00	0.00	105.00	1517.00	0.00	0.00	0.00	0.00
Nudge 1° DLS	1600.00	0.00	105.00	1600.00	0.00	0.00	0.00	0.00
Salado	1946.21	3.46	105.00	1946.00	2.77	-2.71	10.10	1.00
Hold	2200.00	6.00	105.00	2198.90	8.30	-8.12	30.32	1.00
Yates	3346.38	6.00	105.00	3339.00	40.00	-39.14	146.06	0.00
Drop 1° DLS	3365.00	6.00	105.00	3357.52	40.52	-39.64	147.94	0.00
Capitan Reef	3653.42	3.12	105.00	3645.00	46.58	-45.57	170.08	1.00
Hold	3965.00	0.00	105.00	3956.43	48.82	-47.77	178.26	1.00
Bell Canyon	5248.57	0.00	105.00	5240.00	48.82	-47.77	178.26	0.00
Cherry Canyon	5670.57	0.00	105.00	5662.00	48.82	-47.77	178.26	0.00
Brushy Canyon	6988.57	0.00	105.00	6980.00	48.82	-47.77	178.26	0.00
Bone Spring	8802.57	0.00	105.00	8794.00	48.82	-47.77	178.26	0.00
1st Bone Spring SS	9851.57	0.00	105.00	9843.00	48.82	-47.77	178.26	0.00
KOP, Build 10° DLS	10249.57	0.00	105.00	10241.00	48.82	-47.77	178.26	0.00
2nd Bone Spring SS	10366.38	11.68	179.66	10357.00	60.69	-59.63	178.33	10.00
HL Crossing	10719.62	47.00	179.66	10660.07	231.06	-230.00	179.36	10.00
Landing Point	11138.57	88.90	179.66	10813.85	610.78	-609.71	181.64	10.00
Chisholm Aztec 14-23 Fed Com 6H - BHL	21124.84	88.90	179.66	11005.44	10595.21	-10593.96	241.62	0.00





D
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CONTROLLED

Plan ref	Chisholm Aztec 14-23 Fed Com 2BS 6H R0 IC 08Oct19
Drawing ref	
Copy number	of 3
Date	11-Oct-2019

1	Client	
2	Client	
3	Office	
4	Office	

Copy number for

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**CHISHOLM ENERGY OPERATING LLC**
LEASE NO.:	**NMNM0061261**
WELL NAME & NO.:	AZTEC 14-23 2BS FED COM 6H
SURFACE HOLE FOOTAGE:	130'/S & 1455'/W
BOTTOM HOLE FOOTAGE	100'/S & 1633'/W
LOCATION:	Section 11, T.21 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	( ) None	( ) Secretary	(•) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	( ) Multibowl	(•) Both
Other	[x] 4 String Area	[x] Capitan Reef	[ ] WIPP
Other	[x] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Hat Mesa Borrow** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Casing Design:

Surface casing must be kept fluid filled to meet BLM minimum collapse requirement.

1. The **20** inch surface casing shall be set at approximately **1575 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run

 Approval Date: 11/23/2020

to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

First intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing string must come to surface.

- In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

- **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
  (Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the capitan interval)

  - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

  - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

2. The minimum required fill of cement behind the **13-3/8** inch first intermediate casing which shall be set at approximately **3600 feet** is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.**

Second intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **9-5/8** inch second intermediate casing which shall be set at approximately **5950 feet** is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. If cement does not circulate see B.1.a, c-d above.
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef. Excess cement calculates to 9%, additional cement might be required.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** psi.

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)

b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement

program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been

done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

OTA11192020

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

CHISHOLM ENERGY OPERATING LLC

Lease Number NMNM0061261

AZTEC 14-23 2BS FED COM 5H
Surface Hole Location: 130 FSL / 1425 FWL, Section 11, T. 21 S, R. 32 E
Bottom Hole Location: 100 FSL / 380 FWL, Section 23, T. 21 S, R. 32 E

AZTEC 14-23 2BS FED COM 6H
Surface Hole Location: 130 FSL / 1455 FWL, Section 11, T. 21 S, R. 32 E
Bottom Hole Location: 100 FSL / 1633 FWL, Section 23, T. 21 S, R. 32 E

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

Approval Date: 11/23/2020

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for

acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:
Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

Hydrology
The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or

similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Potash Resources

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established (Aztec) Drill Island.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

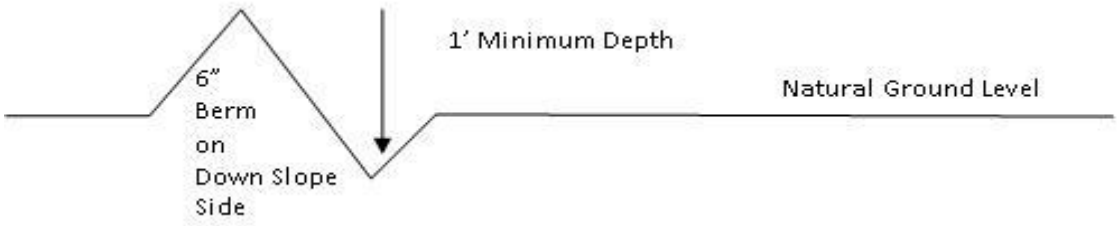
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

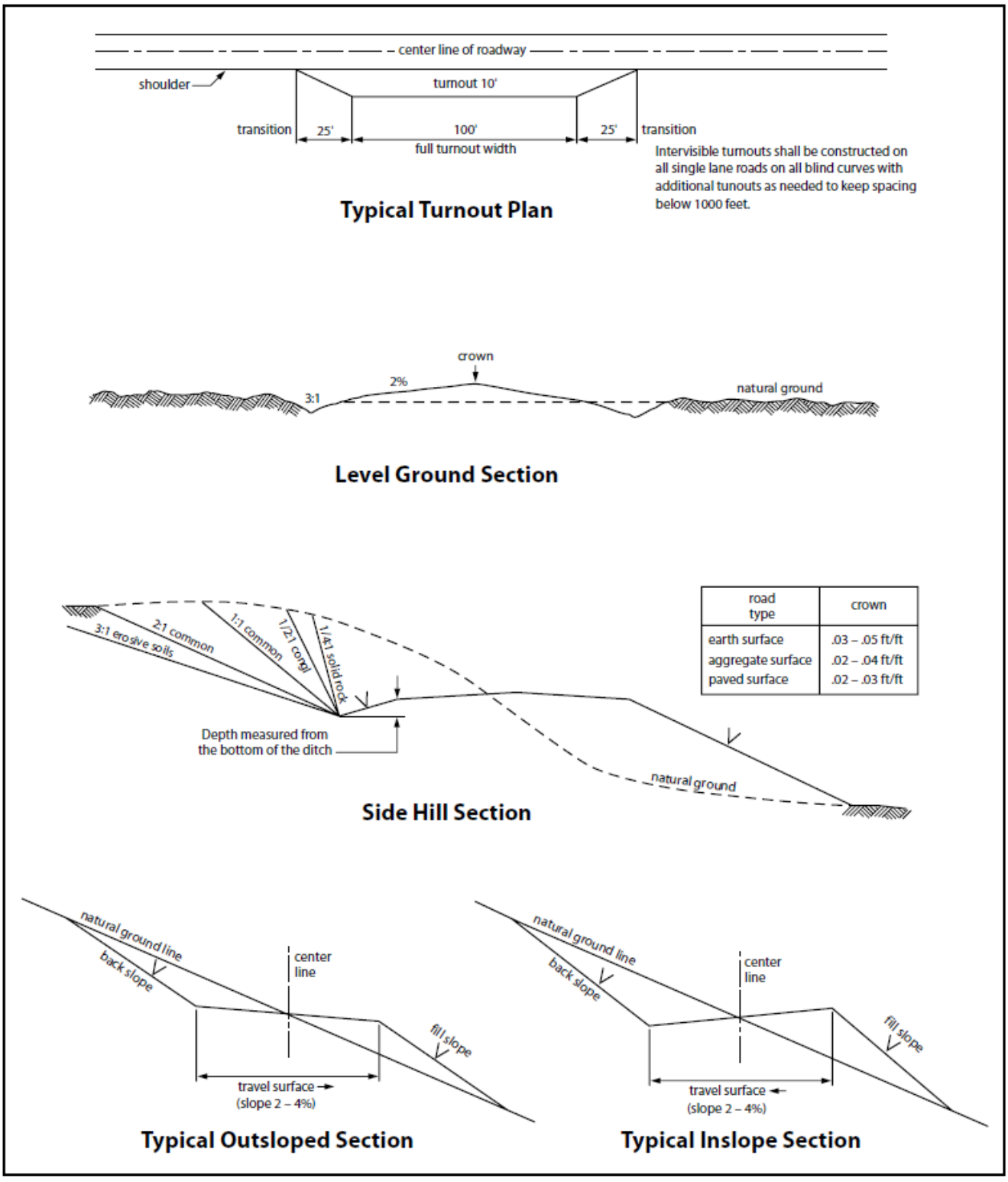


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Approval Date: 11/23/2020

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production

equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

X. Potash Resources

Lessees must comply with the 2012Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Aztec Drill Island.

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 (S02). 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 SO,

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H2S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	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 sit e. 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 play 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 H25 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	Office:	(817)953-6063
Vice President of Operations-Brad Grandstaff	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

AZTEC 14-23 FED COM 2BS 5H

AZTEC 14-23 FED COM 2BS 6H

CHISHOLM ENERGY OPERATING, LLC WILL USED A CLOSED LOOP SYSTEM

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report

01/28/2021

APD ID: 10400050862
Submission Date: 11/13/2019
Operator Name: CHISHOLM ENERGY OPERATING LLC
Well Name: AZTEC 14-23 2BS FED COM
Well Number: 6H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
583928	RUSTLER	3846	1517	1517	ANHYDRITE	USEABLE WATER	N
583929	SALADO	1900	1946	1946	SALT	NONE	N
583931	YATES	507	3339	3339	ANHYDRITE, DOLOMITE	NATURAL GAS, OIL	N
583930	CAPITAN REEF	201	3645	3645	DOLOMITE, LIMESTONE, SANDSTONE	NATURAL GAS, OIL	N
583932	BELL CANYON	-1394	5240	5240	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
583933	CHERRY CANYON	-1816	5662	5662	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
583934	BRUSHY CANYON	-3134	6980	6980	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
583935	BONE SPRING	-4948	8794	8794	LIMESTONE, SHALE	NATURAL GAS, OIL	N
583938	BONE SPRING 1ST	-5997	9843	9843	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	N
583939	BONE SPRING 2ND	-6511	10357	10357	SANDSTONE, SHALE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M
Rating Depth: 12000

Equipment: Rotating Head, remote kill line, mud-gas sperator

Requesting Variance? YES

Variance request: WE PROPOSE UTILIZING A CACTUS SPEED HEAD 4-STRING MULTI-BOWL WELLHEAD FOR THIS WELL. PLEASE SEE ATTACHED DIAGRAM AND PRESSURE TESTING STATEMENT. ALSO WE REQUEST TO USE A FLEX CHOKE HOSE; PLEASE SEE ATTACHMENT.
Testing Procedure: BOP will be tested by an independent service company per onshore order 2 regulations. BOP testing procedure -N/U the rig's BOP. Use 3rd party testers to perform the following: -Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump. -Test the Hydril annular to 250 psi/2,500 psi with same as above
Choke Diagram Attachment:

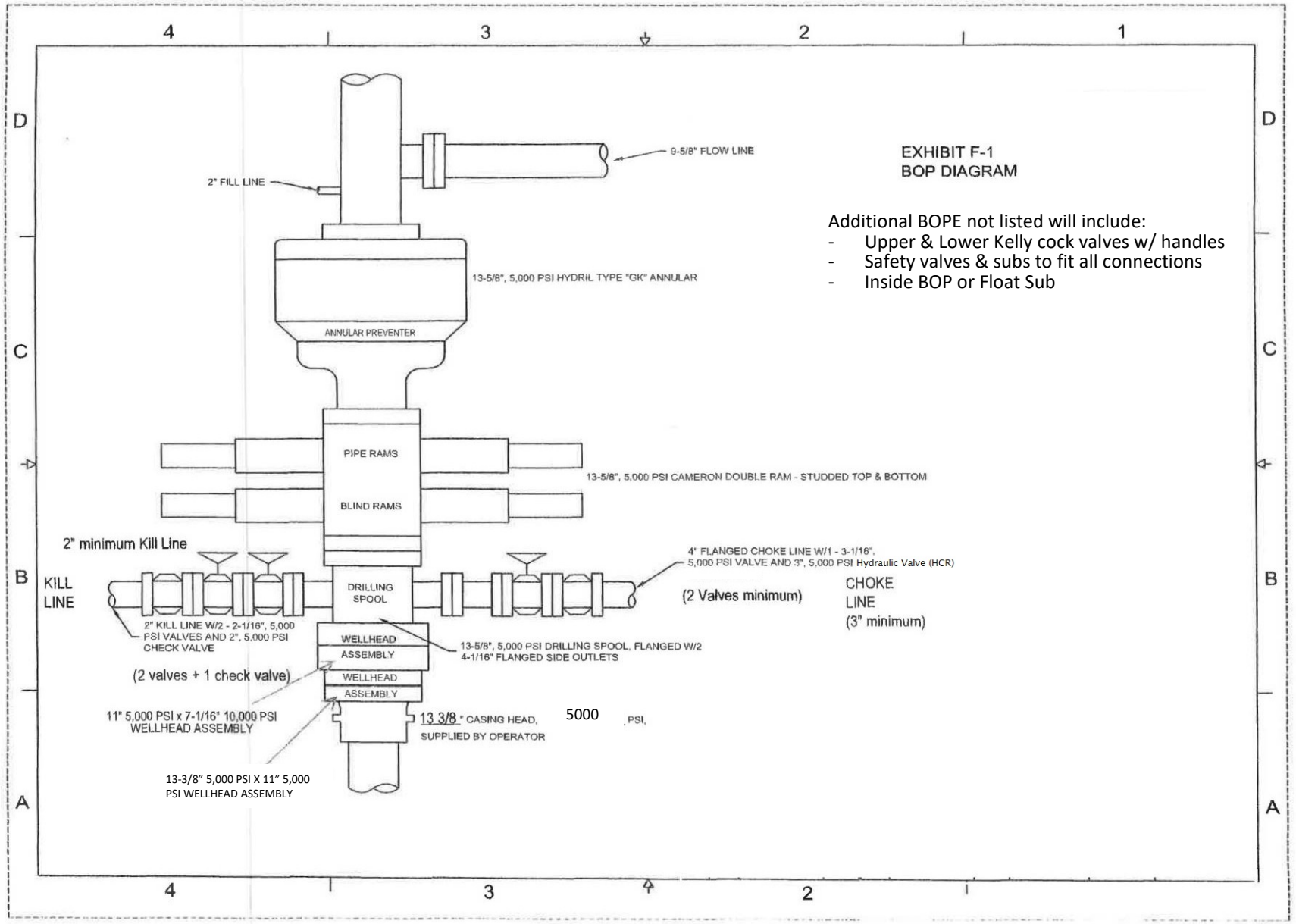


EXHIBIT F-1
BOP DIAGRAM
Additional BOPE not listed will include:
- Upper & Lower Kelly cock valves w/ handles
- Safety valves & subs to fit all connections
- Inside BOP or Float Sub
9-5/8" FLOW LINE
2" FILL LINE
13-5/8", 5,000 PSI HYDRIL TYPE "GK" ANNULAR
ANNULAR PREVENTER
PIPE RAMS
BLIND RAMS
13-5/8", 5,000 PSI CAMERON DOUBLE RAM - STUDDED TOP & BOTTOM
2" minimum Kill Line
KILL LINE
4" FLANGED CHOKE LINE W/1 - 3-1/16", 5,000 PSI VALVE AND 3", 5,000 PSI Hydraulic Valve (HCR)
(2 Valves minimum)
CHOKE LINE (3" minimum)
DRILLING SPOOL
2" KILL LINE W/2 - 2-1/16", 5,000 PSI VALVES AND 2", 5,000 PSI CHECK VALVE
13-5/8", 5,000 PSI DRILLING SPOOL, FLANGED W/2 4-1/16" FLANGED SIDE OUTLETS
WELLHEAD ASSEMBLY
(2 valves + 1 check valve)
WELLHEAD ASSEMBLY
11" 5,000 PSI x 7-1/16" 10,000 PSI WELLHEAD ASSEMBLY
13 3/8" CASING HEAD, SUPPLIED BY OPERATOR
5000
PSI
13-3/8" 5,000 PSI X 11" 5,000 PSI WELLHEAD ASSEMBLY

Patriot Drilling, LLC

RIG NO. 5

Annular Preventer
13-3/8 5,000 PSI WP

Ram Preventers
13-3/8" 5,000 PSI WP Double Ram
13-3/8" 5,000 PSI WP Single Ram

Test the pipe rams, blind rams, floor valves (IBOP and/or upper Kelly valve), choke lines and manifold to 250 psi/5,000 psi with a test plug and a test pump.

Test the annular to 250 psi/2,500 psi with same as above.

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 16228

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
CHISHOLM ENERGY OPERATING, LLC	801 Cherry Street	Fort Worth, TX76102	372137	16228	FORM 3160-3

OCD Reviewer	Condition
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string