District I
1625 N. French Dr., Hobbs, NM 88240
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Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 274126

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

1. Operator Name and Address		2. OGRID Number
CHISHOLM ENERGY OPERATING, LLC 801 Cherry Street Fort Worth, TX 76102		372137
		3. API Number 30-025-46539
4. Property Code 321291	5. Property Name GRAMA RIDGE EAST 34 STATE COM 3BS	6. Well No. 006H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	34	21S	34E	D	155	N	850	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	34	21S	34E	M	100	S	750	W	Lea

9. Pool Information

GRAMA RIDGE;BONE SPRING, NE	28435

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3712
16. Multiple	17. Proposed Depth	18. Formation	19. Contractor	20. Spud Date
N	15406	2nd Bone Spring Sand		2/1/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

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

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1800	1425	0
Int1	12.25	9.625	40	5700	2085	0
Prod	8.75	5.5	20	15406	1435	4500

Casing/Cement Program: Additional Comments

DV TOOL WILL BE SET @ 3900'; INTERMEDIATE CEMENT WILL BE A 2 STAGE JOB

22. Proposed Blowout Prevention Program

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

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:			**OIL CONSERVATION DIVISION**		
Printed Name:	Electronically filed by Jennifer Elrod		Approved By:	Paul F Kautz	
Title:	Sr. Regulatory Tech		Title:	Geologist	
Email Address:	jelrod@chisholmenergy.com		Approved Date:	11/25/2019	Expiration Date: 11/25/2021
Date:	11/20/2019	Phone: 817-953-3728	Conditions of Approval Attached		

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Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	28435	GRAMA RIDGE; BONE SPRING, NE

Property Code	Property Name	Well Number
	GRAMA RIDGE EAST 34 2BS STATE COM	6H

OGRID No.	Operator Name	Elevation
372137	CHISHOLM ENERGY OPERATING, LLC	3712'

Surface Location

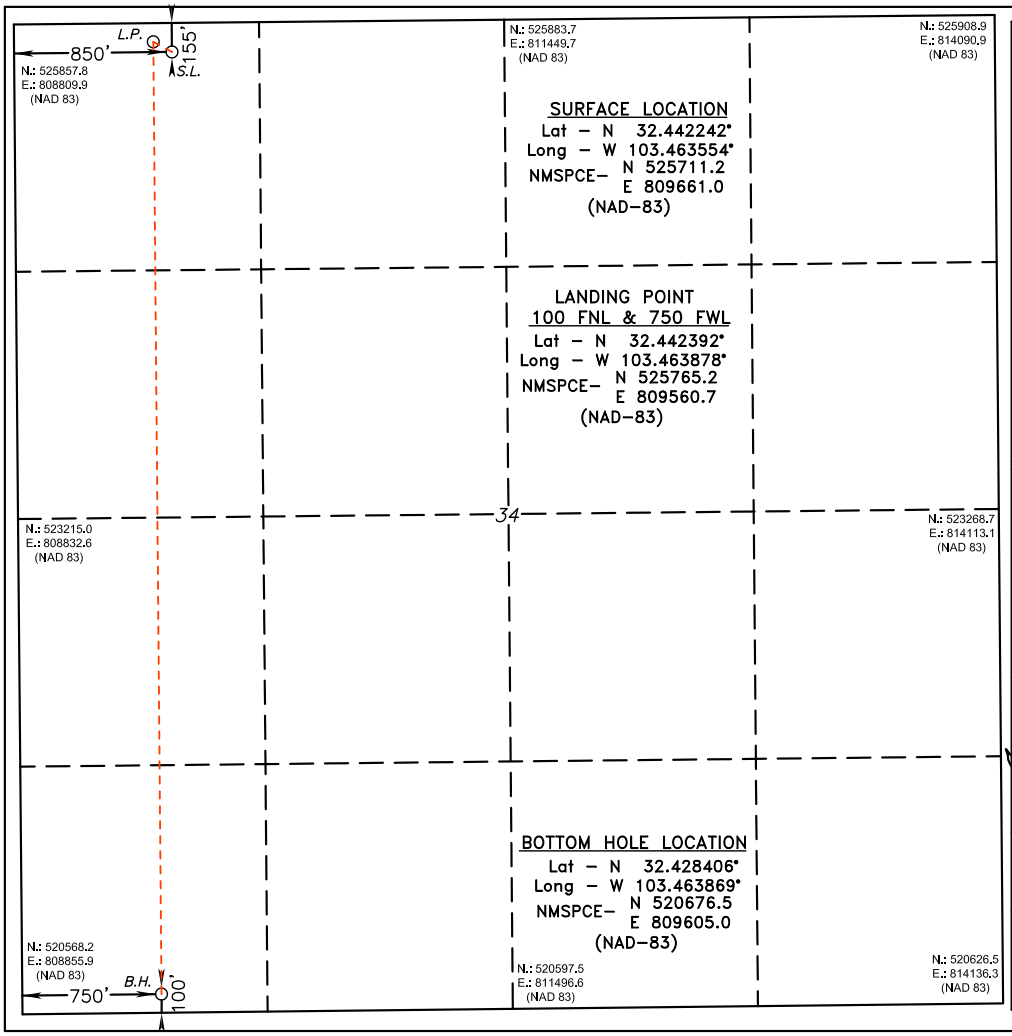
UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/South line	FEET from the	East/West line	County
D	34	21 S	34 E		155	NORTH	850	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	FEET from the	North/South line	FEET from the	East/West line	County
M	34	21 S	34 E		100	SOUTH	750	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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



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 11/19/19
Signature Date

JENNIFER ELROD
Printed Name

jelrod@chisholmenergy.com
Email Address

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 supervison, and that the same is true and correct to the best of my belief.

AUGUST 21, 2019
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary L. Jones 7977
BASIN SURVEYS

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'
WO Num.: 34819

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

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

Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

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Oil Conservation Division
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GAS CAPTURE PLAN

Date: 11/25/2019

☒ Original

☐ Amended - Reason for Amendment:

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

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
GRAMA RIDGE EAST 34 STATE COM 3BS #006H	30-025-46539	D-34-21S-34E	0155N 0850W	1200	Flared	FLARED ONLY IF NEEDED

Gathering System and Pipeline Notification

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

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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

Form APD Comments

Permit 274126

PERMIT COMMENTS

Operator Name and Address:	API Number:
CHISHOLM ENERGY OPERATING, LLC [372137] 801 Cherry Street Fort Worth, TX 76102	30-025-46539
	Well: GRAMA RIDGE EAST 34 STATE COM 3BS #006H

Created By	Comment	Comment Date

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

Form APD Conditions

Permit 274126

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
CHISHOLM ENERGY OPERATING, LLC [372137] 801 Cherry Street Fort Worth, TX 76102	30-025-46539
	Well: GRAMA RIDGE EAST 34 STATE COM 3BS #006H

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

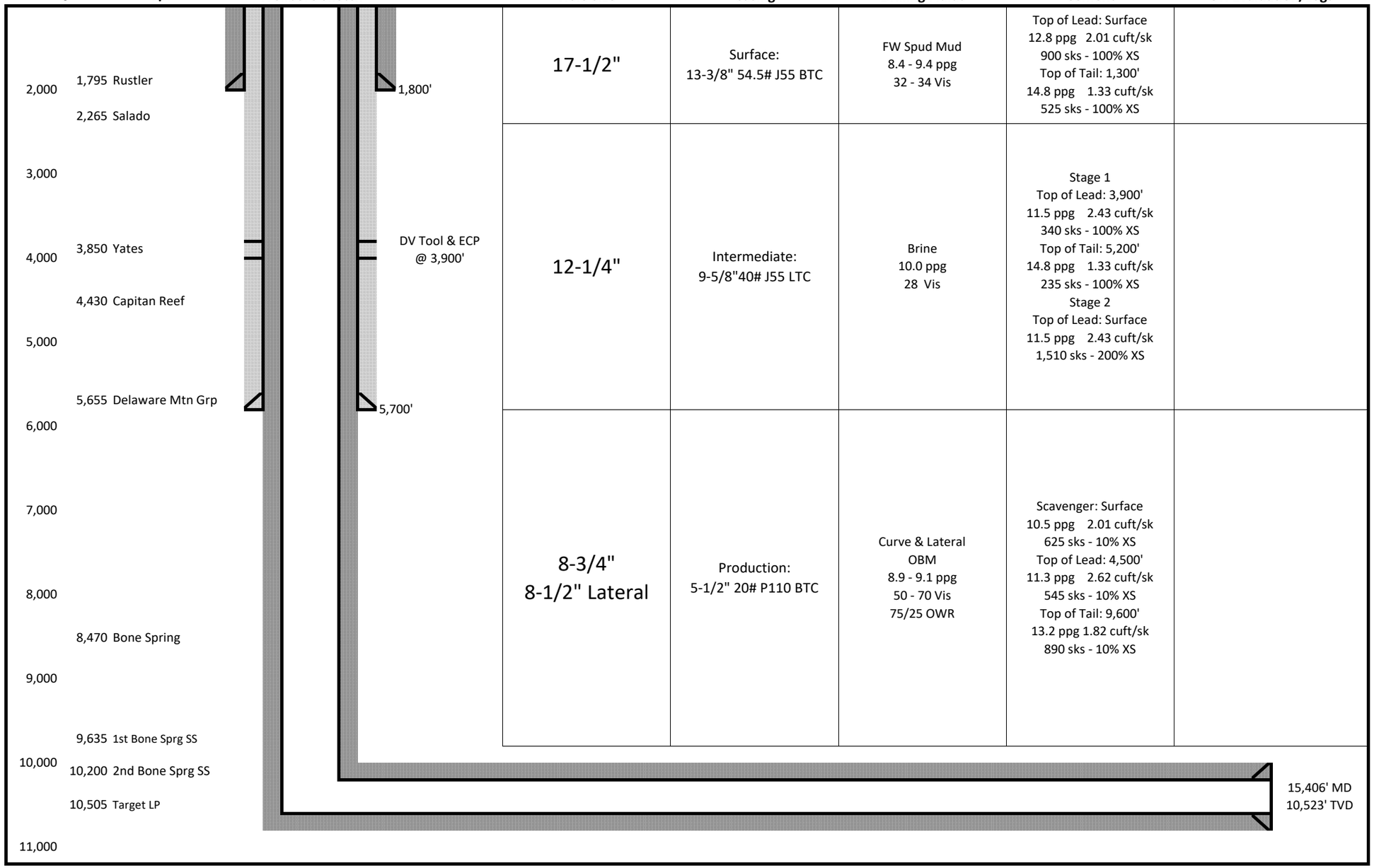
NTG NEW TECH GLOBAL
An Oil and Gas Consulting and Engineering Firm

Grama Ridge East 34 State Com 2BS 6H

API # 30-025-xxxxx

Updated: 11/15/2019

TVD ft-RKB	Geological Tops
1,795	Rustler
2,265	Salado
3,850	Yates
4,430	Capitan Reef
5,655	Delaware Mtn Grp
8,470	Bone Spring
9,635	1st Bone Sprg SS
10,200	2nd Bone Sprg SS
10,505	Target LP



Wellbore Sketch	Hole Size	Casing	Drilling Fluids	Cement	OH Evaluation/Logs
	17-1/2"	Surface: 13-3/8" 54.5# J55 BTC	FW Spud Mud 8.4 - 9.4 ppg 32 - 34 Vis	Top of Lead: Surface 12.8 ppg 2.01 cuft/sk 900 sks - 100% XS Top of Tail: 1,300' 14.8 ppg 1.33 cuft/sk 525 sks - 100% XS	
	12-1/4"	Intermediate: 9-5/8"40# J55 LTC	Brine 10.0 ppg 28 Vis	Stage 1 Top of Lead: 3,900' 11.5 ppg 2.43 cuft/sk 340 sks - 100% XS Top of Tail: 5,200' 14.8 ppg 1.33 cuft/sk 235 sks - 100% XS Stage 2 Top of Lead: Surface 11.5 ppg 2.43 cuft/sk 1,510 sks - 200% XS	
	8-3/4" 8-1/2" Lateral	Production: 5-1/2" 20# P110 BTC	Curve & Lateral OBM 8.9 - 9.1 ppg 50 - 70 Vis 75/25 OWR	Scavenger: Surface 10.5 ppg 2.01 cuft/sk 625 sks - 10% XS Top of Lead: 4,500' 11.3 ppg 2.62 cuft/sk 545 sks - 10% XS Top of Tail: 9,600' 13.2 ppg 1.82 cuft/sk 890 sks - 10% XS	

Schlumberger

JDC 7

Rev0

CHISHOLM ENERGY

BOREHOLE	WELL	FIELD	STRUCTURE
Grama Ridge East 34 State 2BS 6H	Grama Ridge East 34 State 2BS 6H	NM Lea County (NAD 83)	Chisholm Grama Ridge East 34 State 2BS 6H

Critical Point	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (deg/100ft)
SHL	0.00	0.00	315.72	0.00	0.00	0.00	0.00	
Nudge 1° DLS	1,500.00	0.00	315.72	1,500.00	0.00	0.00	0.00	0.00
Hold	2,099.84	6.00	315.72	2,098.74	-22.65	22.46	-21.90	1.00
13.375 in Casing	2,411.00	6.00	315.72	2,408.20	-46.12	45.74	-44.61	0.00
Drop 1° DLS	2,882.38	6.00	315.72	2,877.00	-81.69	81.00	-79.00	0.00
Hold	3,482.22	0.00	315.72	3,475.74	-104.33	103.46	-100.90	1.00
9.625 in Casing	9,511.00	0.00	315.72	9,504.53	-104.33	103.46	-100.90	0.00
KOP, Build 10° DLS	9,940.17	0.00	315.72	9,933.70	-104.33	103.46	-100.90	0.00
Landing Point	10,838.17	89.80	179.50	10,506.65	466.62	-467.48	-95.93	10.00
Chisholm Grama Ridge East 34 State 2BS 6H - BHL	15,405.65	89.80	179.50	10,522.57	5,034.07	-5,034.75	-56.00	0.00

GRAVITY & MAGNETICS PARAMETERS

Model	HDGM 2019 GARM	Dip	60.257°	Date	15-Oct-19	Lat	32°26'32.07"N	Northing	525,711.20 ftUS	Grid Conv	0.467°
MagDec	6.585°	FS	47,997.818nT	Gravity FS	998.474mgn (9.80665 Based)	Lon	103°27'48.79"W	Easting	809,661.00 ftUS	Scale Fact	0.99999155

SURFACE LOCATION NAD83 New Mexico State Plane, Eastern Zone, US Feet

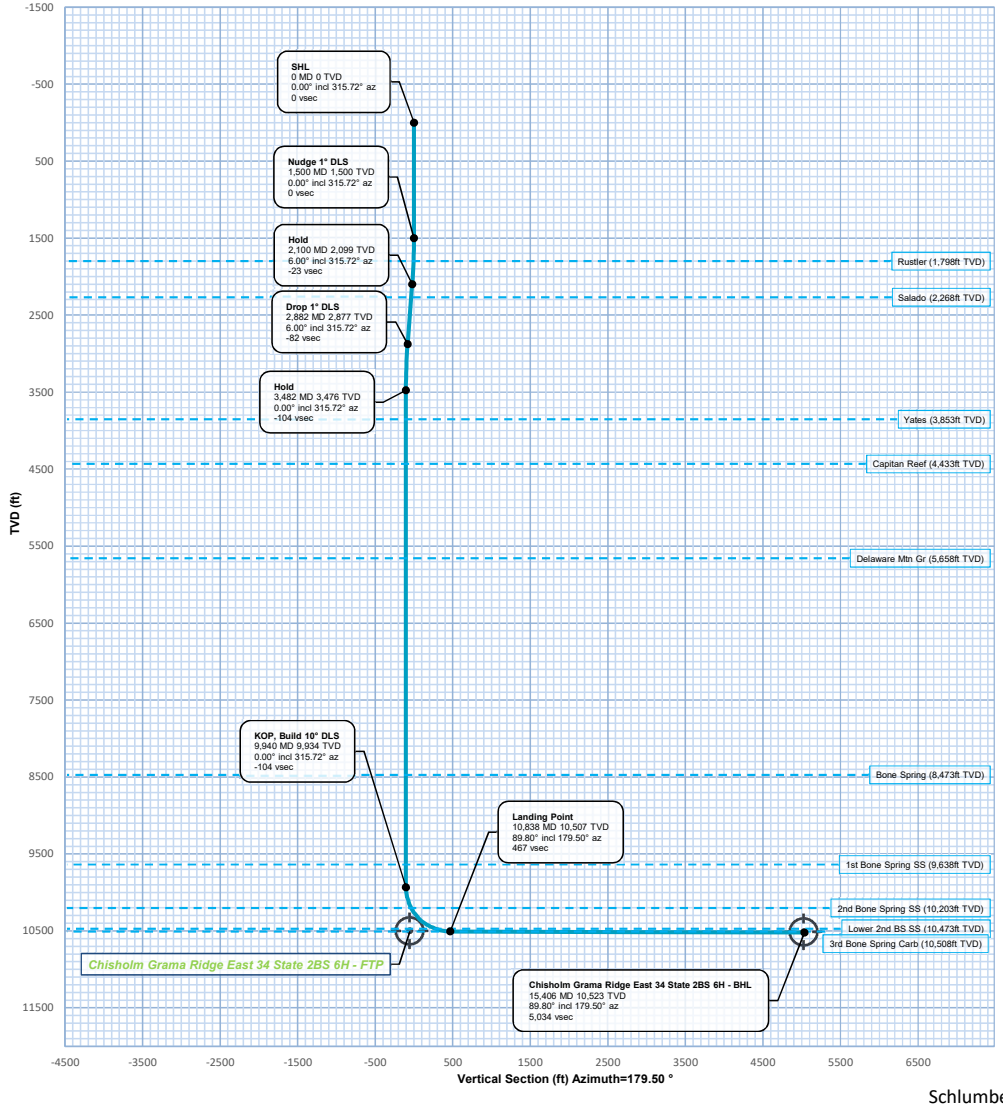
MISCELLANEOUS

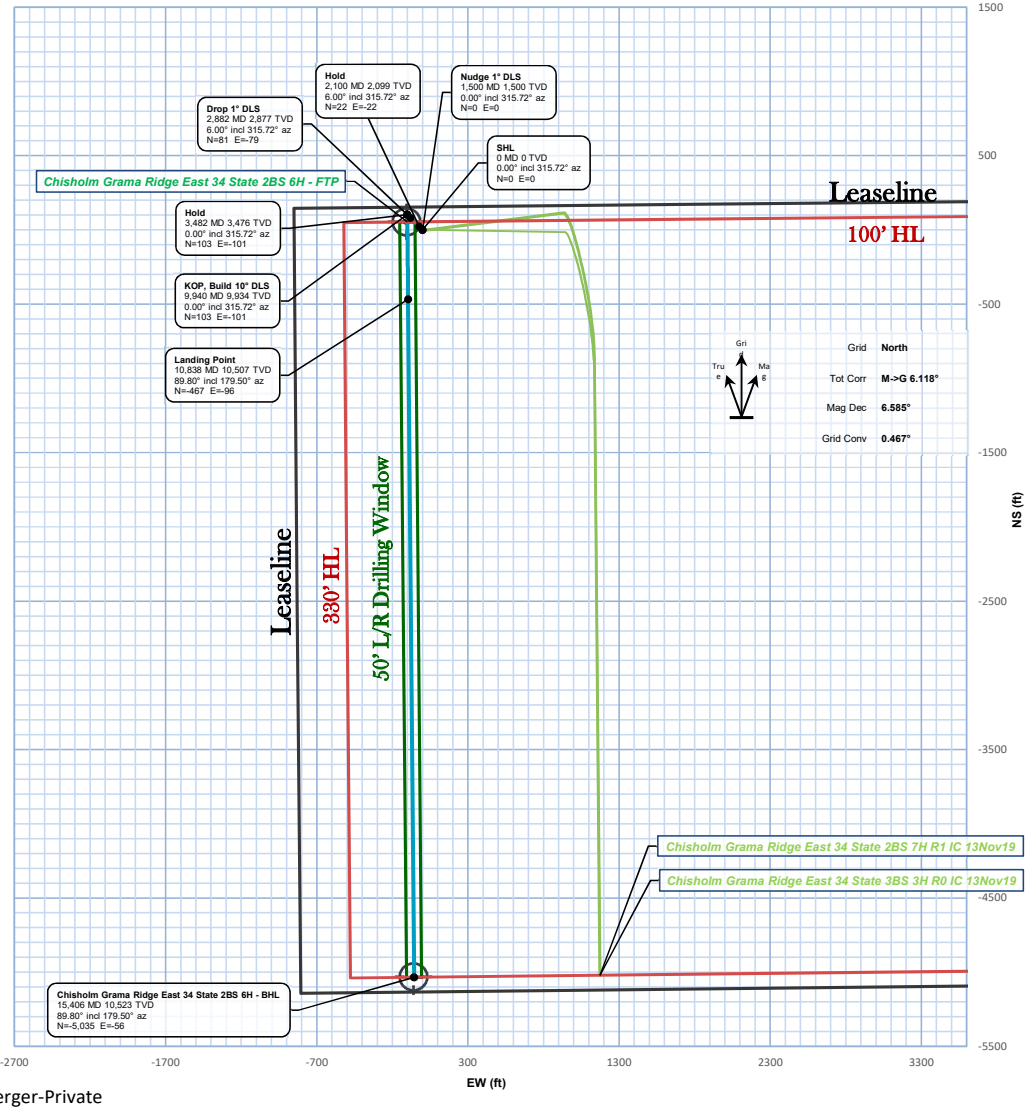
Slot

TVD Reference RKB (3743.000 ft above MSL)

Plan Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19

Seabed / Ground Elevation 3712.000 ft above MSL





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Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19 Proposal
Geodetic Report
Def Plan

CHISHOLM ENERGY

Report Date:	November 01, 2019 - 03:36 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.500 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Grama Ridge East 34 State 2BS 6H	**TVD Reference Datum:**	RKB
Well:	Grama Ridge East 34 State 2BS 6H	**TVD Reference Elevation:**	3743.000 ft above MSL
Borehole:	Grama Ridge East 34 State 2BS 6H	**Seabed / Ground Elevation:**	3712.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.585°
Survey Name:	Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19	**Total Gravity Field Strength:**	998.4735mgn (9.80665 Based)
Survey Date:	November 01, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	101.801 ° / 5282.922 ft / 5.896 / 0.502	**Total Magnetic Field Strength:**	47997.818 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.257°
Location Lat / Long:	32°28'32.07026"N , 103°27'48.75303"W	**Declination Date:**	October 15, 2019
Location Grid N/E Y/X:	N 525711.200 ftUS , E 809661.000 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.4695°	**North Reference:**	Grid North
Grid Scale Factor:	0.999991555	**Grid Convergence Used:**	0.4695°
Version / Patch:	2019.3.0.2	**Total Corr Mag North->Grid**	6.1183°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL	0.00	0.00	315.72	0.00	-3,743.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46			
Nudge 1° DLS	1,500.00	0.00	315.72	1,500.00	-2,243.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
Hold	2,099.84	6.00	315.72	2,098.74	-1,644.26	-22.65	22.46	-21.90	525,733.66	809,639.10	32.44	-103.46	1.00	1.00	0.00
Drop 1° DLS	2,882.38	6.00	315.72	2,877.00	-866.00	-81.69	81.00	-79.00	525,792.20	809,582.00	32.44	-103.46	0.00	0.00	0.00
Hold	3,482.22	0.00	315.72	3,475.74	-267.26	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	1.00	-1.00	0.00
KOP, Build 10° DLS	9,940.17	0.00	315.72	9,933.70	6,190.70	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
Landing Point	10,838.17	89.80	179.50	10,506.65	6,763.65	466.62	-467.48	-95.93	525,243.73	809,565.07	32.44	-103.46	10.00	10.00	0.00
Chisholm Grama Ridge East 34 :	15,405.65	89.80	179.50	10,522.57	6,779.57	5,034.07	-5,034.75	-56.00	520,678.50	809,605.00	32.43	-103.46	0.00	0.00	0.00

Survey Type: Def Plan

Survey Error Model: ISCWSA0 3 - D 95 % 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	1,500.000	1/100.000	17.500		NAL	MWD 1.0 DEG	Grama Ridge East 34 State 2BS
	1	1,500.000	9,940.170	1/100.000	12.250		NAL	MWD 1.0 DEG	Grama Ridge East 34 State 2BS
	1	9,940.170	10,838.170	1/100.000	8.750		NAL	MWD_1.0_DEG	Grama Ridge East 34 State 2BS
	1	10,838.170	15,405.651	1/100.000	8.500		NAL	MWD 1.0 DEG	Grama Ridge East 34 State 2BS

Schlumberger

Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19 Proposal
Geodetic Report
Def Plan

Report Date:	November 01, 2019 - 03:36 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.500 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Grama Ridge East 34 State 2BS 6H	**TVD Reference Datum:**	RKB
Well:	Grama Ridge East 34 State 2BS 6H	**TVD Reference Elevation:**	3743.000 ft above MSL
Borehole:	Grama Ridge East 34 State 2BS 6H	**Seabed / Ground Elevation:**	3712.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.585°
Survey Name:	Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19	**Total Gravity Field Strength:**	998.4736mgn (9.80665 Based)
Survey Date:	November 01, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	101.801 ° / 5282.922 ft / 5.896 / 0.502	**Total Magnetic Field Strength:**	47997.818 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.257°
Location Lat / Long:	32°26'32.07036"N , 103°27'48.79393"W	**Declination Date:**	October 15, 2019
Location Grid N/E Y/X:	N 525711.200 ftUS , E 809661.000 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.4666°	**North Reference:**	Grid North
Grid Scale Factor:	0.99999155	**Grid Convergence Used:**	0.4666°
Version / Patch:	2019.3.0.2	**Total Corr Mag North->Grid**	6.1183°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	AHD (ft)	NS (ft)	EW (ft)	DeltaMD (ft)	DeltaTVD (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	GTF (°)	MTF (°)	TF (°)	Northing (ftUS)	Easting (ftUS)	Latitude (° ' ")	Longitude (° ' ")	Latitude (°)	Longitude (°)	Closure (ft)	Closure Azimuth (°)	Directional Difficulty Index	Tortuosity (°)	ERD Ratio
SHL	0.00	0.00	315.72	0.00	-3,743.00	0.00	0.00	0.00	0.00						HS	315.72	315.72M	525,711.20	809,661.00	26°32.070359"N	7°48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
Nudge 1° DLS	1,500.00	0.00	315.72	1,500.00	-2,243.00	0.00	0.00	0.00	0.00	1,500.00	1,500.00	0.00	0.00	0.00	HS	315.72	315.72M	525,711.20	809,661.00	26°32.070359"N	7°48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
Rustler	1,798.13	2.98	315.72	1,798.00	-1,945.00	-5.60	7.75	5.55	-5.41	298.13	298.00	1.00	1.00	0.00	HS	315.72	315.72M	525,716.75	809,655.59	26°32.125726"N	7°48.856579"W	32.44	-103.46	7.75	315.72	1.36	2.98	0.00
Hold	2,099.84	6.00	315.72	2,098.74	-1,644.26	-22.65	31.37	22.46	-21.90	301.70	300.74	1.00	1.00	0.00	HS	315.72	315.72M	525,733.66	809,639.10	26°32.294329"N	7°49.047364"W	32.44	-103.46	31.37	315.72	2.27	6.00	0.01
Salado	2,270.03	6.00	315.72	2,268.00	-1,475.00	-35.49	49.16	35.19	-34.32	170.19	169.26	0.00	0.00	0.00	HS	315.72	315.72M	525,746.39	809,626.68	26°32.421307"N	7°49.191047"W	32.44	-103.46	49.16	315.72	2.47	6.00	0.02
13.375 in Casing	2,411.00	6.00	315.72	2,408.20	-1,334.80	-46.12	63.89	45.74	-44.61	140.97	140.20	0.00	0.00	0.00	HS	315.72	315.72M	525,756.94	809,616.39	26°32.526485"N	7°49.310063"W	32.44	-103.46	63.89	315.72	2.58	6.00	0.03
Drop 1° DLS	2,882.38	6.00	315.72	2,877.00	-866.00	-81.69	113.15	81.00	-79.00	471.38	468.80	0.00	0.00	0.00	LS	315.72	315.72M	525,792.20	809,582.00	26°32.878177"N	7°49.708024"W	32.44	-103.46	113.15	315.72	2.83	6.00	0.04
Hold	3,482.22	0.00	315.72	3,475.74	-267.26	-104.33	144.52	103.46	-100.90	599.84	598.74	1.00	-1.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
Yates	3,859.47	0.00	315.72	3,853.00	110.00	-104.33	144.52	103.46	-100.90	377.26	377.26	0.00	0.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
Capitan Reef	4,439.47	0.00	315.72	4,433.00	690.00	-104.33	144.52	103.46	-100.90	580.00	580.00	0.00	0.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
Delaware Mtn Gr	5,664.47	0.00	315.72	5,658.00	1,915.00	-104.33	144.52	103.46	-100.90	1,225.00	1,225.00	0.00	0.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
Bone Spring	8,479.47	0.00	315.72	8,473.00	4,730.00	-104.33	144.52	103.46	-100.90	2,815.00	2,815.00	0.00	0.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
9.625 in Casing	9,511.00	0.00	315.72	9,504.53	5,761.53	-104.33	144.52	103.46	-100.90	1,031.53	1,031.53	0.00	0.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
1st Bone Spring SS	9,644.47	0.00	315.72	9,638.00	5,895.00	-104.33	144.52	103.46	-100.90	133.47	133.47	0.00	0.00	0.00	HS	315.72	315.72M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
KOP, Build 10° DLS	9,940.17	0.00	315.72	9,933.70	6,190.70	-104.33	144.52	103.46	-100.90	295.70	295.70	0.00	0.00	0.00	HS	179.50	179.5M	525,814.66	809,560.10	26°33.102147"N	7°49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
2nd Bone Spring SS	10,220.53	28.04	179.50	10,203.00	6,460.00	-37.10	211.75	36.23	-100.32	280.35	269.30	10.00	10.00	0.00	HS	179.50	HS	525,747.43	809,560.68	26°32.436895"N	7°49.961018"W	32.44	-103.46	106.66	289.86	3.93	40.03	0.02
Lower 2nd BS SS	10,642.81	70.26	179.50	10,473.00	6,730.00	275.14	523.99	-276.00	-97.60	422.28	270.00	10.00	10.00	0.00	HS	179.50	HS	525,435.20	809,563.40	26°29.347331"N	7°49.958962"W	32.44	-103.46	292.75	199.47	4.64	82.26	0.05
Landing Point	10,838.17	89.80	179.50	10,506.65	6,763.65	466.62	715.47	-467.48	-95.93	195.36	33.65	10.00	10.00	0.00	HS	179.50	HS	525,243.73	809,565.07	26°27.452632"N	7°49.957700"W	32.44	-103.46	477.22	191.60	4.88	101.80	0.07
3rd Bone Spring Carb	11,223.74	89.80	179.50	10,508.00	6,765.00	852.19	1,101.04	-853.03	-92.58	385.57	1.35	0.00	0.00	0.00	81.55L	179.50	81.55L	524,858.18	809,568.43	26°23.637553"N	7°49.955145"W	32.44	-103.46	858.04	186.19	5.08	101.80	0.10
Chisholm Grama Ridge East 34	15,405.65	89.80	179.50	10,522.57	6,779.57	5,034.07	5,282.92	-5,034.75	-56.00	4,181.91	14.57	0.00	0.00	0.00				520,676.50	809,605.00	25°42.258580"N	7°49.925538"W	32.43	-103.46	5,035.06	180.64	5.90	101.80	0.50

Survey Type: Def Plan

Survey Error Model: ISCWSA0 3 - D 95 % 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	1,500.000	1/100.000	17.500			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B
	1	1,500.000	9,940.170	1/100.000	12.250			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B
	1	9,940.170	10,838.170	1/100.000	8.750			NAL_MWD 1.0 DEG	Grama Ridge East 34 State 2B
	1	10,838.170	15,405.651	1/100.000	8.500			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B

Schlumberger

Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19 Proposal
Geodetic Report
Def Plan

CHISHOLM ENERGY

Report Date:	November 01, 2019 - 03:37 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.500 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Grama Ridge East 34 State 2BS 6H	**TVD Reference Datum:**	RKB
Well:	Grama Ridge East 34 State 2BS 6H	**TVD Reference Elevation:**	3743.000 ft above MSL
Borehole:	Grama Ridge East 34 State 2BS 6H	**Seabed / Ground Elevation:**	3712.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.585°
Survey Name:	Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19	**Total Gravity Field Strength:**	998.4736mgn (9.80665 Based)
Survey Date:	November 01, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	101.801 ° / 5282.922 ft / 5.896 / 0.502	**Total Magnetic Field Strength:**	47997.818 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.257°
Location Lat / Long:	32°26'32.07036"N , 103°27'48.79393"W	**Declination Date:**	October 15, 2019
Location Grid N/E Y/X:	N 525711.200 ftUS , E 809661.000 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.4666°	**North Reference:**	Grid North
Grid Scale Factor:	0.99999155	**Grid Convergence Used:**	0.4666°
Version / Patch:	2019.3.0.2	**Total Corr Mag North->Grid**	6.1183°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
SHL	0.00	0.00	315.72	0.00	-3,743.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46			
	100.00	0.00	315.72	100.00	-3,643.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	200.00	0.00	315.72	200.00	-3,543.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	300.00	0.00	315.72	300.00	-3,443.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	400.00	0.00	315.72	400.00	-3,343.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	500.00	0.00	315.72	500.00	-3,243.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	600.00	0.00	315.72	600.00	-3,143.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	700.00	0.00	315.72	700.00	-3,043.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	800.00	0.00	315.72	800.00	-2,943.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	900.00	0.00	315.72	900.00	-2,843.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	1,000.00	0.00	315.72	1,000.00	-2,743.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	1,100.00	0.00	315.72	1,100.00	-2,643.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	1,200.00	0.00	315.72	1,200.00	-2,543.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	1,300.00	0.00	315.72	1,300.00	-2,443.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	1,400.00	0.00	315.72	1,400.00	-2,343.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
Nudge 1° DLS	1,500.00	0.00	315.72	1,500.00	-2,243.00	0.00	0.00	0.00	525,711.20	809,661.00	32.44	-103.46	0.00	0.00	0.00
	1,600.00	1.00	315.72	1,599.99	-2,143.01	-0.63	0.62	-0.61	525,711.82	809,660.39	32.44	-103.46	1.00	1.00	0.00
	1,700.00	2.00	315.72	1,699.96	-2,043.04	-2.52	2.50	-2.44	525,713.70	809,658.56	32.44	-103.46	1.00	1.00	0.00
Rustler	1,798.13	2.98	315.72	1,798.00	-1,945.00	-5.60	5.55	-5.41	525,716.75	809,655.59	32.44	-103.46	1.00	1.00	0.00
	1,800.00	3.00	315.72	1,799.86	-1,943.14	-5.67	5.62	-5.48	525,716.82	809,655.52	32.44	-103.46	1.00	1.00	0.00
	1,900.00	4.00	315.72	1,899.68	-1,843.32	-10.08	9.99	-9.74	525,721.19	809,651.26	32.44	-103.46	1.00	1.00	0.00
	2,000.00	5.00	315.72	1,999.37	-1,743.63	-15.74	15.61	-15.22	525,726.81	809,645.78	32.44	-103.46	1.00	1.00	0.00
Hold	2,099.84	6.00	315.72	2,098.74	-1,644.26	-22.65	22.46	-21.90	525,733.66	809,639.10	32.44	-103.46	1.00	1.00	0.00
	2,100.00	6.00	315.72	2,098.90	-1,644.10	-22.66	22.47	-21.91	525,733.67	809,639.09	32.44	-103.46	0.00	0.00	0.00
	2,200.00	6.00	315.72	2,198.36	-1,544.64	-30.20	29.95	-29.21	525,741.15	809,631.79	32.44	-103.46	0.00	0.00	0.00
Salado	2,270.03	6.00	315.72	2,268.00	-1,475.00	-35.49	35.19	-34.32	525,746.39	809,626.68	32.44	-103.46	0.00	0.00	0.00
	2,300.00	6.00	315.72	2,297.81	-1,445.19	-37.75	37.43	-36.51	525,748.63	809,624.49	32.44	-103.46	0.00	0.00	0.00
	2,400.00	6.00	315.72	2,397.26	-1,345.74	-45.29	44.91	-43.80	525,756.11	809,617.20	32.44	-103.46	0.00	0.00	0.00
	2,500.00	6.00	315.72	2,496.71	-1,246.29	-52.84	52.39	-51.10	525,763.59	809,609.90	32.44	-103.46	0.00	0.00	0.00
	2,600.00	6.00	315.72	2,596.17	-1,146.83	-60.38	59.88	-58.40	525,771.07	809,602.60	32.44	-103.46	0.00	0.00	0.00
	2,700.00	6.00	315.72	2,695.62	-1,047.38	-67.93	67.36	-65.69	525,778.56	809,595.31	32.44	-103.46	0.00	0.00	0.00
	2,800.00	6.00	315.72	2,795.07	-947.93	-75.47	74.84	-72.99	525,786.04	809,588.01	32.44	-103.46	0.00	0.00	0.00
Drop 1° DLS	2,882.38	6.00	315.72	2,877.00	-866.00	-81.69	81.00	-79.00	525,792.20	809,582.00	32.44	-103.46	0.00	0.00	0.00
	2,900.00	5.82	315.72	2,894.53	-848.47	-83.00	82.30	-80.27	525,793.50	809,580.73	32.44	-103.46	1.00	-1.00	0.00
	3,000.00	4.82	315.72	2,994.09	-748.91	-89.69	88.94	-86.74	525,800.14	809,574.26	32.44	-103.46	1.00	-1.00	0.00
	3,100.00	3.82	315.72	3,093.81	-649.19	-95.13	94.33	-92.01	525,805.53	809,569.00	32.44	-103.46	1.00	-1.00	0.00
	3,200.00	2.82	315.72	3,193.64	-549.36	-99.32	98.48	-96.05	525,809.68	809,564.95	32.44	-103.46	1.00	-1.00	0.00
	3,300.00	1.82	315.72	3,293.56	-449.44	-102.24	101.38	-98.88	525,812.58	809,562.12	32.44	-103.46	1.00	-1.00	0.00
	3,400.00	0.82	315.72	3,393.53	-349.47	-103.91	103.04	-100.49	525,814.23	809,560.51	32.44	-103.46	1.00	-1.00	0.00
Hold	3,482.22	0.00	315.72	3,475.74	-267.26	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	1.00	-1.00	0.00
	3,500.00	0.00	315.72	3,493.53	-249.47	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	3,600.00	0.00	315.72	3,593.53	-149.47	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	3,700.00	0.00	315.72	3,693.53	-49.47	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	3,800.00	0.00	315.72	3,793.53	50.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
Yates	3,859.47	0.00	315.72	3,853.00	110.00	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	3,900.00	0.00	315.72	3,893.53	150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,000.00	0.00	315.72	3,993.53	250.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,100.00	0.00	315.72	4,093.53	350.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,200.00	0.00	315.72	4,193.53	450.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,300.00	0.00	315.72	4,293.53	550.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,400.00	0.00	315.72	4,393.53	650.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
Capitan Reef	4,439.47	0.00	315.72	4,433.00	690.00	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,500.00	0.00	315.72	4,493.53	750.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,600.00	0.00	315.72	4,593.53	850.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,700.00	0.00	315.72	4,693.53	950.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,800.00	0.00	315.72	4,793.53	1,050.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	4,900.00	0.00	315.72	4,893.53	1,150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,000.00	0.00	315.72	4,993.53	1,250.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,100.00	0.00	315.72	5,093.53	1,350.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,200.00	0.00	315.72	5,193.53	1,450.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,300.00	0.00	315.72	5,293.53	1,550.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,400.00	0.00	315.72	5,393.53	1,650.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,500.00	0.00	315.72	5,493.53	1,750.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,600.00	0.00	315.72	5,593.53	1,850.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
Delaware Mtn Gr	5,664.47	0.00	315.72	5,658.00	1,915.00	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,700.00	0.00	315.72	5,693.53	1,950.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,800.00	0.00	315.72	5,793.53	2,050.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	5,900.00	0.00	315.72	5,893.53	2,150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,000.00	0.00	315.72	5,993.53	2,250.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,100.00	0.00	315.72	6,093.53	2,350.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,200.00	0.00	315.72	6,193.53	2,450.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,300.00	0.00	315.72	6,293.53	2,550.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,400.00	0.00	315.72	6,393.53	2,650.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,500.00	0.00	315.72	6,493.53	2,750.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,600.00	0.00	315.72	6,593.53	2,850.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,700.00	0.00	315.72	6,693.53	2,950.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,800.00	0.00	315.72	6,793.53	3,050.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	6,900.00	0.00	315.72	6,893.53	3,150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,000.00	0.00	315.72	6,993.53	3,250.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,100.00	0.00	315.72	7,093.53	3,350.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,200.00	0.00	315.72	7,193.53	3,450.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,300.00	0.00	315.72	7,293.53	3,550.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,400.00	0.00	315.72	7,393.53	3,650.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,500.00	0.00	315.72	7,493.53	3,750.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,600.00	0.00	315.72	7,593.53	3,850.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,700.00	0.00	315.72	7,693.53	3,950.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,800.00	0.00	315.72	7,793.53	4,050.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	7,900.00	0.00	315.72	7,893.53	4,150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,000.00	0.00	315.72	7,993.53	4,250.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,100.00	0.00	315.72	8,093.53	4,350.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,200.00	0.00	315.72	8,193.53	4,450.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,300.00	0.00	315.72	8,293.53	4,550.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,400.00	0.00	315.72	8,393.53	4,650.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
Bone Spring	8,479.47	0.00	315.72	8,473.00	4,730.00	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,500.00	0.00	315.72	8,493.53	4,750.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,600.00	0.00	315.72	8,593.53	4,850.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,700.00	0.00	315.72	8,693.53	4,950.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,800.00	0.00	315.72	8,793.53	5,050.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	8,900.00	0.00	315.72	8,893.53	5,150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,000.00	0.00	315.72	8,993.53	5,250.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,100.00	0.00	315.72	9,093.53	5,350.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,200.00	0.00	315.72	9,193.53	5,450.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,300.00	0.00	315.72	9,293.53	5,550.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,400.00	0.00	315.72	9,393.53	5,650.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,500.00	0.00	315.72	9,493.53	5,750.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,600.00	0.00	315.72	9,593.53	5,850.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
1st Bone Spring SS	9,644.47	0.00	315.72	9,638.00	5,895.00	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,700.00	0.00	315.72	9,693.53	5,950.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,800.00	0.00	315.72	9,793.53	6,050.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	9,900.00	0.00	315.72	9,893.53	6,150.53	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
KOP, Build 10° DLS	9,940.17	0.00	315.72	9,933.70	6,190.70	-104.33	103.46	-100.90	525,814.66	809,560.10	32.44	-103.46	0.00	0.00	0.00
	10,000.00	5.98	179.50	9,993.42	6,250.42	-101.21	100.34	-100.88	525,811.54	809,560.13	32.44	-103.46	10.00	10.00	0.00
	10,100.00	15.98	179.50	10,091.46	6,348.46	-82.19	81.31	-100.71	525,792.51	809,560.29	32.44	-103.46	10.00	10.00	0.00
	10,200.00	25.98	179.50	10,184.71	6,441.71	-46.42	45.55	-100.40	525,756.75	809,560.60	32.44	-103.46	10.00	10.00	0.00
2nd Bone Spring SS	10,220.53	28.04	179.50	10,203.00	6,460.00	-37.10	36.23	-100.32	525,747.43	809,560.68	32.44	-103.46	10.00	10.00	0.00
	10,300.00	35.98	179.50	10,270.33	6,527.33	4.99	-5.86	-99.95	525,705.34	809,561.05	32.44	-103.46	10.00	10.00	0.00
	10,400.00	45.98	179.50	10,345.73	6,602.73	70.49	-71.36	-99.38	525,639.84	809,561.62	32.44	-103.46	10.00	10.00	0.00
	10,500.00	55.98	179.50	10,408.61	6,665.61	148.08	-148.95	-98.71	525,562.25	809,562.30	32.44	-103.46	10.00	10.00	0.00
	10,600.00	65.98	179.50	10,457.05	6,714.05	235.42	-236.28	-97.95	525,474.92	809,563.06	32.44	-103.46	10.00	10.00	0.00
Lower 2nd BS SS	10,642.81	70.26	179.50	10,473.00	6,730.00	275.14	-276.00	-97.60	525,435.20	809,563.40	32.44	-103.46	10.00	10.00	0.00
	10,700.00	75.98	179.50	10,489.60	6,746.60	329.84	-330.70	-97.12	525,380.50	809,563.88	32.44	-103.46	10.00	10.00	0.00
	10,800.00	85.98	179.50	10,505.25	6,762.25	428.48	-429.34	-96.26	525,281.87	809,564.74	32.44	-103.46	10.00	10.00	0.00
Landing Point	10,838.17	89.80	179.50	10,506.65	6,763.65	466.62	-467.48	-95.93	525,243.73	809,565.07	32.44	-103.46	10.00	10.00	0.00
	10,900.00	89.80	179.50	10,506.87	6,763.87	528.45	-529.30	-95.39	525,181.90	809,565.61	32.44	-103.46	0.00	0.00	0.00
	11,000.00	89.80	179.50	10,507.22	6,764.22	628.45	-629.30	-94.52	525,081.91	809,566.48	32.44	-103.46	0.00	0.00	0.00
	11,100.00	89.80	179.50	10,507.57	6,764.57	728.45	-729.29	-93.65	524,981.92	809,567.35	32.44	-103.46	0.00	0.00	0.00
	11,200.00	89.80	179.50	10,507.92	6,764.92	828.45	-829.29	-92.78	524,881.92	809,568.22	32.44	-103.46	0.00	0.00	0.00
3rd Bone Spring Carb	11,223.74	89.80	179.50	10,508.00	6,765.00	852.19	-853.03	-92.58	524,858.18	809,568.43	32.44	-103.46	0.00	0.00	0.00
	11,300.00	89.80	179.50	10,508.27	6,765.27	928.45	-929.28	-91.91	524,781.93	809,569.09	32.44	-103.46	0.00	0.00	0.00
	11,400.00	89.80	179.50	10,508.62	6,765.62	1,028.45	-1,029.28	-91.04	524,681.93	809,569.96	32.44	-103.46	0.00	0.00	0.00
	11,500.00	89.80	179.50	10,508.96	6,765.96	1,128.44	-1,129.27	-90.17	524,581.94	809,570.83	32.44	-103.46	0.00	0.00	0.00
	11,600.00	89.80	179.50	10,509.31	6,766.31	1,228.44	-1,229.27	-89.30	524,481.94	809,571.70	32.44	-103.46	0.00	0.00	0.00
	11,700.00	89.80	179.50	10,509.66	6,766.66	1,328.44	-1,329.27	-88.42	524,381.95	809,572.58	32.44	-103.46	0.00	0.00	0.00
	11,800.00	89.80	179.50	10,510.01	6,767.01	1,428.44	-1,429.26	-87.55	524,281.95	809,573.45	32.44	-103.46	0.00	0.00	0.00
	11,900.00	89.80	179.50	10,510.36	6,767.36	1,528.44	-1,529.26	-86.68	524,181.96	809,574.32	32.44	-103.46	0.00	0.00	0.00
	12,000.00	89.80	179.50	10,510.71	6,767.71	1,628.44	-1,629.25	-85.81	524,081.96	809,575.19	32.44	-103.46	0.00	0.00	0.00
	12,100.00	89.80	179.50	10,511.06	6,768.06	1,728.44	-1,729.25	-84.94	523,981.97	809,576.07	32.44	-103.46	0.00	0.00	0.00
	12,200.00	89.80	179.50	10,511.41	6,768.41	1,828.44	-1,829.24	-84.06	523,881.98	809,576.94	32.44	-103.46	0.00	0.00	0.00
	12,300.00	89.80	179.50	10,511.75	6,768.75	1,928.44	-1,929.24	-83.19	523,781.98	809,577.81	32.44	-103.46	0.00	0.00	0.00
	12,400.00	89.80	179.50	10,512.10	6,769.10	2,028.44	-2,029.24	-82.32	523,681.99	809,578.68	32.44	-103.46	0.00	0.00	0.00
	12,500.00	89.80	179.50	10,512.45	6,769.45	2,128.44	-2,129.23	-81.44	523,581.99	809,579.56	32.44	-103.46	0.00	0.00	0.00
	12,600.00	89.80	179.50	10,512.80	6,769.80	2,228.44	-2,229.23	-80.57	523,482.00	809,580.43	32.44	-103.46	0.00	0.00	0.00
	12,700.00	89.80	179.50	10,513.15	6,770.15	2,328.44	-2,329.22	-79.70	523,382.00	809,581.30	32.44	-103.46	0.00	0.00	0.00
	12,800.00	89.80	179.50	10,513.50	6,770.50	2,428.44	-2,429.22	-78.82	523,282.01	809,582.18	32.44	-103.46	0.00	0.00	0.00
	12,900.00	89.80	179.50	10,513.85	6,770.85	2,528.44	-2,529.21	-77.95	523,182.01	809,583.05	32.44	-103.46	0.00	0.00	0.00
	13,000.00	89.80	179.50	10,514.19	6,771.19	2,628.44	-2,629.21	-77.08	523,082.02	809,583.93	32.44	-103.46	0.00	0.00	0.00
	13,100.00	89.80	179.50	10,514.54	6,771.54	2,728.44	-2,729.20	-76.20	522,982.02	809,584.80	32.43	-103.46	0.00	0.00	0.00
	13,200.00	89.80	179.50	10,514.89	6,771.89	2,828.43	-2,829.20	-75.33	522,882.03	809,585.67	32.43	-103.46	0.00	0.00	0.00
	13,300.00	89.80	179.50	10,515.24	6,772.24	2,928.43	-2,929.20	-74.45	522,782.04	809,586.55	32.43	-103.46	0.00	0.00	0.00
	13,400.00	89.80	179.50	10,515.59	6,772.59	3,028.43	-3,029.19	-73.58	522,682.04	809,587.42	32.43	-103.46	0.00	0.00	0.00
	13,500.00	89.80	179.50	10,515.94	6,772.94	3,128.43	-3,129.19	-72.70	522,582.05	809,588.30	32.43	-103.46	0.00	0.00	0.00
	13,600.00	89.80	179.50	10,516.29	6,773.29	3,228.43	-3,229.18	-71.83	522,482.05	809,589.17	32.43	-103.46	0.00	0.00	0.00
	13,700.00	89.80	179.50	10,516.63	6,773.63	3,328.43	-3,329.18	-70.95	522,382.06	809,590.05	32.43	-103.46	0.00	0.00	0.00
	13,800.00	89.80	179.50	10,516.98	6,773.98	3,428.43	-3,429.17	-70.08	522,282.06	809,590.92	32.43	-103.46	0.00	0.00	0.00
	13,900.00	89.80	179.50	10,517.33	6,774.33	3,528.43	-3,529.17	-69.20	522,182.07	809,591.80	32.43	-103.46	0.00	0.00	0.00
	14,000.00	89.80	179.50	10,517.68	6,774.68	3,628.43	-3,629.16	-68.33	522,082.07	809,592.67	32.43	-103.46	0.00	0.00	0.00
	14,100.00	89.80	179.50	10,518.03	6,775.03	3,728.43	-3,729.16	-67.45	521,982.08	809,593.55	32.43	-103.46	0.00	0.00	0.00
	14,200.00	89.80	179.50	10,518.38	6,775.38	3,828.43	-3,829.16	-66.57	521,882.08	809,594.43	32.43	-103.46	0.00	0.00	0.00
	14,300.00	89.80	179.50	10,518.72	6,775.72	3,928.43	-3,929.15	-65.70	521,782.09	809,595.30	32.43	-103.46	0.00	0.00	0.00
	14,400.00	89.80	179.50	10,519.07	6,776.07	4,028.43	-4,029.15	-64.82	521,682.10	809,596.18	32.43	-103.46	0.00	0.00	0.00
	14,500.00	89.80	179.50	10,519.42	6,776.42	4,128.43	-4,129.14	-63.95	521,582.10	809,597.05	32.43	-103.46	0.00	0.00	0.00
	14,600.00	89.80	179.50	10,519.77	6,776.77	4,228.43	-4,229.14	-63.07	521,482.11	809,597.93	32.43	-103.46	0.00	0.00	0.00
	14,700.00	89.80	179.50	10,520.12	6,777.12	4,328.43	-4,329.13	-62.19	521,382.11	809,598.81	32.43	-103.46	0.00	0.00	0.00
	14,800.00	89.80	179.50	10,520.46	6,777.46	4,428.42	-4,429.13	-61.32	521,282.12	809,599.69	32.43	-103.46	0.00	0.00	0.00
	14,900.00	89.80	179.50	10,520.81	6,777.81	4,528.42	-4,529.12	-60.44	521,182.12	809,600.56	32.43	-103.46	0.00	0.00	0.00
	15,000.00	89.80	179.50	10,521.16	6,778.16	4,628.42	-4,629.12	-59.56	521,082.13	809,601.44	32.43	-103.46	0.00	0.00	0.00
	15,100.00	89.80	179.50	10,521.51	6,778.51	4,728.42	-4,729.12	-58.68	520,982.13	809,602.32	32.43	-103.46	0.00	0.00	0.00
	15,200.00	89.80	179.50	10,521.86	6,778.86	4,828.42	-4,829.11	-57.81	520,882.14	809,603.19	32.43	-103.46	0.00	0.00	0.00
	15,300.00	89.80	179.50	10,522.20	6,779.20	4,928.42	-4,929.11	-56.93	520,782.15	809,604.07	32.43	-103.46	0.00	0.00	0.00
	15,400.00	89.80	179.50	10,522.55	6,779.55	5,028.42	-5,029.10	-56.05	520,682.15	809,604.95	32.43	-103.46	0.00	0.00	0.00
Chisholm Grama Ridge East 34	15,405.65	89.80	179.50	10,522.57	6,779.57	5,034.07	-5,034.75	-56.00	520,676.50	809,605.00	32.43	-103.46	0.00	0.00	0.00

Survey Type: Def Plan

Survey Error Model: ISCWSA0 3 - D 95 % 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	1,500.000	1/100.000	17.500			NAL MWD 1.0 DEG	Grama Ridge East 34 State 2BS
	1	1,500.000	9,940.170	1/100.000	12.250			NAL MWD 1.0 DEG	Grama Ridge East 34 State 2BS
	1	9,940.170	10,838.170	1/100.000	8.750			NAL MWD 1.0 DEG	Grama Ridge East 34 State 2BS
	1	10,838.170	15,405.651	1/100.000	8.500			NAL MWD 1.0 DEG	Grama Ridge East 34 State 2BS

Schlumberger

Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19 Proposal
Geodetic Report
Def Plan

Report Date:	November 01, 2019 - 03:37 PM (UTC 0)	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Chisholm	**Vertical Section Azimuth:**	179.500 °(GRID North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Grama Ridge East 34 State 2BS 6H	**TVD Reference Datum:**	RKB
Well:	Grama Ridge East 34 State 2BS 6H	**TVD Reference Elevation:**	3743.000 ft above MSL
Borehole:	Grama Ridge East 34 State 2BS 6H	**Seabed / Ground Elevation:**	3712.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.585°
Survey Name:	Chisholm Grama Ridge East 34 State 2BS 6H R0 IC 01Nov19	**Total Gravity Field Strength:**	998.4736mgn (9.80665 Based)
Survey Date:	November 01, 2019	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	101.801 ° / 5282.922 ft / 5.896 / 0.502	**Total Magnetic Field Strength:**	47997.818 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.257°
Location Lat / Long:	32°26'32.07036"N , 103°27'48.79393"W	**Declination Date:**	October 15, 2019
Location Grid N/E Y/X:	N 525711.200 ftUS , E 809661.000 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.4666°	**North Reference:**	Grid North
Grid Scale Factor:	0.99999155	**Grid Convergence Used:**	0.4666°
Version / Patch:	2019.3.0.2	**Total Corr Mag North->Grid**	6.1183°
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	AHD (ft)	NS (ft)	EW (ft)	DeltaMD (ft)	DeltaTVD (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	GTF (°)	MTF (°)	TF (°)	Northing (ftUS)	Easting (ftUS)	Latitude (° ' ")	Longitude (° ' ")	Latitude (°)	Longitude (°)	Closure (ft)	Closure Azimuth (°)	Directional Difficulty Index	Tortuosity (°)	ERD Ratio
SHL	0.00	0.00	315.72	0.00	-3.743.00	0.00	0.00	0.00	0.00						HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46			0.00	0.00	0.00
	100.00	0.00	315.72	100.00	-3.643.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	200.00	0.00	315.72	200.00	-3.543.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	300.00	0.00	315.72	300.00	-3.443.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	400.00	0.00	315.72	400.00	-3.343.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	500.00	0.00	315.72	500.00	-3.243.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	600.00	0.00	315.72	600.00	-3.143.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	700.00	0.00	315.72	700.00	-3.043.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	800.00	0.00	315.72	800.00	-2.943.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	900.00	0.00	315.72	900.00	-2.843.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	1.000.00	0.00	315.72	1.000.00	-2.743.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	1.100.00	0.00	315.72	1.100.00	-2.643.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	1.200.00	0.00	315.72	1.200.00	-2.543.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	1.300.00	0.00	315.72	1.300.00	-2.443.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	1.400.00	0.00	315.72	1.400.00	-2.343.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
Nudge 1° DLS	1.500.00	0.00	315.72	1.500.00	-2.243.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.711.20	809.661.00	26'32.070359"N	7'48.793928"W	32.44	-103.46	0.00	0.00	0.00	0.00	0.00
	1.600.00	1.00	315.72	1.599.99	-2.143.01	-0.63	0.87	0.62	-0.61	100.00	99.99	1.00	1.00	0.00	HS	315.72	315.72M	525.711.82	809.660.39	26'32.076589"N	7'48.800978"W	32.44	-103.46	0.87	315.72	0.00	1.00	0.00
	1.700.00	2.00	315.72	1.699.96	-2.043.04	-2.52	3.49	2.50	-2.44	100.00	99.96	1.00	1.00	0.00	HS	315.72	315.72M	525.713.70	809.658.56	26'32.095278"N	7'48.822126"W	32.44	-103.46	3.49	315.72	0.84	2.00	0.00
Rustler	1.798.13	2.98	315.72	1.798.00	-1.945.00	-5.60	7.75	5.55	-5.41	98.13	98.04	1.00	1.00	0.00	HS	315.72	315.72M	525.716.75	809.655.59	26'32.125726"N	7'48.856579"W	32.44	-103.46	7.75	315.72	1.36	2.98	0.00
	1.800.00	3.00	315.72	1.799.86	-1.943.14	-5.67	7.85	5.62	-5.48	1.87	1.86	1.00	1.00	0.00	HS	315.72	315.72M	525.716.82	809.655.52	26'32.126421"N	7'48.857365"W	32.44	-103.46	7.85	315.72	1.37	3.00	0.00
	1.900.00	4.00	315.72	1.899.68	-1.843.32	-10.08	13.96	9.99	-9.74	100.00	99.81	1.00	1.00	0.00	HS	315.72	315.72M	525.721.19	809.651.26	26'32.170006"N	7'48.906685"W	32.44	-103.46	13.96	315.72	1.75	4.00	0.01
	2.000.00	5.00	315.72	1.999.37	-1.743.63	-15.74	21.80	15.61	-15.22	100.00	99.69	1.00	1.00	0.00	HS	315.72	315.72M	525.726.81	809.645.78	26'32.226022"N	7'48.970070"W	32.44	-103.46	21.80	315.72	2.04	5.00	0.01
Hold	2.099.84	6.00	315.72	2.098.74	-1.644.26	-22.65	31.37	22.46	-21.90	99.84	99.38	1.00	1.00	0.00	HS	315.72	315.72M	525.733.66	809.639.10	26'32.294329"N	7'49.047364"W	32.44	-103.46	31.37	315.72	2.27	6.00	0.01
	2.100.00	6.00	315.72	2.098.90	-1.644.10	-22.66	31.39	22.47	-21.91	0.16	0.16	0.00	0.00	0.00	HS	315.72	315.72M	525.733.67	809.639.09	26'32.294452"N	7'49.047502"W	32.44	-103.46	31.39	315.72	2.28	6.00	0.01
	2.200.00	6.00	315.72	2.198.36	-1.544.64	-30.20	41.84	29.95	-29.21	100.00	99.45	0.00	0.00	0.00	HS	315.72	315.72M	525.741.15	809.631.79	26'32.369061"N	7'49.131927"W	32.44	-103.46	41.84	315.72	2.40	6.00	0.02
Salado	2.270.03	6.00	315.72	2.268.00	-1.475.00	-35.49	49.16	35.19	-34.32	70.03	69.64	0.00	0.00	0.00	HS	315.72	315.72M	525.746.39	809.626.68	26'32.421307"N	7'49.191047"W	32.44	-103.46	49.16	315.72	2.47	6.00	0.02
	2.300.00	6.00	315.72	2.297.81	-1.445.19	-37.75	52.29	37.43	-36.51	29.97	29.81	0.00	0.00	0.00	HS	315.72	315.72M	525.748.63	809.624.49	26'32.443670"N	7'49.216351"W	32.44	-103.46	52.29	315.72	2.50	6.00	0.02
	2.400.00	6.00	315.72	2.397.26	-1.345.74	-45.29	62.74	44.91	-43.80	100.00	99.45	0.00	0.00	0.00	HS	315.72	315.72M	525.756.11	809.617.20	26'32.518278"N	7'49.300776"W	32.44	-103.46	62.74	315.72	2.58	6.00	0.03
13.375 in Casing	2.411.00	6.00	315.72	2.408.20	-1.334.80	-46.12	63.89	45.74	-44.61	11.00	10.94	0.00	0.00	0.00	HS	315.72	315.72M	525.756.94	809.616.39	26'32.526485"N	7'49.310063"W	32.44	-103.46	63.89	315.72	2.58	6.00	0.03
	2.500.00	6.00	315.72	2.496.71	-1.246.29	-52.84	73.19	52.39	-51.10	89.00	88.51	0.00	0.00	0.00	HS	315.72	315.72M	525.763.59	809.609.90	26'32.592887"N	7'49.385201"W	32.44	-103.46	73.19	315.72	2.64	6.00	0.03
	2.600.00	6.00	315.72	2.596.17	-1.146.83	-60.38	83.64	59.88	-58.40	100.00	99.45	0.00	0.00	0.00	HS	315.72	315.72M	525.771.07	809.602.60	26'32.667496"N	7'49.469625"W	32.44	-103.46	83.64	315.72	2.70	6.00	0.03
	2.700.00	6.00	315.72	2.695.62	-1.047.38	-67.93	94.09	67.36	-65.69	100.00	99.45	0.00	0.00	0.00	HS	315.72	315.72M	525.778.56	809.595.31	26'32.742105"N	7'49.554050"W	32.44	-103.46	94.09	315.72	2.75	6.00	0.03
	2.800.00	6.00	315.72	2.795.07	-947.93	-75.47	104.54	74.84	-72.99	100.00	99.45	0.00	0.00	0.00	HS	315.72	315.72M	525.786.04	809.588.01	26'32.816714"N	7'49.638475"W	32.44	-103.46	104.54	315.72	2.80	6.00	0.04
Drop 1° DLS	2.882.38	6.00	315.72	2.877.00	-866.00	-81.69	113.15	81.00	-79.00	82.38	81.93	0.00	0.00	0.00	LS	315.72	315.72M	525.792.20	809.582.00	26'32.878177"N	7'49.708024"W	32.44	-103.46	113.15	315.72	2.83	6.00	0.04
	2.900.00	5.82	315.72	2.894.53	-848.47	-83.00	114.96	82.30	-80.27	17.62	17.53	1.00	-1.00	0.00	LS	315.72	315.72M	525.793.50	809.580.73	26'32.891131"N	7'49.722682"W	32.44	-103.46	114.96	315.72	2.85	6.17	0.04
	3.000.00	4.82	315.72	2.994.09	-748.91	-89.69	124.24	88.94	-86.74	100.00	99.57	1.00	-1.00	0.00	LS	315.72	315.72M	525.800.14	809.574.26	26'32.957353"N	7'49.797618"W	32.44	-103.46	124.24	315.72	2.95	7.17	0.04
	3.100.00	3.82	315.72	3.093.81	-649.19	-95.13	131.77	94.33	-92.01	100.00	99.71	1.00	-1.00	0.00	LS	315.72	315.72M	525.805.53	809.569.00	26'33.011160"N	7'49.858503"W	32.44	-103.46	131.77	315.72	3.03	8.17	0.04
	3.200.00	2.82	315.72	3.193.64	-549.36	-99.32	137.57	98.48	-96.05	100.00	99.83	1.00	-1.00	0.00	LS	315.72	315.72M	525.809.68	809.564.95	26'33.052533"N	7'49.905320"W	32.44	-103.46	137.57	315.72	3.10	9.17	0.04
	3.300.00	1.82	315.72	3.293.56	-449.44	-102.24	141.62	101.38	-98.88	100.00	99.92	1.00	-1.00	0.00	LS	315.72	315.72M	525.812.58	809.562.12	26'33.081461"N	7'49.938054"W	32.44	-103.46	141.62	315.72	3.16	10.17	0.04
	3.400.00	0.82	315.72	3.393.53	-349.47	-103.91	143.93	103.04	-100.49	100.00	99.97	1.00	-1.00	0.00	LS	315.72	315.72M	525.814.23	809.560.51	26'33.097935"N	7'49.956695"W	32.44	-103.46	143.93	315.72	3.21	11.17	0.04
Hold	3.482.22	0.00	315.72	3.475.74	-267.26	-104.33	144.52	103.46	-100.90	82.22	82.21	1.00	-1.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	3.500.00	0.00	315.72	3.493.53	-249.47	-104.33	144.52	103.46	-100.90	17.78	17.78	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	3.600.00	0.00	315.72	3.593.53	-149.47	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	3.700.00	0.00	315.72	3.693.53	-49.47	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	3.800.00	0.00	315.72	3.793.53	50.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
Yates	3.859.47	0.00	315.72	3.853.00	110.00	-104.33	144.52	103.46	-100.90	59.47	59.47	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	3.900.00	0.00	315.72	3.893.53	150.53	-104.33	144.52	103.46	-100.90	40.53	40.53	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	4.000.00	0.00	315.72	3.993.53	250.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	4.100.00	0.00	315.72	4.093.53	350.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.04
	4.200.00	0.00	315.72	4.193.53	450.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.300.00	0.00	315.72	4.293.53	550.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.400.00	0.00	315.72	4.393.53	650.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
Capitan Reef	4.439.47	0.00	315.72	4.433.00	690.00	-104.33	144.52	103.46	-100.90	39.47	39.47	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.500.00	0.00	315.72	4.493.53	750.53	-104.33	144.52	103.46	-100.90	60.53	60.53	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.600.00	0.00	315.72	4.593.53	850.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.700.00	0.00	315.72	4.693.53	950.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.800.00	0.00	315.72	4.793.53	1.050.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	4.900.00	0.00	315.72	4.893.53	1.150.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.000.00	0.00	315.72	4.993.53	1.250.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.100.00	0.00	315.72	5.093.53	1.350.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.200.00	0.00	315.72	5.193.53	1.450.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.300.00	0.00	315.72	5.293.53	1.550.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.400.00	0.00	315.72	5.393.53	1.650.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.500.00	0.00	315.72	5.493.53	1.750.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.600.00	0.00	315.72	5.593.53	1.850.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
Delaware Mtn Gr	5.664.47	0.00	315.72	5.658.00	1.915.00	-104.33	144.52	103.46	-100.90	64.47	64.47	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.700.00	0.00	315.72	5.693.53	1.950.53	-104.33	144.52	103.46	-100.90	35.53	35.53	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.03
	5.800.00	0.00	315.72	5.793.53	2.050.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	5.900.00	0.00	315.72	5.893.53	2.150.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.000.00	0.00	315.72	5.993.53	2.250.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.100.00	0.00	315.72	6.093.53	2.350.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.200.00	0.00	315.72	6.193.53	2.450.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.300.00	0.00	315.72	6.293.53	2.550.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.400.00	0.00	315.72	6.393.53	2.650.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.500.00	0.00	315.72	6.493.53	2.750.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.600.00	0.00	315.72	6.593.53	2.850.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.700.00	0.00	315.72	6.693.53	2.950.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.800.00	0.00	315.72	6.793.53	3.050.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	6.900.00	0.00	315.72	6.893.53	3.150.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.000.00	0.00	315.72	6.993.53	3.250.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.100.00	0.00	315.72	7.093.53	3.350.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.200.00	0.00	315.72	7.193.53	3.450.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.300.00	0.00	315.72	7.293.53	3.550.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.400.00	0.00	315.72	7.393.53	3.650.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.500.00	0.00	315.72	7.493.53	3.750.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.600.00	0.00	315.72	7.593.53	3.850.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.700.00	0.00	315.72	7.693.53	3.950.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.800.00	0.00	315.72	7.793.53	4.050.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	7.900.00	0.00	315.72	7.893.53	4.150.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.000.00	0.00	315.72	7.993.53	4.250.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.100.00	0.00	315.72	8.093.53	4.350.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.200.00	0.00	315.72	8.193.53	4.450.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.300.00	0.00	315.72	8.293.53	4.550.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.400.00	0.00	315.72	8.393.53	4.650.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
Bone Spring	8.479.47	0.00	315.72	8.473.00	4.730.00	-104.33	144.52	103.46	-100.90	79.47	79.47	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.500.00	0.00	315.72	8.493.53	4.750.53	-104.33	144.52	103.46	-100.90	20.53	20.53	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.600.00	0.00	315.72	8.593.53	4.850.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	7'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	AHD (ft)	NS (ft)	EW (ft)	DeltaMD (ft)	DeltaTVD (ft)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)	GTF (°)	MTF (°)	TF (°)	Northing (ftUS)	Easting (ftUS)	Latitude (° ' ")	Longitude (° ' ")	Latitude (°)	Longitude (°)	Closure (ft)	Closure Azimuth (°)	Directional Difficulty Index	Tortuosity (°)	ERD Ratio
	8.700.00	0.00	315.72	8.693.53	4.950.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.800.00	0.00	315.72	8.793.53	5.050.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	8.900.00	0.00	315.72	8.893.53	5.150.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.000.00	0.00	315.72	8.993.53	5.250.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.100.00	0.00	315.72	9.093.53	5.350.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.200.00	0.00	315.72	9.193.53	5.450.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.300.00	0.00	315.72	9.293.53	5.550.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.400.00	0.00	315.72	9.393.53	5.650.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.500.00	0.00	315.72	9.493.53	5.750.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
9.625 in Casing	9.511.00	0.00	315.72	9.504.53	5.761.53	-104.33	144.52	103.46	-100.90	11.00	11.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
	9.600.00	0.00	315.72	9.593.53	5.850.53	-104.33	144.52	103.46	-100.90	89.00	89.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.02
1st Bone Spring SS	9.644.47	0.00	315.72	9.638.00	5.895.00	-104.33	144.52	103.46	-100.90	44.47	44.47	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
	9.700.00	0.00	315.72	9.693.53	5.950.53	-104.33	144.52	103.46	-100.90	55.53	55.53	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
	9.800.00	0.00	315.72	9.793.53	6.050.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
	9.900.00	0.00	315.72	9.893.53	6.150.53	-104.33	144.52	103.46	-100.90	100.00	100.00	0.00	0.00	0.00	HS	315.72	315.72M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
KOP. Build 10° DLS	9.940.17	0.00	315.72	9.933.70	6.190.70	-104.33	144.52	103.46	-100.90	40.17	40.17	0.00	0.00	0.00	HS	179.50	179.5M	525.814.66	809.560.10	26'33.102147"N	74'49.961461"W	32.44	-103.46	144.52	315.72	3.24	12.00	0.01
	10.000.00	5.98	179.50	9.993.42	6.250.42	-101.21	147.64	100.34	-100.88	59.83	59.72	10.00	10.00	0.00	HS	179.50	179.5M	525.811.54	809.560.13	26'33.071270"N	74'49.961440"W	32.44	-103.46	142.28	314.85	3.42	17.98	0.01
	10.100.00	15.98	179.50	10.091.46	6.348.46	-82.19	166.66	81.31	-100.71	100.00	98.04	10.00	10.00	0.00	HS	179.50	HS	525.792.51	809.560.29	26'32.883004"N	74'49.961315"W	32.44	-103.46	129.44	308.92	3.67	27.98	0.02
	10.200.00	25.98	179.50	10.184.71	6.441.71	-46.42	202.43	45.55	-100.40	100.00	93.25	10.00	10.00	0.00	HS	179.50	HS	525.756.75	809.560.60	26'32.529137"N	74'49.961080"W	32.44	-103.46	110.25	294.40	3.89	37.98	0.02
2nd Bone Spring SS	10.220.53	28.04	179.50	10.203.00	6.460.00	-37.10	211.75	36.23	-100.32	20.53	18.29	10.00	10.00	0.00	HS	179.50	HS	525.747.43	809.560.68	26'32.436895"N	74'49.961018"W	32.44	-103.46	106.66	289.86	3.93	40.03	0.02
	10.300.00	35.98	179.50	10.270.33	6.527.33	4.99	253.84	-5.86	-99.95	79.47	67.33	10.00	10.00	0.00	HS	179.50	HS	525.705.34	809.561.05	26'32.020422"N	74'49.960741"W	32.44	-103.46	100.12	266.64	4.09	47.98	0.02
	10.400.00	45.98	179.50	10.345.73	6.602.73	70.49	319.34	-71.36	-99.38	100.00	75.40	10.00	10.00	0.00	HS	179.50	HS	525.639.84	809.561.62	26'31.372316"N	74'49.960310"W	32.44	-103.46	122.35	234.32	4.27	57.98	0.03
	10.500.00	55.98	179.50	10.408.61	6.665.61	148.08	396.94	-148.95	-98.71	100.00	62.88	10.00	10.00	0.00	HS	179.50	HS	525.562.25	809.562.30	26'30.604511"N	74'49.959799"W	32.44	-103.46	178.69	213.53	4.43	67.98	0.04
	10.600.00	65.98	179.50	10.457.05	6.714.05	235.42	484.27	-236.28	-97.95	100.00	48.45	10.00	10.00	0.00	HS	179.50	HS	525.474.92	809.563.06	26'29.740336"N	74'49.959223"W	32.44	-103.46	255.78	202.52	4.58	77.98	0.05
Lower 2nd BS SS	10.642.81	70.26	179.50	10.473.00	6.730.00	275.14	523.99	-276.00	-97.60	42.81	15.95	10.00	10.00	0.00	HS	179.50	HS	525.435.20	809.563.40	26'29.347331"N	74'49.958962"W	32.44	-103.46	292.75	199.47	4.64	82.26	0.05
	10.700.00	75.98	179.50	10.489.60	6.746.60	329.84	578.69	-330.70	-97.12	57.19	16.60	10.00	10.00	0.00	HS	179.50	HS	525.380.50	809.563.88	26'28.806049"N	74'49.958601"W	32.44	-103.46	344.67	196.37	4.72	87.98	0.06
	10.800.00	85.98	179.50	10.505.25	6.762.25	428.48	677.33	-429.34	-96.26	100.00	15.65	10.00	10.00	0.00	HS	179.50	HS	525.281.87	809.564.74	26'27.830038"N	74'49.957952"W	32.44	-103.46	440.00	192.64	4.83	97.98	0.06
Landing Point	10.838.17	89.80	179.50	10.506.65	6.763.65	466.62	715.47	-467.48	-95.93	38.17	1.40	10.00	10.00	0.00	HS	179.50	HS	525.243.73	809.565.07	26'27.452632"N	74'49.957700"W	32.44	-103.46	477.22	191.60	4.88	101.80	0.07
	10.900.00	89.80	179.50	10.506.87	6.763.87	528.45	777.30	-529.30	-95.39	61.83	0.22	0.00	0.00	0.00	HS	179.50	HS	525.181.90	809.565.61	26'26.840887"N	74'49.957291"W	32.44	-103.46	537.83	190.22	4.91	101.80	0.07
	11.000.00	89.80	179.50	10.507.22	6.764.22	628.45	877.30	-629.30	-94.52	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	525.081.91	809.566.48	26'25.851412"N	74'49.956628"W	32.44	-103.46	636.36	188.54	4.97	101.80	0.08
	11.100.00	89.80	179.50	10.507.57	6.764.57	728.45	977.30	-729.29	-93.65	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.981.92	809.567.35	26'24.861938"N	74'49.955965"W	32.44	-103.46	735.28	187.32	5.02	101.80	0.09
	11.200.00	89.80	179.50	10.507.92	6.764.92	828.45	1.077.30	-829.29	-92.78	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.881.92	809.568.22	26'23.872463"N	74'49.955303"W	32.44	-103.46	834.46	186.38	5.07	101.80	0.10
3rd Bone Sorino Carb	11.223.74	89.80	179.50	10.508.00	6.765.00	852.19	1.101.04	-853.03	-92.58	23.74	0.08	0.00	0.00	0.00	HS	179.50	HS	524.858.18	809.568.43	26'23.637553"N	74'49.955145"W	32.44	-103.46	858.04	186.19	5.08	101.80	0.10
	11.300.00	89.80	179.50	10.508.27	6.765.27	928.45	1.177.30	-929.28	-91.91	76.26	0.27	0.00	0.00	0.00	HS	179.50	HS	524.781.93	809.569.09	26'22.882989"N	74'49.954637"W	32.44	-103.46	933.82	185.65	5.11	101.80	0.11
	11.400.00	89.80	179.50	10.508.62	6.765.62	1.028.45	1.277.30	-1.029.28	-91.04	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.681.93	809.569.96	26'21.893514"N	74'49.953968"W	32.44	-103.46	1.033.30	185.05	5.15	101.80	0.12
	11.500.00	89.80	179.50	10.508.96	6.765.96	1.128.44	1.377.30	-1.129.27	-90.17	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.581.94	809.570.83	26'20.904040"N	74'49.953297"W	32.44	-103.46	1.132.87	184.57	5.19	101.80	0.13
	11.600.00	89.80	179.50	10.509.31	6.766.31	1.228.44	1.477.29	-1.229.27	-89.30	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.481.94	809.571.70	26'19.914565"N	74'49.952624"W	32.44	-103.46	1.232.51	184.15	5.22	101.80	0.14
	11.700.00	89.80	179.50	10.509.66	6.766.66	1.328.44	1.577.29	-1.329.27	-88.42	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.381.95	809.572.58	26'18.925090"N	74'49.951949"W	32.44	-103.46	1.332.20	183.81	5.25	101.80	0.15
	11.800.00	89.80	179.50	10.510.01	6.767.01	1.428.44	1.677.29	-1.429.26	-87.55	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.281.95	809.573.45	26'17.935616"N	74'49.951272"W	32.44	-103.46	1.431.94	183.51	5.28	101.80	0.16
	11.900.00	89.80	179.50	10.510.36	6.767.36	1.528.44	1.777.29	-1.529.26	-86.68	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.181.96	809.574.32	26'16.946141"N	74'49.950593"W	32.44	-103.46	1.531.71	183.24	5.31	101.80	0.17
	12.000.00	89.80	179.50	10.510.71	6.767.71	1.628.44	1.877.29	-1.629.25	-85.81	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	524.081.96	809.575.19	26'15.956666"N	74'49.949912"W	32.44	-103.46	1.631.51	183.01	5.34	101.80	0.18
	12.100.00	89.80	179.50	10.511.06	6.768.06	1.728.44	1.977.29	-1.729.25	-84.94	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.981.97	809.576.07	26'14.967191"N	74'49.949229"W	32.44	-103.46	1.731.33	182.81	5.36	101.80	0.19
	12.200.00	89.80	179.50	10.511.41	6.768.41	1.828.44	2.077.29	-1.829.24	-84.06	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.881.98	809.576.94	26'13.977716"N	74'49.948544"W	32.44	-103.46	1.831.17	182.63	5.39	101.80	0.20
	12.300.00	89.80	179.50	10.511.75	6.768.75	1.928.44	2.177.29	-1.929.24	-83.19	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.781.98	809.577.81	26'12.988241"N	74'49.947857"W	32.44	-103.46	1.931.03	182.47	5.41	101.80	0.21
	12.400.00	89.80	179.50	10.512.10	6.769.10	2.028.44	2.277.29	-2.029.24	-82.32	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.681.99	809.578.68	26'11.998766"N	74'49.947168"W	32.44	-103.46	2.030.90	182.32	5.44	101.80	0.22
	12.500.00	89.80	179.50	10.512.45	6.769.45	2.128.44	2.377.29	-2.129.23	-81.44	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.581.99	809.579.56	26'11.009291"N	74'49.946478"W	32.44	-103.46	2.130.79	182.19	5.46	101.80	0.23
	12.600.00	89.80	179.50	10.512.80	6.769.80	2.228.44	2.477.29	-2.229.23	-80.57	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.482.00	809.580.43	26'10.019816"N	74'49.945785"W	32.44	-103.46	2.230.68	182.07	5.48	101.80	0.24
	12.700.00	89.80	179.50	10.513.15	6.770.15	2.328.44	2.577.29	-2.329.22	-79.70	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.382.00	809.581.30	26'9.030341"N	74'49.945090"W	32.44	-103.46	2.330.58	181.96	5.50	101.80	0.25
	12.800.00	89.80	179.50	10.513.50	6.770.50	2.428.44	2.677.29	-2.429.22	-78.82	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.282.01	809.582.18	26'8.040866"N	74'49.944393"W	32.44	-103.46	2.430.50	181.86	5.52	101.80	0.25
	12.900.00	89.80	179.50	10.513.85	6.770.85	2.528.44	2.777.29	-2.529.21	-77.95	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.182.01	809.583.05	26'7.051390"N	74'49.943694"W	32.44	-103.46	2.530.41	181.77	5.54	101.80	0.26
	13.000.00	89.80	179.50	10.514.19	6.771.19	2.628.44	2.877.29	-2.629.21	-77.08	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	523.082.02	809.583.93	26'6.061915"N	74'49.942994"W	32.44	-103.46	2.630.34	181.68	5.56	101.80	0.27
	13.100.00	89.80	179.50	10.514.54	6.771.54	2.728.44	2.977.29	-2.729.20	-76.20	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.982.02	809.584.80	26'5.072440"N	74'49.942291"W	32.43	-103.46	2.730.27	181.60	5.58	101.80	0.28
	13.200.00	89.80	179.50	10.514.89	6.771.89	2.828.43	3.077.28	-2.829.20	-75.33	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.882.03	809.585.67	26'4.082964"N	74'49.941586"W	32.43	-103.46	2.830.20	181.53	5.59	101.80	0.29
	13.300.00	89.80	179.50	10.515.24	6.772.24	2.928.43	3.177.28	-2.929.20	-74.45	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.782.04	809.586.55	26'3.093489"N	74'49.940879"W	32.43	-103.46	2.930.14	181.46	5.61	101.80	0.30
	13.400.00	89.80	179.50	10.515.59	6.772.59	3.028.43	3.277.28	-3.029.19	-73.58	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.682.04	809.587.42	26'2.104014"N	74'49.940171"W	32.43	-103.46	3.030.08	181.39	5.63	101.80	0.31
	13.500.00	89.80	179.50	10.515.94	6.772.94	3.128.43	3.377.28	-3.129.19	-72.70	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.582.05	809.588.30	26'1.114538"N	74'49.939460"W	32.43	-103.46	3.130.03	181.33	5.64	101.80	0.32
	13.600.00	89.80	179.50	10.516.29	6.773.29	3.228.43	3.477.28	-3.229.18	-71.83	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.482.05	809.589.17	26'0.125063"N	74'49.938747"W	32.43	-103.46	3.229.98	181.27	5.66	101.80	0.33
	13.700.00	89.80	179.50	10.516.63	6.773.63	3.328.43	3.577.28	-3.329.18	-70.95	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.382.06	809.590.05	25'59.135587"N	74'49.938033"W	32.43	-103.46	3.329.93	181.22	5.68	101.80	0.34
	13.800.00	89.80	179.50	10.516.98	6.773.98	3.428.43	3.677.28	-3.429.17	-70.08	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.282.06	809.590.92	25'58.146111"N	74'49.937316"W	32.43	-103.46	3.429.89	181.17	5.69	101.80	0.35
	13.900.00	89.80	179.50	10.517.33	6.774.33	3.528.43	3.777.28	-3.529.17	-69.20	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.182.07	809.591.80	25'57.156636"N	74'49.936598"W	32.43	-103.46	3.529.85	181.12	5.71	101.80	0.36
	14.000.00	89.80	179.50	10.517.68	6.774.68	3.628.43	3.877.28	-3.629.16	-68.33	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	522.082.07	809.592.67	25'56.167160"N	74'49.935877"W	32.43	-103.46	3.629.81	181.08	5.72	101.80	0.37
	14.100.00	89.80	179.50	10.518.03	6.775.03	3.728.43	3.977.28	-3.729.16	-67.45	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.982.08	809.593.55	25'55.177684"N	74'49.935154"W	32.43	-103.46	3.729.77	181.04	5.73	101.80	0.38
	14.200.00	89.80	179.50	10.518.38	6.775.38	3.828.43	4.077.28	-3.829.16	-66.57	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.882.08	809.594.43	25'54.188209"N	74'49.934430"W	32.43	-103.46	3.829.73	181.00	5.75	101.80	0.39
	14.300.00	89.80	179.50	10.518.72	6.775.72	3.928.43	4.177.28	-3.929.15	-65.70	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.782.09	809.595.30	25'53.198733"N	74'49.933703"W	32.43	-103.46	3.929.70	180.96	5.76	101.80	0.40
	14.400.00	89.80	179.50	10.519.07	6.776.07	4.028.43	4.277.28	-4.029.15	-64.82	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.682.10	809.596.18	25'52.209257"N	74'49.932975"W	32.43	-103.46	4.029.67	180.92	5.78	101.80	0.41
	14.500.00	89.80	179.50	10.519.42	6.776.42	4.128.43	4.377.28	-4.129.14	-63.95	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.582.10	809.597.05	25'51.219781"N	74'49.932244"W	32.43	-103.46	4.129.64	180.89	5.79	101.80	0.42
	14.600.00	89.80	179.50	10.519.77	6.776.77	4.228.43	4.477.28	-4.229.14	-63.07	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.482.11	809.597.93	25'50.230305"N	74'49.931512"W	32.43	-103.46	4.229.61	180.85	5.80	101.80	0.43
	14.700.00	89.80	179.50	10.520.12	6.777.12	4.328.43	4.577.28	-4.329.13	-62.19	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.382.11	809.598.81	25'49.240829"N	74'49.930777"W	32.43	-103.46	4.329.58	180.82	5.81	101.80	0.44
	14.800.00	89.80	179.50	10.520.46	6.777.46	4.428.42	4.677.27	-4.429.13	-61.32	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.282.12	809.599.69	25'48.251353"N	74'49.930041"W	32.43	-103.46	4.429.55	180.79	5.83	101.80	0.44
	14.900.00	89.80	179.50	10.520.81	6.777.81	4.528.42	4.777.27	-4.529.12	-60.44	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.182.12	809.600.56	25'47.261877"N	74'49.929302"W	32.43	-103.46	4.529.53	180.76	5.84	101.80	0.45
	15.000.00	89.80	179.50	10.521.16	6.778.16	4.628.42	4.877.27	-4.629.12	-59.56	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	521.082.13	809.601.44	25'46.272401"N	74'49.928562"W	32.43	-103.46	4.629.50	180.74	5.85	101.80	0.46
	15.100.00	89.80	179.50	10.521.51	6.778.51	4.728.42	4.977.27	-4.729.12	-58.68	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	520.982.13	809.602.32	25'45.282925"N	74'49.927819"W	32.43	-103.46	4.729.48	180.71	5.86	101.80	0.47
	15.200.00	89.80	179.50	10.521.86	6.778.86	4.828.42	5.077.27	-4.829.11	-57.81	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	520.882.14	809.603.19	25'44.293448"N	74'49.927075"W	32.43	-103.46	4.829.46	180.69	5.87	101.80	0.48
	15.300.00	89.80	179.50	10.522.20	6.779.20	4.928.42	5.177.27	-4.929.11	-56.93	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	520.782.15	809.604.07	25'43.303972"N	74'49.926328"W	32.43	-103.46	4.929.43	180.66	5.88	101.80	0.49
	15.400.00	89.80	179.50	10.522.55	6.779.55	5.028.42	5.277.27	-5.029.10	-56.05	100.00	0.35	0.00	0.00	0.00	HS	179.50	HS	520.682.15	809.604.95	25'42.314496"N	74'49.925580"W	32.43	-103.46	5.029.41	180.64	5.90	101.80	0.50
Chisholm Grama Ridge East 34	15.405.65	89.80	179.50	10.522.57	6.779.57	5.034.07	5.282.92	-5.034.75	-56.00	5.65	0.02	0.00	0.00	0.00				520.676.50	809.605.00	25'42.258580"N	74'49.925538"W	32.43	-103.46	5.035.06	180.64	5.90	101.80	0.50

Survey Type: Def Plan

Survey Error Model: ISCWSA0 3 - D 95 % 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	1,500.000	1/100.000	17.500			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B!
	1	1,500.000	9,940.170	1/100.000	12.250			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B!
	1	9,940.170	10,838.170	1/100.000	8.750			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B!
	1	10,838.170	15,405.651	1/100.000	8.500			NAL_MWD_1.0_DEG	Grama Ridge East 34 State 2B!