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

State of New Mexico
Energy, Minerals and Natural Resources

Rcvd 4/24/2020 - NMOCD

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-46614
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Chimichangas 12 State Com
8. Well Number 601H
9. OGRID Number 372165
10. Pool name or Wildcat
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3590 GR

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator Centennial Resource Production, LLC	
3. Address of Operator 1001 17th Street, suite 1800, Denver, CO 80202	
4. Well Location Unit Letter B : 630 feet from the North line and 1350 feet from the East line Section 12 Township 22S Range 34E NMPM County Lea	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3590 GR	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☒	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Centennial Resource Production, LLC respectfully requests to TA this well due to economic hardship.

We have drilled this well to TD and shut in. There are no perforations.

Please see attached TA procedure.

Condition of Approval:
Notify OCD Hobbs Office
24 Hours prior of running
MIT Test & Chart

Spud Date:

3/18/2020

Rig Release Date:

4/13/2020

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE K. Schlichting TITLE Sr. Regulatory Analyst DATE 04/24/2020

Type or print name Kanicia Schlichting E-mail address: kanicia.schlichting@cdevinc.com PHONE: 720-499-1537

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Accepted - NMOCD

Chimichangas 12 State Com 601H – T A Procedure

Well Chronology

Please review the Wellbore diagram on the following pages.

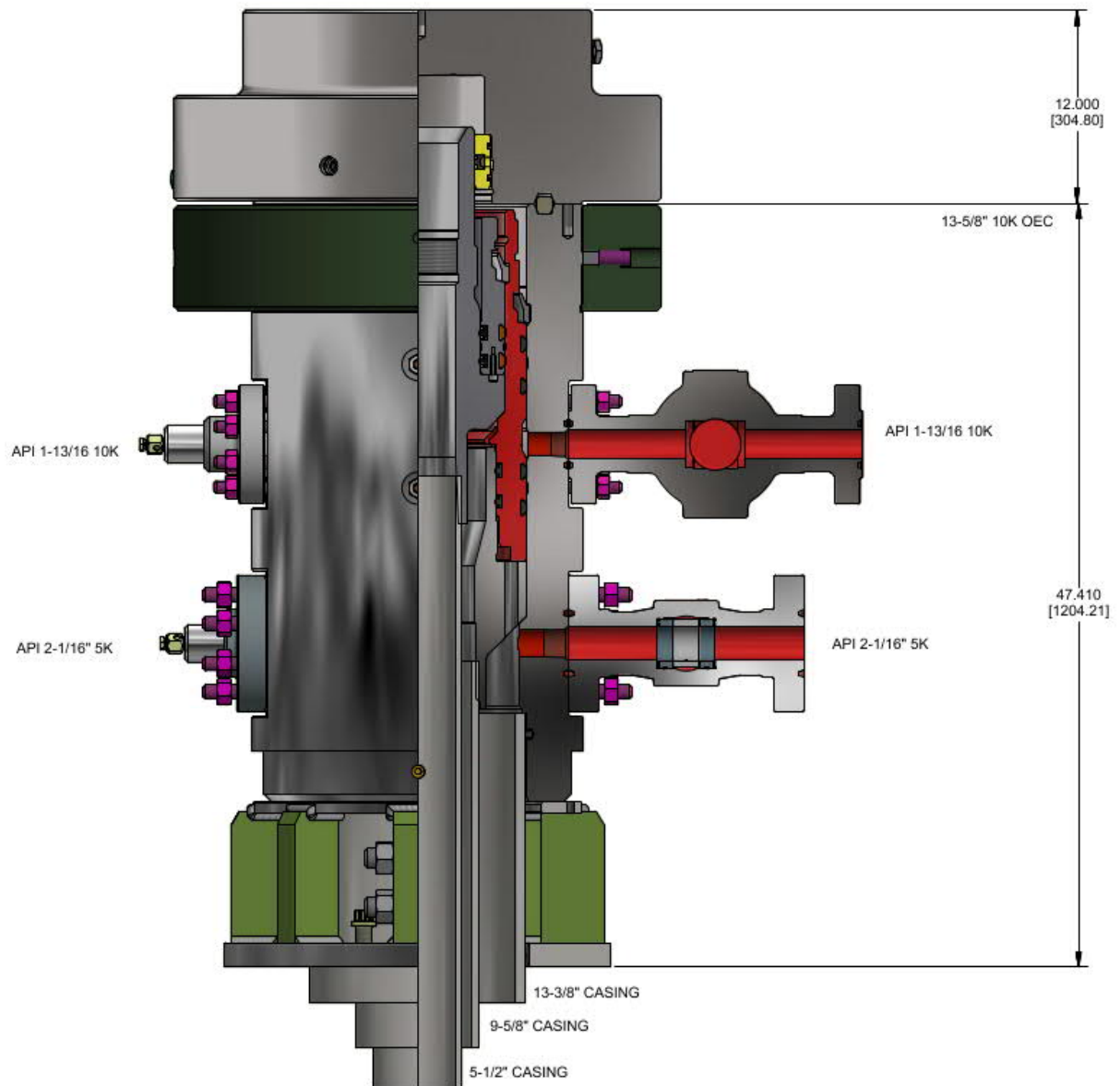
The 13-3/8" surface casing for the Chimichangas 12 State Com 601H was drilled (Spud 3/18/20) and set by Paterson 588 to a depth of 1,800'MD. The 13-3/8" was cemented in one stage with 146bbls of Lead Cement to surface. Patterson spudded from under the 13-3/8" casing on 3/20/20. Prior to drilling out, the 13-3/8" casing was successfully tested to 900psi for 30 minutes. The 12-1/4" intermediate was drilled to a depth of 5505'MD with 9-5/8" casing set and cemented to a depth of 5,495'MD. The 9-5/8" was cemented successfully in 2 stages with 71bbls to surface. The casing was tested successfully to 1350psi for 30 minutes before drilling out of 9 5/8".

The 8-3/4" Vertical and Curve were drilled with no issues to a depth of 11,612'MD where a lateral BHA was run and drilled 8-1/2" lateral to TD at 21,322'MD/11,272'TVD. The subsequent 5-1/2" production string was run to a depth of 21,322'MD / 11,272'TVD and cemented in place as follows.

- Lead 587 bbls (1050 sxs) 2.63 yield TXI Lightweight 11.0ppg
- Tail 548 bbls (2040 sxs) 1.51 yield 100 HSLD 80 Cement 13.0ppg
- Displaced with 461 bbls with Corrosion Inhibited Treated Freshwater

During the Cement Job, full returns were observed with a final circulating pressure of 2500psi. Bumped the plug at calculated displacement and increased pressure to 4,900psi. Released pressure with floats holding and 305bbls (651sxs) to Lead cement to surface.

The wellhead was flushed out and packoff installed and tested to 5,000psi for 15 minutes. Finally, a BPV was installed in the 5-1/2" casing mandrel and nightcap installed and tested to 5000psi. The BOPE was nipped down and rig released at 23:30hrs on 4/13/2020. See diagram below of final wellhead configuration.





HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM		Well Name CHIMICHANGAS 12 STATE COM 601H		County LEA		State/Province NEW MEXICO		API/UWI 30025466140000		
Vertical schematic (actual)		API/UWI 30025466140000		Total Depth (ftKB) 21,322.0		Original KB Elevation (ft) 3,614.60		Ground Elevation (ft) 3,589.60		
		KOP / LP								
		Top Depth (ftKB) 10,615.0				Bottom Depth (ftKB) 11,517.0				
		Hole Section								
		Section Des	Act Top (ftKB)	Act Btm (ftKB)	Start Date		End Date		Size (in)	
		Conductor	25.0	120.0	2/20/2020 00:00		2/21/2020 00:00		28	
		Surface	120.0	1,800.0	3/18/2020 11:00		3/18/2020 22:00		17 1/2	
		Intermediate 1	1,800.0	5,505.0	3/20/2020 12:30		3/22/2020 21:30		12 1/4	
		Production Vertical	5,505.0	10,615.0	3/22/2020 21:30		3/25/2020 04:00		8 3/4	
		Production Curve	10,615.0	11,517.0	3/25/2020 04:00		3/27/2020 12:30		8 3/4	
		Production Lateral	11,517.0	21,322.0	3/27/2020 12:30		4/8/2020 21:30		8 1/2	
		Casing								
		Conductor, 120ftKB								
		Run Date 2/21/2020		Centralizers						
		Item Des	Top (ftKB)	Len (ft)	Btm (ftKB)	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread
		Casing Joints	25.0	95.00	120.0	20	19.12	94.00	H-40	
		Surface Casing, 1,800ftKB								
		Run Date 3/19/2020		Centralizers 13						
		Item Des	Top (ftKB)	Len (ft)	Btm (ftKB)	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread
		Casing Joints	28.2	1,727.04	1,755.2	13 3/8	12.62	54.50	J-55	BTC
		Float Collar	1,755.2	1.46	1,756.7	13 3/8	12.62	54.50	J-55	BTC
		Casing Joints	1,756.7	41.53	1,798.2	13 3/8	12.62	54.50	J-55	BTC
		Float Shoe	1,798.2	1.80	1,800.0	13 3/8	12.62	54.50	J-55	BTC
		Intermediate 1, 5,495ftKB								
		Run Date 3/22/2020		Centralizers 24						
		Item Des	Top (ftKB)	Len (ft)	Btm (ftKB)	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread
		Landing joint	26.0	0.00	26.0	9 5/8	8.84	40.00	J-55	LT&C
		Casing Hanger	26.0	2.18	28.2	9 5/8	8.84	40.00	J-55	LT&C
		Hanger pup joint	28.2	3.54	31.7	9 5/8	8.84	40.00	J-55	LT&C
		Casing Joints	31.7	3,976.57	4,008.3	9 5/8	8.84	40.00	J-55	LT&C
		Pup Joint	4,008.3	7.36	4,015.6	9 5/8	8.84	40.00	J-55	LT&C
		DVT	4,015.6	2.64	4,018.3	9 5/8	8.84	40.00	J-55	LT&C
		ECP	4,018.3	16.57	4,034.9	9 5/8	8.84	40.00	J-55	LT&C
		Casing Joints	4,034.9	1,371.68	5,406.5	9 5/8	8.84	40.00	J-55	LT&C
		Float Collar	5,406.5	1.44	5,408.0	9 5/8	8.84	40.00	J-55	LT&C
		Casing Joints	5,408.0	85.45	5,493.4	9 5/8	8.84	40.00	J-55	LT&C
		Float Shoe	5,493.4	1.58	5,495.0	9 5/8	8.84	40.00	J-55	LT&C
		Production Casing/Liner, 21,312ftKB								
		Run Date 4/11/2020		Centralizers 0						
		Item Des	Top (ftKB)	Len (ft)	Btm (ftKB)	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread
		Landing Joint	29.1	0.00	29.1	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Hanger	29.1	0.73	29.8	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Pup Joint	29.8	4.15	34.0	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Joints	34.0	10,480.56	10,514.5	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Joints	10,514.5	45.20	10,559.7	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Joints	10,559.7	44.65	10,604.4	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Pup Joint	10,604.4	10.58	10,615.0	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Joints	10,615.0	10,681.98	21,297.0	5 1/2	4.78	20.00	P-110	TCBC-HT
		Float Collar	21,297.0	1.82	21,298.8	5 1/2	4.78	20.00	P-110	TCBC-HT
		Casing Pup Joint	21,298.8	11.43	21,310.2	5 1/2	4.78	20.00	P-110	TCBC-HT
		Float Shoe	21,310.2	1.80	21,312.0	5 1/2	4.78	20.00	P-110	TCBC-HT
		Cementing								
		Conductor Cement - Start Date: 3/1/2020								
		Cementing Company	Amount (...)	Vol Pum...	Evaluation Method	Cement Evaluation Results				
			0	0.0						
		Cement Stages								
		Stage 1								
		Plug Bump Pressure (psi)				Plug Failed?		Float Failed?		
						No		No		
		Fluid	Amount (sacks)	Dens (lb/gal)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)		Excess (%)	Vol Pumped (bbl)	
		Lead								

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM

Vertical schematic (actual)

Cementing

Surface Casing Cement - Start Date: 3/19/2020

Cementing Company COMPASS	Amount (...) 1,430	Vol Pum... 715.4	Evaluation Method Returns to Surface	Cement Evaluation Results 146 BBLS OF CEMENT TO SURFACE
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Cement Stages

Stage 1

Plug Bump Pressure (psi) 974.0	Plug Failed? No	Float Failed? No
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Fluid	Amount (sacks)	Dens (lb/gal)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	Excess (%)	Vol Pumped (bbl)
Lead	1,025	13.50	1.69	8.96	75.0	308.5
Tail	405	14.80	1.33	6.33	100.0	95.9

Intermediate Casing Cement - Start Date: 3/22/2020

Cementing Company COMPASS	Amount (...) 1,950	Vol Pum... 1,885.3	Evaluation Method RETURNS TO SURFACE	Cement Evaluation Results NO CEMENT ON 1ST STAGE, CIRCULATED 170 BBLS OFF DVT. 71 BBLS OF CEMENT ON 2ND STAGE.
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Cement Stages

Stage 1

Plug Bump Pressure (psi) 1,340.0	Plug Failed? No	Float Failed? No
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Fluid	Amount (sacks)	Dens (lb/gal)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	Excess (%)	Vol Pumped (bbl)
Lead	675	10.50	4.69	30.08	150.0	563.8
Tail	160	14.80	1.33	6.33	20.0	37.9

Stage 2

Plug Bump Pressure (psi) 2,135.0	Plug Failed? No	Float Failed? No
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Fluid	Amount (sacks)	Dens (lb/gal)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	Excess (%)	Vol Pumped (bbl)
Lead	1,025	11.80	2.68	15.86	200.0	489.2
Tail	90	14.80	1.33	6.33	50.0	21.3

Production Casing Cement - Start Date: 4/11/2020

Cementing Company COMPASS	Amount (...) 3,090	Vol Pum... 1,676.0	Evaluation Method Returns to Surface	Cement Evaluation Results 305 BBLS CEMENT RETURNED TO SURFACE.
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Cement Stages

Stage 1

Plug Bump Pressure (psi) 3,000.0	Plug Failed? No	Float Failed? No
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Fluid	Amount (sacks)	Dens (lb/gal)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	Excess (%)	Vol Pumped (bbl)
Lead	1,050	11.10	3.14	19.14	25.0	587.0
Tail	2,040	13.00	1.51	7.51	25.0	548.0

Wellbores

Actual Deviation Survey AS DRILLED, Proposed? No	Start Depth (ftKB) 25.0	VS Dir (°) 180.13	Total Depth (ftKB) 21,322.00	Total Depth (TVD) (...) 11,270.19	Max TVD (ftKB) 11,277.43
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Note Correction	Comment
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Survey Data

MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	3/26/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
139.00	0.53	93.93	139.00	-0.04	0.53	0.03	0.46	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
201.00	0.97	11.14	200.99	0.46	0.91	-0.46	1.69	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
260.00	1.06	80.22	259.99	1.04	1.55	-1.05	1.95	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
317.00	1.06	16.41	316.98	1.64	2.22	-1.64	1.97	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
374.00	0.88	19.40	373.97	2.56	2.51	-2.56	0.33	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
431.00	0.35	31.88	430.97	3.12	2.75	-3.12	0.95	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
520.00	0.62	43.84	519.96	3.69	3.23	-3.70	0.32	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
580.00	0.53	33.29	579.96	4.16	3.60	-4.17	0.23	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
670.00	0.53	47.53	669.96	4.79	4.14	-4.80	0.15	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
760.00	0.62	359.71	759.95	5.56	4.44	-5.57	0.53	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
851.00	0.44	358.13	850.95	6.40	4.43	-6.41	0.20	3/23/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
943.00	0.44	342.21	942.95	7.09	4.31	-7.10	0.13	3/23/2020

Conductor; 25-120

Conductor; 20 in; 25-120 ftKB

Surface; 120-1,800

Surface Casing; 13 3/8 in; 28-1,800 ftKB

Intermediate 1; 1,800-5,505

Intermediate 1; 9 5/8 in; 26-5,495 ftKB

Production Vertical; 5,505-10,615

KOP-LP; 10,615-11,517

Production Curve; 10,615-11,517

Drilled Lateral Length; 11,517-21,322

Production Lateral; 11,517-21,322

Production Casing/Liner; 5 1/2 in; 29-21,312 ftKB

Date TD Reached; 21,322

TD - Original Hole; 21,322

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM									
Survey Data									
Vertical schematic (actual)	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,033.00	0.09	356.55	1,032.95	7.49	4.20	-7.50	0.39	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,126.00	0.09	180.95	1,125.95	7.49	4.19	-7.50	0.19	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,218.00	0.00	299.95	1,217.95	7.42	4.19	-7.43	0.10	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,309.00	0.18	277.98	1,308.95	7.44	4.05	-7.44	0.20	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,400.00	0.18	286.41	1,399.94	7.50	3.77	-7.50	0.03	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,495.00	0.18	286.94	1,494.94	7.58	3.49	-7.59	0.00	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,590.00	0.09	249.15	1,589.94	7.60	3.27	-7.61	0.13	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,685.00	0.26	269.89	1,684.94	7.57	2.99	-7.58	0.19	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,728.00	0.26	281.49	1,727.94	7.59	2.80	-7.60	0.12	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,900.00	0.09	276.83	1,899.94	7.68	2.28	-7.69	0.10	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	1,995.00	0.83	316.31	1,994.94	8.19	1.73	-8.20	0.80	3/23/2020
Conductor; 25-120	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,090.00	2.30	312.72	2,089.90	9.98	-0.15	-9.98	1.55	3/23/2020
Conductor; 20 in; 25-120 ftKB	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,185.00	3.26	317.00	2,184.79	13.25	-3.39	-13.24	1.03	3/23/2020
Surface; 120-1,800	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,280.00	4.71	326.03	2,279.56	18.46	-7.41	-18.44	1.66	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,469.00	7.48	328.85	2,467.47	35.43	-18.11	-35.39	1.47	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,564.00	7.71	327.02	2,561.64	46.07	-24.78	-46.01	0.35	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,659.00	7.35	326.99	2,655.82	56.51	-31.56	-56.44	0.38	3/23/2020
Surface Casing; 13 3/8 in; 28-1,800 ftKB	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,753.00	7.07	328.13	2,749.07	66.46	-37.89	-66.38	0.33	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,848.00	6.81	331.10	2,843.38	76.36	-43.70	-76.26	0.47	3/23/2020
Intermediate 1; 1,800-5,505	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	2,942.00	7.50	331.98	2,936.65	86.65	-49.27	-86.54	0.74	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,037.00	7.84	334.99	3,030.80	98.00	-54.93	-97.87	0.55	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,132.00	7.30	339.28	3,124.97	109.52	-59.80	-109.38	0.82	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,227.00	6.25	335.33	3,219.30	119.86	-64.09	-119.71	1.21	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,322.00	7.55	337.15	3,313.61	130.31	-68.68	-130.16	1.39	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,417.00	7.86	335.81	3,407.76	141.99	-73.76	-141.82	0.38	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,512.00	7.49	339.43	3,501.91	153.71	-78.60	-153.53	0.64	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,606.00	6.48	339.83	3,595.21	164.43	-82.58	-164.24	1.08	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,700.00	6.58	331.12	3,688.60	174.12	-87.01	-173.92	1.06	3/23/2020
Intermediate 1; 9 5/8 in; 26-5,495 ftKB	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,795.00	6.99	329.40	3,782.93	183.86	-92.58	-183.65	0.48	3/23/2020
Production Vertical; 5,505-10,615	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,889.00	6.45	331.13	3,876.29	193.41	-98.04	-193.19	0.61	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	3,984.00	5.95	330.09	3,970.73	202.35	-103.07	-202.12	0.54	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,079.00	6.59	327.65	4,065.16	211.22	-108.45	-210.98	0.73	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,173.00	6.91	324.60	4,158.51	220.39	-114.61	-220.13	0.51	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,268.00	6.59	328.10	4,252.85	229.68	-120.80	-229.40	0.55	3/23/2020
KOP-LP; 10,615-11,517	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,363.00	6.35	329.07	4,347.25	238.81	-126.38	-238.52	0.28	3/23/2020
Production Curve; 10,615-11,517	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,458.00	6.38	334.70	4,441.66	248.09	-131.34	-247.79	0.66	3/23/2020
Drilled Lateral Length; 11,517-21,322	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,552.00	5.98	334.76	4,535.12	257.24	-135.66	-256.93	0.43	3/23/2020
Production Lateral; 11,517-21,322	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,646.00	6.04	335.35	4,628.60	266.16	-139.81	-265.85	0.09	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,741.00	5.64	335.32	4,723.11	274.95	-143.84	-274.62	0.42	3/23/2020
Production Casing/Liner; 5 1/2 in; 29-21,312 ftKB	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	4,836.00	5.67	335.53	4,817.65	283.46	-147.73	-283.13	0.04	3/23/2020
Date TD Reached; 21,322	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
TD - Original Hole; 21,322	4,930.00	5.62	334.12	4,911.19	291.83	-151.67	-291.48	0.16	3/23/2020

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM									
Survey Data									
Vertical schematic (actual)	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,025.00	5.35	334.02	5,005.75	300.00	-155.64	-299.64	0.28	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,120.00	4.70	328.93	5,100.39	307.31	-159.59	-306.95	0.83	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,214.00	4.70	328.93	5,194.07	313.91	-163.56	-313.54	0.00	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,309.00	4.30	335.97	5,288.78	320.49	-167.02	-320.11	0.72	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,404.00	4.89	331.53	5,383.48	327.31	-170.40	-326.92	0.72	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,448.00	5.19	332.11	5,427.31	330.71	-172.23	-330.32	0.69	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,578.00	5.07	331.72	5,556.78	340.97	-177.70	-340.57	0.10	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,673.00	7.12	336.78	5,651.24	350.08	-182.01	-349.66	2.23	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,767.00	8.65	334.56	5,744.35	361.82	-187.34	-361.39	1.66	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,862.00	9.20	332.36	5,838.20	374.99	-193.93	-374.55	0.68	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	5,957.00	9.32	333.02	5,931.96	388.58	-200.95	-388.12	0.17	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,052.00	9.07	332.08	6,025.74	402.05	-207.94	-401.58	0.31	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,147.00	8.65	332.56	6,119.61	415.01	-214.74	-414.52	0.45	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,241.00	8.44	331.25	6,212.57	427.33	-221.32	-426.82	0.30	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,337.00	8.59	330.90	6,307.51	439.77	-228.19	-439.25	0.17	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,432.00	8.67	329.60	6,401.43	452.14	-235.27	-451.61	0.22	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,527.00	7.29	327.16	6,495.51	463.38	-242.16	-462.83	1.50	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,622.00	6.99	325.26	6,589.77	473.20	-248.72	-472.63	0.40	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,716.00	6.68	326.43	6,683.11	482.45	-255.00	-481.87	0.36	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,811.00	5.25	320.72	6,777.59	490.42	-260.81	-489.83	1.63	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	6,905.00	5.26	320.24	6,871.19	497.06	-266.29	-496.46	0.05	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,000.00	4.73	316.51	6,965.83	503.25	-271.77	-502.64	0.65	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,095.00	4.69	316.14	7,060.51	508.90	-277.16	-508.27	0.05	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,190.00	3.07	316.81	7,155.29	513.55	-281.59	-512.91	1.71	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,284.00	2.74	314.82	7,249.17	516.97	-284.91	-516.32	0.37	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,379.00	2.64	320.43	7,344.07	520.26	-287.91	-519.60	0.30	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,474.00	1.41	305.64	7,439.01	522.62	-290.25	-521.96	1.40	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,569.00	1.47	309.82	7,533.98	524.09	-292.14	-523.42	0.13	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,664.00	1.54	311.02	7,628.94	525.70	-294.04	-525.04	0.08	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,758.00	0.52	235.80	7,722.93	526.29	-295.34	-525.62	1.59	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,853.00	0.61	178.95	7,817.93	525.55	-295.69	-524.87	0.57	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	7,948.00	0.48	175.23	7,912.92	524.64	-295.65	-523.97	0.14	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,043.00	0.81	160.22	8,007.92	523.61	-295.39	-522.94	0.39	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,138.00	0.76	157.30	8,102.91	522.40	-294.92	-521.73	0.07	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,232.00	0.58	139.37	8,196.90	521.47	-294.37	-520.80	0.29	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,327.00	0.71	115.32	8,291.89	520.85	-293.52	-520.18	0.31	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,422.00	0.67	115.30	8,386.89	520.36	-292.49	-519.69	0.04	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,516.00	0.66	101.76	8,480.88	520.01	-291.46	-519.35	0.17	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,611.00	0.79	102.28	8,575.87	519.76	-290.29	-519.10	0.14	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,706.00	0.92	94.90	8,670.86	519.56	-288.89	-518.90	0.18	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,801.00	0.87	81.23	8,765.85	519.60	-287.41	-518.95	0.23	3/23/2020

Conductor; 25-120

Conductor; 20 in; 25-120 ftKB

Surface; 120-1,800

Surface Casing; 13 3/8 in; 28-1,800 ftKB

Intermediate 1; 1,800-5,505

Intermediate 1; 9 5/8 in; 26-5,495 ftKB

Production Vertical; 5,505-10,615

KOP-LP; 10,615-11,517

Production Curve; 10,615-11,517

Drilled Lateral Length; 11,517-21,322

Production Lateral; 11,517-21,322

Production Casing/Liner; 5 1/2 in; 29-21,312 ftKB

Date TD Reached; 21,322

TD - Original Hole; 21,322

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM									
Survey Data									
Vertical schematic (actual)	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,896.00	0.61	84.19	8,860.84	519.77	-286.20	-519.11	0.28	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	8,990.00	0.13	1.12	8,954.84	519.92	-285.70	-519.27	0.65	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,085.00	0.24	278.48	9,049.84	520.06	-285.89	-519.41	0.27	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,180.00	0.94	280.26	9,144.84	520.23	-286.86	-519.58	0.74	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,275.00	1.41	278.37	9,239.82	520.54	-288.78	-519.88	0.50	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,371.00	1.40	273.87	9,335.79	520.79	-291.12	-520.13	0.12	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,465.00	1.91	283.72	9,429.75	521.24	-293.79	-520.57	0.62	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,560.00	2.65	285.66	9,524.67	522.21	-297.44	-521.53	0.78	3/23/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,655.00	0.69	236.67	9,619.63	522.48	-300.03	-521.80	2.38	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,750.00	0.77	236.78	9,714.62	521.82	-301.04	-521.14	0.08	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,845.00	1.06	244.93	9,809.61	521.10	-302.37	-520.41	0.33	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	9,939.00	1.16	248.69	9,903.59	520.38	-304.05	-519.69	0.13	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,035.00	1.27	259.22	9,999.57	519.83	-306.00	-519.14	0.26	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,129.00	1.19	259.75	10,093.55	519.46	-307.98	-518.76	0.09	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,224.00	1.29	260.27	10,188.53	519.11	-310.01	-518.40	0.11	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,319.00	1.53	261.44	10,283.50	518.74	-312.31	-518.03	0.25	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,414.00	1.08	311.04	10,378.48	519.14	-314.24	-518.42	1.23	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,508.00	0.88	265.38	10,472.46	519.66	-315.63	-518.94	0.83	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,559.00	0.75	264.10	10,523.46	519.59	-316.35	-518.87	0.26	3/25/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,650.00	3.66	174.67	10,614.39	516.64	-316.68	-515.92	4.10	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,718.00	10.60	165.08	10,681.83	508.42	-314.86	-507.71	10.32	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,765.00	16.18	166.80	10,727.53	497.86	-312.25	-497.15	11.90	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,812.00	20.28	166.61	10,772.16	483.56	-308.87	-482.86	8.72	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,859.00	24.80	169.52	10,815.56	465.93	-305.19	-465.24	9.90	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,907.00	28.58	170.43	10,858.44	444.70	-301.45	-444.02	7.92	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	10,954.00	32.13	171.72	10,898.99	421.24	-297.78	-420.57	7.68	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,002.00	35.93	173.00	10,938.77	394.62	-294.22	-393.95	8.06	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,049.00	40.33	173.64	10,975.73	365.81	-290.85	-365.15	9.40	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,096.00	43.97	174.25	11,010.57	334.45	-287.53	-333.79	7.79	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,143.00	48.47	174.80	11,043.08	300.68	-284.30	-300.03	9.61	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,190.00	52.40	175.57	11,073.01	264.58	-281.27	-263.94	8.46	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,237.00	57.08	177.88	11,100.14	226.28	-279.10	-225.64	10.73	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,285.00	63.03	181.81	11,124.09	184.72	-279.03	-184.08	14.28	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,332.00	68.71	183.95	11,143.30	141.90	-281.20	-141.26	12.78	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,379.00	74.59	183.61	11,158.09	97.41	-284.14	-96.76	12.53	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,426.00	81.89	182.47	11,167.66	51.49	-286.57	-50.84	15.71	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,473.00	89.33	181.56	11,171.26	4.69	-288.22	-4.03	15.95	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,568.00	92.67	179.02	11,169.60	-90.27	-288.70	90.93	4.42	3/26/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,598.00	90.85	177.74	11,168.68	-120.25	-287.85	120.90	7.42	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,692.00	89.73	177.12	11,168.20	-214.15	-283.63	214.79	1.36	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,787.00	89.59	177.44	11,168.77	-309.04	-279.13	309.67	0.37	3/28/2020

Conductor; 25-120

Conductor; 20 in; 25-120 ftKB

Surface; 120-1,800

Surface Casing; 13 3/8 in; 28-1,800 ftKB

Intermediate 1; 1,800-5,505

Intermediate 1; 9 5/8 in; 26-5,495 ftKB

Production Vertical; 5,505-10,615

KOP-LP; 10,615-11,517

Production Curve; 10,615-11,517

Drilled Lateral Length; 11,517-21,322

Production Lateral; 11,517-21,322

Production Casing/Liner; 5 1/2 in; 29-21,312 ftKB

Date TD Reached; 21,322

TD - Original Hole; 21,322

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM									
Survey Data									
Vertical schematic (actual)	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,882.00	89.47	177.32	11,169.55	-403.94	-274.78	404.56	0.18	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	11,977.00	89.59	177.87	11,170.33	-498.85	-270.80	499.46	0.59	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,071.00	89.45	178.52	11,171.11	-592.80	-267.84	593.41	0.71	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,166.00	89.41	179.55	11,172.06	-687.78	-266.24	688.38	1.08	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,260.00	89.65	180.63	11,172.83	-781.78	-266.39	782.38	1.18	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,355.00	89.47	181.59	11,173.56	-876.75	-268.23	877.36	1.03	3/28/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,450.00	89.36	182.39	11,174.53	-971.69	-271.52	972.30	0.85	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,544.00	89.59	183.29	11,175.39	-1,065.57	-276.18	1,066.19	0.99	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,639.00	89.27	183.64	11,176.34	-1,160.39	-281.92	1,161.03	0.50	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,734.00	90.16	184.45	11,176.81	-1,255.15	-288.62	1,255.80	1.27	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,829.00	90.39	183.46	11,176.35	-1,349.92	-295.18	1,350.59	1.07	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	12,924.00	90.57	181.12	11,175.56	-1,444.84	-298.97	1,445.51	2.47	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,018.00	90.50	182.00	11,174.68	-1,538.80	-301.53	1,539.48	0.94	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,113.00	90.28	181.34	11,174.03	-1,633.75	-304.30	1,634.44	0.73	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,208.00	90.41	181.84	11,173.46	-1,728.72	-306.93	1,729.41	0.54	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,303.00	90.26	181.82	11,172.90	-1,823.67	-309.97	1,824.36	0.16	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,398.00	90.52	181.40	11,172.26	-1,918.63	-312.64	1,919.33	0.52	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,493.00	90.61	178.32	11,171.32	-2,013.61	-312.41	2,014.31	3.24	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,587.00	90.35	179.23	11,170.53	-2,107.58	-310.40	2,108.28	1.01	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,682.00	90.62	179.30	11,169.73	-2,202.57	-309.18	2,203.27	0.29	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,776.00	90.21	180.06	11,169.05	-2,296.57	-308.65	2,297.26	0.92	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,871.00	90.45	179.62	11,168.50	-2,391.57	-308.39	2,392.26	0.53	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	13,966.00	90.47	180.02	11,167.74	-2,486.56	-308.09	2,487.25	0.42	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,060.00	90.26	178.86	11,167.14	-2,580.55	-307.17	2,581.24	1.25	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,155.00	90.50	179.09	11,166.51	-2,675.54	-305.47	2,676.22	0.35	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,250.00	89.70	179.17	11,166.34	-2,770.52	-304.03	2,771.21	0.85	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,344.00	90.07	178.82	11,166.53	-2,864.51	-302.38	2,865.19	0.54	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,439.00	89.45	179.56	11,166.93	-2,959.50	-301.04	2,960.17	1.02	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,533.00	89.73	178.47	11,167.60	-3,053.48	-299.42	3,054.15	1.20	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,627.00	89.03	179.45	11,168.62	-3,147.46	-297.71	3,148.12	1.28	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,721.00	89.04	179.22	11,170.20	-3,241.44	-296.62	3,242.10	0.24	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,816.00	89.50	180.41	11,171.41	-3,336.43	-296.32	3,337.09	1.34	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	14,911.00	88.88	179.40	11,172.76	-3,431.42	-296.16	3,432.08	1.25	3/29/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,006.00	89.02	179.68	11,174.50	-3,526.40	-295.40	3,527.06	0.33	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,100.00	88.38	180.10	11,176.63	-3,620.37	-295.22	3,621.03	0.81	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,196.00	88.03	180.16	11,179.64	-3,716.32	-295.43	3,716.99	0.37	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,290.00	88.72	179.26	11,182.30	-3,810.28	-294.96	3,810.94	1.21	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,384.00	88.03	179.20	11,184.97	-3,904.24	-293.70	3,904.89	0.74	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,479.00	88.26	179.92	11,188.04	-3,999.18	-292.97	3,999.84	0.80	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,572.00	88.15	179.31	11,190.96	-4,092.14	-292.34	4,092.79	0.67	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,667.00	88.56	179.16	11,193.68	-4,187.09	-291.07	4,187.74	0.46	3/30/2020

Conductor; 25-120

Conductor; 20 in; 25-120 ftKB

Surface; 120-1,800

Surface Casing; 13 3/8 in; 28-1,800 ftKB

Intermediate 1; 1,800-5,505

Intermediate 1; 9 5/8 in; 26-5,495 ftKB

Production Vertical; 5,505-10,615

KOP-LP; 10,615-11,517

Production Curve; 10,615-11,517

Drilled Lateral Length; 11,517-21,322

Production Lateral; 11,517-21,322

Production Casing/Liner; 5 1/2 in; 29-21,312 ftKB

Date TD Reached; 21,322

TD - Original Hole; 21,322

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM									
Survey Data									
Vertical schematic (actual)	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,762.00	88.22	180.06	11,196.35	-4,282.05	-290.43	4,282.69	1.01	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,857.00	87.94	179.99	11,199.54	-4,376.99	-290.47	4,377.64	0.30	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	15,951.00	88.49	179.59	11,202.46	-4,470.95	-290.13	4,471.59	0.72	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,046.00	88.51	180.66	11,204.95	-4,565.91	-290.33	4,566.56	1.13	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,141.00	88.98	180.13	11,207.03	-4,660.89	-290.99	4,661.54	0.75	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,236.00	88.76	179.58	11,208.91	-4,755.87	-290.75	4,756.52	0.62	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,331.00	89.23	178.60	11,210.57	-4,850.84	-289.24	4,851.48	1.14	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,425.00	89.31	179.26	11,211.77	-4,944.82	-287.48	4,945.45	0.71	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,520.00	88.97	177.79	11,213.19	-5,039.77	-285.04	5,040.40	1.59	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,615.00	88.55	180.37	11,215.25	-5,134.73	-283.51	5,135.36	2.75	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,711.00	89.03	181.07	11,217.28	-5,230.70	-284.72	5,231.33	0.88	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,805.00	88.79	180.99	11,219.07	-5,324.67	-286.41	5,325.30	0.27	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,900.00	88.89	181.02	11,220.99	-5,419.63	-288.07	5,420.27	0.11	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	16,995.00	88.70	180.57	11,222.99	-5,514.60	-289.39	5,515.24	0.51	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,089.00	88.90	181.12	11,224.96	-5,608.57	-290.78	5,609.21	0.62	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,184.00	89.41	180.55	11,226.36	-5,703.55	-292.16	5,704.20	0.81	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,279.00	90.89	181.42	11,226.11	-5,798.53	-293.80	5,799.18	1.81	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,374.00	88.53	180.54	11,226.59	-5,893.51	-295.42	5,894.16	2.65	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,468.00	89.25	180.42	11,228.41	-5,987.49	-296.21	5,988.14	0.78	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,562.00	88.68	181.77	11,230.11	-6,081.45	-298.00	6,082.11	1.56	3/30/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,657.00	88.99	180.95	11,232.04	-6,176.40	-300.26	6,177.07	0.92	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,752.00	88.78	181.32	11,233.89	-6,271.37	-302.14	6,272.04	0.45	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,847.00	88.99	181.37	11,235.74	-6,366.32	-304.37	6,367.00	0.23	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	17,942.00	88.90	180.77	11,237.49	-6,461.29	-306.14	6,461.97	0.64	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,037.00	87.58	180.07	11,240.40	-6,556.24	-306.84	6,556.92	1.57	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,131.00	85.56	178.48	11,246.03	-6,650.06	-305.65	6,650.73	2.73	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,227.00	86.63	176.89	11,252.57	-6,745.75	-301.78	6,746.42	1.99	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,284.00	84.29	176.21	11,257.08	-6,802.46	-298.36	6,803.12	4.27	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,330.00	86.09	176.90	11,260.93	-6,848.22	-295.61	6,848.87	4.19	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,425.00	88.81	178.31	11,265.16	-6,943.03	-291.65	6,943.67	3.22	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,519.00	88.72	177.78	11,267.19	-7,036.95	-288.44	7,037.59	0.57	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,614.00	92.33	178.13	11,266.32	-7,131.87	-285.05	7,132.50	3.82	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,709.00	89.26	178.97	11,265.00	-7,226.82	-282.65	7,227.44	3.35	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,804.00	89.58	178.18	11,265.96	-7,321.78	-280.29	7,322.40	0.90	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,899.00	90.39	181.26	11,265.99	-7,416.77	-279.82	7,417.39	3.35	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	18,994.00	91.22	181.79	11,264.65	-7,511.73	-282.35	7,512.35	1.04	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	19,089.00	88.95	181.26	11,264.51	-7,606.69	-284.88	7,607.31	2.45	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	19,184.00	88.87	181.48	11,266.32	-7,701.64	-287.15	7,702.27	0.25	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	19,278.00	88.24	180.50	11,268.69	-7,795.60	-288.77	7,796.23	1.24	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	19,373.00	87.70	179.79	11,272.05	-7,890.54	-289.01	7,891.17	0.94	3/31/2020
	MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
	19,468.00	89.82	179.82	11,274.11	-7,985.51	-288.69	7,986.14	2.23	3/31/2020

Conductor; 25-120

Conductor; 20 in; 25-120 ftKB

Surface; 120-1,800

Surface Casing; 13 3/8 in; 28-1,800 ftKB

Intermediate 1; 1,800-5,505

Intermediate 1; 9 5/8 in; 26-5,495 ftKB

Production Vertical; 5,505-10,615

KOP-LP; 10,615-11,517

Production Curve; 10,615-11,517

Drilled Lateral Length; 11,517-21,322

Production Lateral; 11,517-21,322

Production Casing/Liner; 5 1/2 in; 29-21,312 ftKB

Date TD Reached; 21,322

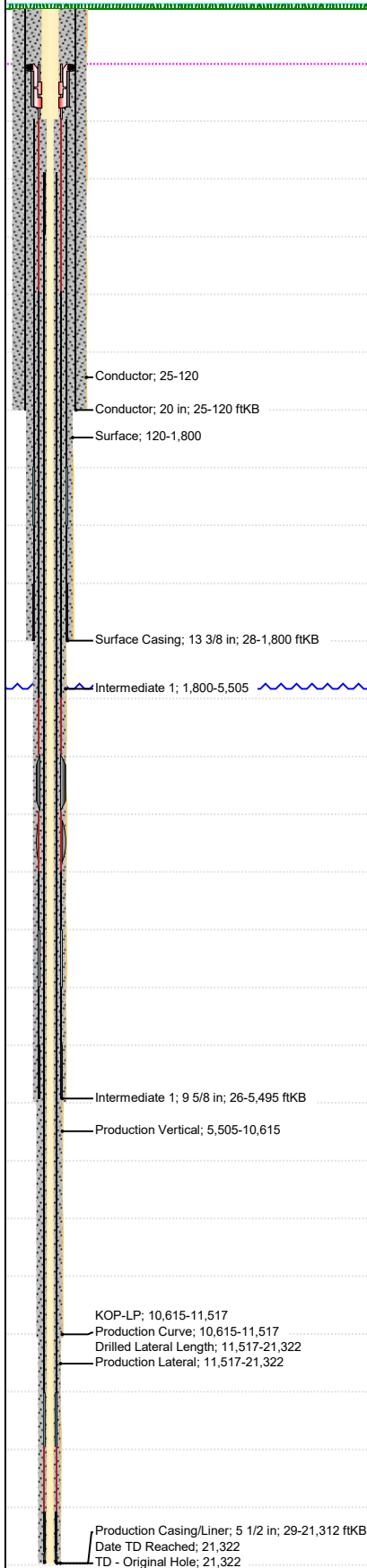
TD - Original Hole; 21,322

DRILLING WBD

HORIZONTAL, Original Hole, 4/14/2020 10:21:03 AM

Survey Data

Vertical schematic (actual)



MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
19,563.00	90.49	179.04	11,273.85	-8,080.50	-287.74	8,081.13	1.08	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
19,657.00	89.81	178.76	11,273.61	-8,174.48	-285.94	8,175.11	0.78	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
19,751.00	89.29	175.77	11,274.34	-8,268.36	-281.45	8,268.98	3.23	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
19,846.00	89.90	178.14	11,275.02	-8,363.22	-276.41	8,363.82	2.58	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
19,940.00	90.16	179.29	11,274.97	-8,457.19	-274.30	8,457.79	1.25	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,035.00	90.60	179.29	11,274.34	-8,552.18	-273.12	8,552.78	0.46	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,129.00	90.48	179.82	11,273.45	-8,646.18	-272.39	8,646.77	0.58	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,223.00	90.78	180.79	11,272.42	-8,740.17	-272.89	8,740.76	1.08	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,317.00	90.80	180.48	11,271.12	-8,834.15	-273.94	8,834.75	0.33	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,411.00	89.42	180.16	11,270.94	-8,928.15	-274.46	8,928.75	1.51	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,505.00	89.04	179.87	11,272.20	-9,022.14	-274.49	9,022.74	0.51	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,599.00	87.74	179.72	11,274.84	-9,116.10	-274.15	9,116.70	1.39	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,694.00	89.14	180.51	11,277.43	-9,211.06	-274.34	9,211.66	1.69	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,788.00	91.07	181.27	11,277.26	-9,305.05	-275.80	9,305.65	2.21	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,882.00	90.08	180.68	11,276.31	-9,399.03	-277.40	9,399.63	1.23	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
20,976.00	91.60	180.70	11,274.94	-9,493.01	-278.53	9,493.61	1.62	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
21,071.00	90.87	179.70	11,272.89	-9,587.98	-278.86	9,588.59	1.30	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
21,164.00	90.66	180.05	11,271.65	-9,680.97	-278.66	9,681.58	0.44	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
21,259.00	90.49	180.30	11,270.69	-9,775.97	-278.95	9,776.58	0.32	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
21,273.00	90.45	180.05	11,270.58	-9,789.97	-278.99	9,790.57	1.81	3/31/2020
MD (ftKB)	Inclination (°)	Azimuth (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Date
21,322.00	90.45	180.05	11,270.19	-9,838.97	-279.04	9,839.57	0.00	3/31/2020