Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
OCD Artesia

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM113944

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
COTTONWOOD 28-33 FED COM 2BS 7H

2. Name of Operator
CHISHOLM ENERGY OPERATING LLC
Contact: JENNIFER ELROD
EMail: JELROD@CHISHOLMENERGY.COM

9. API Well No.
30-015-44650-00-X1

3a. Address
801 CHERRY STREET
FORT WORTH, TX 76012

3b. Phone No. (include area code)
Ph: 817-953-3728
Fx: 817-601-7551

10. Field and Pool or Exploratory Area
WELCH-BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 21 T26S R26E SESE 100FSL 945FEL
32.020756 N Lat, 104.292328 W Lon

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Production Start-up
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

GC 7-13-18
Accepted for record - NMOCD

Completion Sundry

05/25/2018-Run CBL; est TOC @ 220'
05/27/2018-PBTD @ 14308'MD, Tested csg to 7500 psi, 30 min, good test;
05/28/2018-Perforate Stage 1 14280'-14100'
05/31/2018-06/15/2018-Complete completions operations-Perforate 14070'-7590'; Fracture w/1166 bbls HCl + 135829 bbls SW w/6445768# 100 Mesh + 3670154# 20/40 Sand.
06/26/2018-06/28/2018-Drill Out
06/29/2018-Install Prod tree
07/05/2018-Turned to Flowback

RECEIVED

JUL 13 2018

DISTRICT II-ARTESIA O.C.D.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #426514 verified by the BLM Well Information System
For CHISHOLM ENERGY OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 07/11/2018 (18PP2183SE)

Name *(Printed/Typed)* JENNIFER ELROD — Title SR REGULATORY TECH

Signature (Electronic Submission) — Date 07/06/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

ACCEPTED FOR RECORD

Approved By — Title — Date

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

Office

JUL 11 2018 /s/ Jonathon Shepard

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

CHISHOLM ENERGY

Chisholm Energy Holdings

GE 3384 + 22' KB @ 3406.00usft (Nabors M55)

Ground Level: 3384.00

Project: Eddy County, NM (NAD 83)
Site: Cottonwood 28-33 Federal
Well: Cottonwood 28-33 Fed Com 2BS 7H
Wellbore: Wellbore #1
Design: Actual
Rig: Nabors M55

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

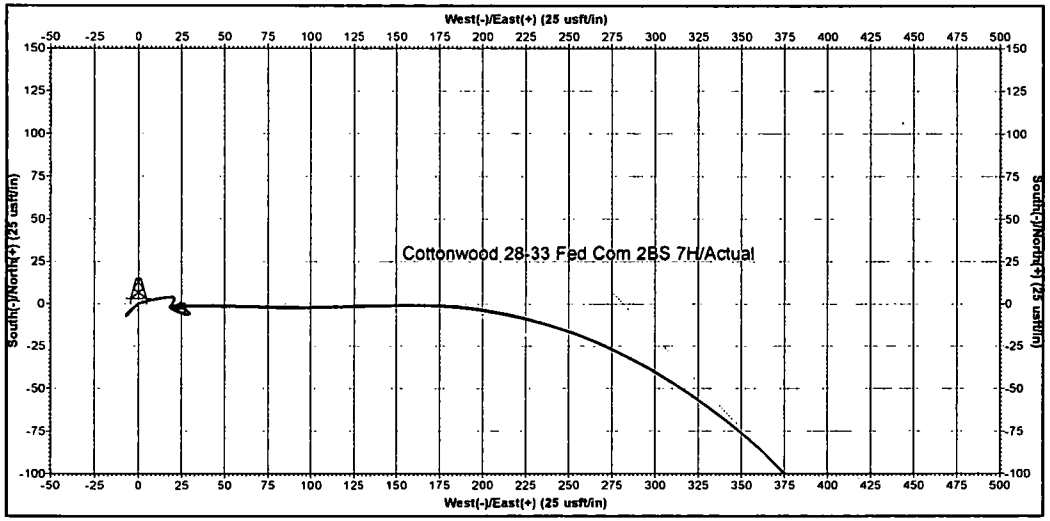
T G M

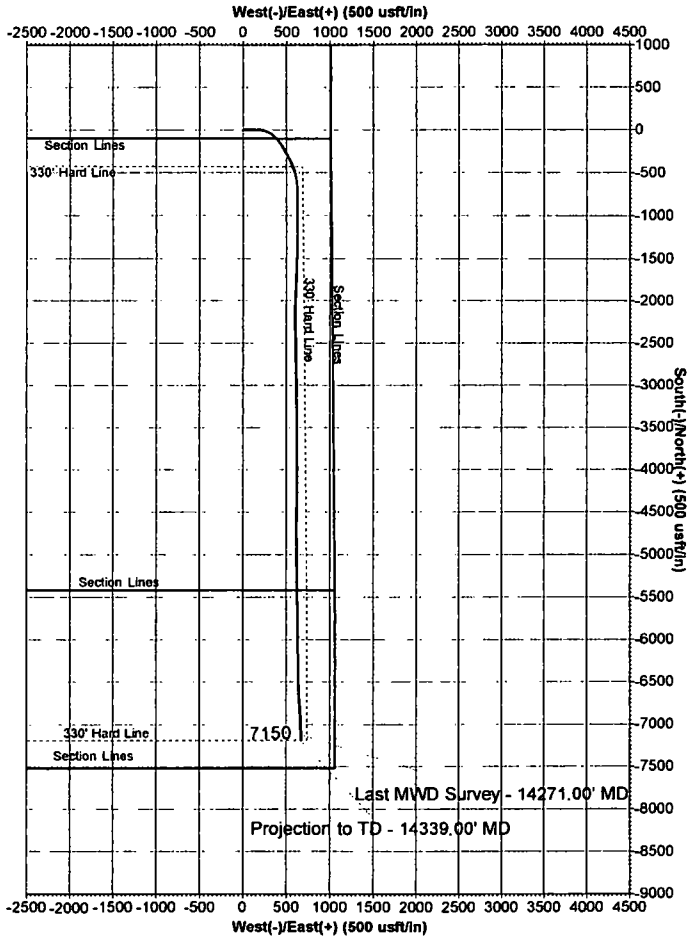
Azimuths to Grid North
True North: -0.02°
Magnetic North: 7.26°

Magnetic Field
Strength: 47703.7snT
Dip Angle: 59.69°
Date: 4/9/2018
Model: BGGM2017

WELL DETAILS
Ground Level: 3384.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	371292.90	553986.90	32° 1' 14.728 N	104° 17' 33.065 W





HALLIBURTON Sperry Drilling

Nabors M55

Chisholm Energy Holdings

Eddy County, NM (NAD 83) Cottonwood 28-33 Federal
API#
Cottonwood 28-33 Fed Com 2BS 7H

Wellbore #1
Design: Actual

Sperry Drilling Services
Combo Report

08 May, 2018

Well Coordinates:	32° 01' 14.73" N 104° 17' 33.06" W	North American Datum 1983 New Mexico Eastern Zone 371,292.90 N 553,986.90 E
Ground Level: 3,384.00 usft		
Local Coordinate Origin:		Centered on Well Cottonwood 28-33 Fed Com 2BS 7H
Viewing Datum:		GE 3384 + 22' KB @ 3406.00usft (Nabors M55)
TVDs to System:		N
North Reference:		**Grid**
Unit System:		API US Survey Feet

Version: 5000.1 Build: 81E

Report Version: Midcon Combo v1.12

HALLIBURTON

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
0.00	0.00	0.00	0.00	0.00 N	0.00 E	371,292.90	553,986.90	0.00	0.00	0.00	
123.00	0.12	24.63	123.00	0.12 N	0.05 E	371,293.02	553,986.95	0.10	-0.12	24.63	
211.00	0.35	239.13	211.00	0.06 N	0.14 W	371,292.96	553,986.76	0.52	-0.06	-154.11	
300.00	0.74	218.48	300.00	0.53 S	0.73 W	371,292.37	553,986.17	0.48	0.53	-37.31	
377.00	0.83	234.71	376.99	1.24 S	1.49 W	371,291.66	553,985.41	0.31	1.24	76.21	
489.00	1.41	230.61	488.97	2.58 S	3.22 W	371,290.32	553,983.68	0.52	2.58	-9.92	
583.00	1.21	224.70	582.94	4.02 S	4.81 W	371,288.88	553,982.09	0.26	4.02	-148.89	
678.00	1.02	234.68	677.92	5.22 S	6.21 W	371,287.68	553,980.69	0.29	5.22	139.29	
750.00	0.83	206.69	749.91	6.06 S	6.97 W	371,286.84	553,979.93	0.67	6.06	-126.39	
844.00	0.99	207.47	843.90	7.39 S	7.65 W	371,285.51	553,979.25	0.17	7.39	4.82	
939.00	0.99	53.04	938.90	7.62 S	7.37 W	371,285.28	553,979.53	2.03	7.62	-167.21	
1,034.00	1.42	36.05	1,033.88	6.18 S	6.02 W	371,286.72	553,980.88	0.58	6.18	-48.42	
1,128.00	2.02	43.07	1,127.83	4.03 S	4.20 W	371,288.87	553,982.70	0.68	4.03	22.88	
1,222.00	1.25	37.60	1,221.80	2.00 S	2.45 W	371,290.90	553,984.45	0.83	2.00	-171.27	
1,317.00	1.37	50.72	1,316.77	0.46 S	0.94 W	371,292.44	553,985.96	0.34	0.46	74.84	
1,412.00	2.34	76.89	1,411.72	0.70 N	1.83 E	371,293.60	553,988.73	1.33	-0.70	54.71	
1,507.00	3.57	77.97	1,506.59	1.75 N	6.61 E	371,294.65	553,993.51	1.30	-1.75	3.13	
1,591.00	3.99	79.88	1,590.41	2.81 N	12.05 E	371,295.71	553,998.95	0.52	-2.81	17.64	
1,665.00	3.62	82.63	1,664.25	3.56 N	16.90 E	371,296.46	554,003.80	0.56	-3.56	155.11	
1,729.00	1.74	99.18	1,728.17	3.67 N	19.86 E	371,296.57	554,006.76	3.15	-3.67	165.75	
1,823.00	1.23	204.89	1,822.16	2.52 N	20.85 E	371,295.42	554,007.75	2.54	-2.52	150.26	
1,918.00	1.32	211.27	1,917.13	0.66 N	19.85 E	371,293.56	554,006.75	0.18	-0.66	60.84	
2,013.00	1.18	208.81	2,012.11	1.13 S	18.81 E	371,291.77	554,005.71	0.16	1.13	-160.25	
2,139.00	1.86	72.79	2,138.09	1.66 S	20.14 E	371,291.24	554,007.04	2.25	1.66	-152.84	
2,202.00	1.81	76.85	2,201.06	1.13 S	22.09 E	371,291.77	554,008.99	0.22	1.13	113.06	
2,297.00	1.73	76.56	2,296.01	0.46 S	24.94 E	371,292.44	554,011.84	0.08	0.46	-173.76	
2,392.00	0.35	168.06	2,391.00	0.41 S	26.40 E	371,292.49	554,013.30	1.87	0.41	168.62	
2,487.00	1.09	228.60	2,485.99	1.29 S	25.78 E	371,291.61	554,012.68	1.02	1.29	78.90	
2,582.00	0.99	235.30	2,580.97	2.35 S	24.43 E	371,290.55	554,011.33	0.17	2.35	132.75	
2,676.00	1.14	234.86	2,674.96	3.35 S	22.99 E	371,289.55	554,009.89	0.16	3.35	-3.34	
2,771.00	0.19	271.59	2,769.95	3.89 S	22.06 E	371,289.01	554,008.96	1.05	3.89	173.44	
2,866.00	0.74	11.63	2,864.95	3.29 S	22.03 E	371,289.61	554,008.93	0.84	3.29	113.64	
2,961.00	0.64	37.77	2,959.94	2.27 S	22.48 E	371,290.63	554,009.38	0.34	2.27	120.40	
3,056.00	0.74	19.08	3,054.93	1.27 S	23.00 E	371,291.63	554,009.90	0.26	1.27	-75.58	
3,151.00	0.47	36.93	3,149.93	0.38 S	23.44 E	371,292.52	554,010.34	0.34	0.38	153.79	
3,246.00	0.22	62.18	3,244.93	0.02 N	23.83 E	371,292.92	554,010.73	0.30	-0.02	160.90	

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
3,341.00	0.03	274.24	3,339.93	0.11 N	23.97 E	371,293.01	554,010.87	0.26	-0.11	-176.29	
3,435.00	0.10	262.61	3,433.93	0.10 N	23.86 E	371,293.00	554,010.76	0.08	-0.10	-16.53	
3,530.00	0.40	190.20	3,528.93	0.24 S	23.72 E	371,292.66	554,010.62	0.40	0.24	-86.87	
3,625.00	0.31	226.53	3,623.92	0.74 S	23.48 E	371,292.16	554,010.38	0.25	0.74	129.29	
3,719.00	0.07	145.03	3,717.92	0.96 S	23.33 E	371,291.94	554,010.23	0.33	0.96	-166.99	
3,814.00	0.34	213.67	3,812.92	1.25 S	23.20 E	371,291.65	554,010.10	0.34	1.25	80.35	
3,909.00	0.53	213.54	3,907.92	1.85 S	22.80 E	371,291.05	554,009.70	0.20	1.85	-0.36	
4,003.00	1.00	242.55	4,001.91	2.59 S	21.84 E	371,290.31	554,008.74	0.63	2.59	54.61	
4,098.00	0.65	82.54	4,096.91	2.90 S	21.63 E	371,290.00	554,008.53	1.71	2.90	-172.15	
4,193.00	1.03	77.34	4,191.90	2.64 S	23.00 E	371,290.26	554,009.90	0.41	2.64	-13.95	
4,288.00	0.59	93.77	4,286.89	2.49 S	24.32 E	371,290.41	554,011.22	0.52	2.49	160.22	
4,382.00	0.48	118.94	4,380.88	2.71 S	25.15 E	371,290.19	554,012.05	0.27	2.71	127.31	
4,477.00	0.66	107.43	4,475.88	3.07 S	26.02 E	371,289.83	554,012.92	0.22	3.07	-38.30	
4,572.00	0.79	127.73	4,570.87	3.63 S	27.06 E	371,289.27	554,013.96	0.30	3.63	73.55	
4,667.00	0.85	134.31	4,665.86	4.52 S	28.08 E	371,288.38	554,014.98	0.12	4.52	60.81	
4,761.00	0.88	139.32	4,759.85	5.56 S	29.05 E	371,287.34	554,015.95	0.09	5.56	70.88	
4,856.00	0.27	225.43	4,854.85	6.27 S	29.37 E	371,286.63	554,016.27	0.95	6.27	162.64	
4,950.00	0.61	259.75	4,948.84	6.51 S	28.72 E	371,286.39	554,015.62	0.44	6.51	55.79	
5,045.00	0.52	274.19	5,043.84	6.57 S	27.79 E	371,286.33	554,014.69	0.18	6.57	129.38	
5,140.00	0.90	254.80	5,138.83	6.74 S	26.64 E	371,286.16	554,013.54	0.47	6.74	-42.25	
5,234.00	0.83	16.72	5,232.83	6.28 S	26.12 E	371,286.62	554,013.02	1.61	6.28	152.24	
5,329.00	0.35	27.26	5,327.82	5.36 S	26.46 E	371,287.54	554,013.36	0.52	5.36	172.49	
5,423.00	0.10	28.28	5,421.82	5.03 S	26.63 E	371,287.87	554,013.53	0.27	5.03	179.59	
5,518.00	0.38	166.51	5,516.82	5.27 S	26.74 E	371,287.63	554,013.64	0.48	5.27	146.57	
5,613.00	0.46	206.32	5,611.82	5.92 S	26.64 E	371,286.98	554,013.54	0.31	5.92	95.17	
5,707.00	0.59	288.62	5,705.82	6.10 S	26.02 E	371,286.80	554,012.92	0.74	6.10	123.08	
5,802.00	1.32	286.31	5,800.80	5.64 S	24.50 E	371,287.26	554,011.40	0.77	5.64	-4.17	
5,895.00	1.50	294.06	5,893.77	4.84 S	22.36 E	371,288.06	554,009.26	0.28	4.84	50.57	
5,991.00	1.18	305.02	5,989.75	3.76 S	20.41 E	371,289.14	554,007.31	0.43	3.76	146.70	
6,085.00	1.00	286.99	6,083.73	2.96 S	18.83 E	371,289.94	554,005.73	0.41	2.96	-126.51	
6,180.00	0.52	344.75	6,178.72	2.31 S	17.92 E	371,290.59	554,004.82	0.89	2.31	148.67	
6,274.00	0.00	12.31	6,272.72	1.89 S	17.81 E	371,291.01	554,004.71	0.55	1.89	180.00	
6,370.00	0.20	181.53	6,368.72	2.06 S	17.81 E	371,290.84	554,004.71	0.21	2.06	181.53	
6,391.00	0.35	150.75	6,389.72	2.15 S	17.84 E	371,290.75	554,004.74	0.98	2.15	-60.65	
6,449.00	0.22	142.13	6,447.72	2.40 S	17.99 E	371,290.50	554,004.89	0.24	2.40	-166.02	
6,480.00	3.42	83.73	6,478.70	2.34 S	18.95 E	371,290.56	554,005.85	10.68	2.34	-61.64	
6,512.00	7.82	85.81	6,510.54	2.08 S	22.07 E	371,290.82	554,008.97	13.76	2.08	3.69	

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
6,543.00	12.47	87.88	6,541.05	1.80 S	27.52 E	371,291.10	554,014.42	15.04	1.80	5.50	
6,575.00	17.33	89.54	6,571.96	1.63 S	35.74 E	371,291.27	554,022.64	15.24	1.63	5.82	
6,607.00	21.75	90.65	6,602.11	1.66 S	46.44 E	371,291.24	554,033.34	13.86	1.66	5.33	
6,638.00	26.60	91.93	6,630.38	1.96 S	59.13 E	371,290.94	554,046.03	15.74	1.96	6.76	
6,670.00	30.10	91.44	6,658.54	2.41 S	74.32 E	371,290.49	554,061.22	10.96	2.41	-4.02	
6,701.00	33.55	89.78	6,684.88	2.57 S	90.66 E	371,290.33	554,077.56	11.48	2.57	-14.95	
6,732.00	37.13	88.94	6,710.16	2.36 S	108.59 E	371,290.54	554,095.49	11.65	2.36	-8.07	
6,763.00	41.48	88.11	6,734.14	1.85 S	128.21 E	371,291.05	554,115.11	14.13	1.85	-7.21	
6,795.00	45.10	88.76	6,757.43	1.26 S	150.14 E	371,291.64	554,137.04	11.40	1.26	7.26	
6,827.00	46.92	92.29	6,779.66	1.48 S	173.16 E	371,291.42	554,160.06	9.76	1.48	55.61	
6,858.00	47.00	97.89	6,800.83	3.49 S	195.71 E	371,289.41	554,182.61	13.20	3.49	90.79	
6,890.00	47.85	102.87	6,822.48	7.74 S	218.87 E	371,285.16	554,205.77	11.76	7.74	78.64	
6,922.00	48.94	107.58	6,843.74	14.02 S	241.94 E	371,278.88	554,228.84	11.52	14.02	74.38	
6,953.00	49.30	113.39	6,864.04	22.22 S	263.88 E	371,270.68	554,250.78	14.22	22.22	87.22	
6,985.00	49.83	117.83	6,884.80	32.75 S	285.83 E	371,260.15	554,272.73	10.69	32.75	82.53	
7,017.00	49.39	122.45	6,905.54	44.98 S	306.90 E	371,247.92	554,293.80	11.08	44.98	98.62	
7,048.00	50.20	125.72	6,925.55	58.25 S	326.50 E	371,234.65	554,313.40	8.47	58.25	73.09	
7,079.00	50.36	129.18	6,945.37	72.74 S	345.43 E	371,220.16	554,332.33	8.60	72.74	87.67	
7,111.00	51.55	134.29	6,965.53	89.28 S	363.95 E	371,203.62	554,350.85	12.95	89.28	74.93	
7,143.00	52.44	137.58	6,985.24	107.40 S	381.48 E	371,185.50	554,368.38	8.56	107.40	72.07	
7,174.00	53.89	140.59	7,003.83	126.15 S	397.72 E	371,166.75	554,384.62	9.07	126.15	59.87	
7,205.00	55.97	143.56	7,021.64	146.16 S	413.31 E	371,146.74	554,400.21	10.32	146.16	50.31	
7,236.00	57.91	145.59	7,038.55	167.34 S	428.36 E	371,125.56	554,415.26	8.32	167.34	41.81	
7,267.00	59.52	149.32	7,054.65	189.67 S	442.60 E	371,103.23	554,429.50	11.52	189.67	64.18	
7,299.00	61.59	151.06	7,070.38	213.84 S	456.45 E	371,079.06	554,443.35	8.02	213.84	36.64	
7,331.00	62.81	151.60	7,085.31	238.68 S	470.03 E	371,054.22	554,456.93	4.09	238.68	21.51	
7,363.00	62.97	151.18	7,099.89	263.69 S	483.67 E	371,029.21	554,470.57	1.27	263.69	-66.93	
7,394.00	63.12	150.67	7,113.94	287.84 S	497.10 E	371,005.06	554,484.00	1.54	287.84	-71.85	
7,426.00	62.96	150.16	7,128.45	312.64 S	511.18 E	370,980.26	554,498.08	1.51	312.64	-109.51	
7,457.00	65.12	152.19	7,142.02	337.06 S	524.61 E	370,955.84	554,511.51	9.12	337.06	40.65	
7,489.00	67.42	155.03	7,154.90	363.30 S	537.62 E	370,929.60	554,524.52	10.85	363.30	49.08	
7,520.00	69.26	156.96	7,166.34	389.61 S	549.34 E	370,903.29	554,536.24	8.29	389.61	44.63	
7,552.00	71.16	159.39	7,177.18	417.56 S	560.53 E	370,875.34	554,547.43	9.29	417.56	50.69	
7,584.00	72.79	161.51	7,187.08	446.24 S	570.71 E	370,846.66	554,557.61	8.10	446.24	51.37	
7,615.00	74.83	162.83	7,195.72	474.58 S	579.82 E	370,818.32	554,566.72	7.75	474.58	32.04	
7,646.00	76.90	165.58	7,203.30	503.50 S	588.00 E	370,789.40	554,574.90	10.89	503.50	52.52	
7,678.00	78.92	167.63	7,210.00	533.93 S	595.25 E	370,758.97	554,582.15	8.89	533.93	45.00	

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
7,710.00	81.65	168.65	7,215.40	564.80 S	601.73 E	370,728.10	554,588.63	9.09	564.80	20.31	
7,742.00	84.05	170.10	7,219.38	596.00 S	607.58 E	370,696.90	554,594.48	8.74	596.00	31.03	
7,773.00	85.25	171.91	7,222.27	626.49 S	612.41 E	370,666.41	554,599.31	6.98	626.49	56.43	
7,804.00	85.83	173.88	7,224.68	657.15 S	616.23 E	370,635.75	554,603.13	6.61	657.15	73.63	
7,836.00	86.51	176.02	7,226.82	688.96 S	619.04 E	370,603.94	554,605.94	7.00	688.96	72.41	
7,885.00	88.06	178.62	7,229.14	737.84 S	621.33 E	370,555.06	554,608.23	6.17	737.84	59.24	
7,929.00	90.49	181.26	7,229.70	781.83 S	621.37 E	370,511.07	554,608.27	8.15	781.83	47.39	
8,024.00	92.66	182.29	7,227.09	876.74 S	618.43 E	370,416.16	554,605.33	2.53	876.74	25.37	
8,118.00	91.36	180.32	7,223.79	970.65 S	616.29 E	370,322.25	554,603.19	2.51	970.65	-123.40	
8,213.00	90.99	179.10	7,221.84	1,065.63 S	616.77 E	370,227.27	554,603.67	1.34	1,065.63	-106.86	
8,308.00	91.42	179.33	7,219.84	1,160.60 S	618.07 E	370,132.30	554,604.97	0.51	1,160.60	28.13	
8,402.00	92.59	179.51	7,216.55	1,254.54 S	619.02 E	370,038.36	554,605.92	1.26	1,254.54	8.74	
8,497.00	90.31	180.80	7,214.15	1,349.50 S	618.77 E	369,943.40	554,605.67	2.76	1,349.50	150.49	
8,591.00	90.74	181.57	7,213.29	1,443.47 S	616.82 E	369,849.43	554,603.72	0.94	1,443.47	60.82	
8,686.00	91.98	181.77	7,211.03	1,538.40 S	614.06 E	369,754.50	554,600.96	1.32	1,538.40	9.16	
8,781.00	90.49	182.08	7,208.99	1,633.33 S	610.87 E	369,659.57	554,597.77	1.60	1,633.33	168.25	
8,875.00	90.68	182.46	7,208.03	1,727.25 S	607.14 E	369,565.65	554,594.04	0.45	1,727.25	63.43	
8,970.00	92.28	182.63	7,205.57	1,822.12 S	602.93 E	369,470.78	554,589.83	1.69	1,822.12	6.06	
9,064.00	91.79	182.13	7,202.24	1,915.98 S	599.02 E	369,376.92	554,585.92	0.74	1,915.98	-134.43	
9,159.00	91.98	182.39	7,199.11	2,010.85 S	595.28 E	369,282.05	554,582.18	0.34	2,010.85	53.82	
9,254.00	89.94	181.65	7,197.52	2,105.77 S	591.93 E	369,187.13	554,578.83	2.28	2,105.77	-160.06	
9,349.00	90.00	179.35	7,197.57	2,200.76 S	591.10 E	369,092.14	554,578.00	2.42	2,200.76	-88.51	
9,444.00	90.99	178.10	7,196.75	2,295.73 S	593.22 E	368,997.17	554,580.12	1.68	2,295.73	-51.62	
9,539.00	92.29	178.22	7,194.03	2,390.64 S	596.27 E	368,902.26	554,583.17	1.37	2,390.64	5.27	
9,634.00	90.43	179.34	7,191.78	2,485.59 S	598.29 E	368,807.31	554,585.19	2.29	2,485.59	148.94	
9,729.00	91.30	180.08	7,190.34	2,580.58 S	598.77 E	368,712.32	554,585.67	1.20	2,580.58	40.38	
9,824.00	90.31	178.63	7,189.01	2,675.56 S	599.84 E	368,617.34	554,586.74	1.85	2,675.56	-124.31	
9,919.00	90.12	178.72	7,188.65	2,770.53 S	602.03 E	368,522.37	554,588.93	0.22	2,770.53	154.65	
10,013.00	91.11	179.27	7,187.64	2,864.51 S	603.68 E	368,428.39	554,590.58	1.20	2,864.51	29.05	
10,108.00	92.35	179.59	7,184.77	2,959.46 S	604.63 E	368,333.44	554,591.53	1.35	2,959.46	14.46	
10,203.00	93.46	179.09	7,179.96	3,054.33 S	605.72 E	368,238.57	554,592.62	1.28	3,054.33	-24.21	
10,298.00	92.47	178.64	7,175.04	3,149.18 S	607.60 E	368,143.72	554,594.50	1.14	3,149.18	-155.57	
10,392.00	90.12	178.41	7,172.92	3,243.12 S	610.02 E	368,049.78	554,596.92	2.51	3,243.12	-174.41	
10,487.00	90.80	178.91	7,172.16	3,338.09 S	612.24 E	367,954.81	554,599.14	0.89	3,338.09	36.32	
10,582.00	92.47	180.16	7,169.45	3,433.04 S	613.01 E	367,859.86	554,599.91	2.20	3,433.04	36.79	
10,676.00	91.24	180.80	7,166.40	3,526.99 S	612.22 E	367,765.91	554,599.12	1.47	3,526.99	152.51	

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
10,771.00	88.95	179.96	7,166.25	3,621.98 S	611.59 E	367,670.92	554,598.49	2.57	3,621.98	-159.85	
10,866.00	90.37	179.18	7,166.81	3,716.97 S	612.31 E	367,575.93	554,599.21	1.71	3,716.97	-28.78	
10,961.00	92.16	179.08	7,164.71	3,811.93 S	613.75 E	367,480.97	554,600.65	1.89	3,811.93	-3.20	
11,055.00	91.85	179.25	7,161.42	3,905.87 S	615.12 E	367,387.03	554,602.02	0.38	3,905.87	151.27	
11,151.00	92.04	179.79	7,158.17	4,001.81 S	615.92 E	367,291.09	554,602.82	0.60	4,001.81	70.60	
11,245.00	93.03	180.25	7,154.01	4,095.71 S	615.89 E	367,197.19	554,602.79	1.16	4,095.71	24.89	
11,340.00	91.30	180.52	7,150.42	4,190.64 S	615.25 E	367,102.26	554,602.15	1.84	4,190.64	171.13	
11,435.00	90.00	180.74	7,149.34	4,285.63 S	614.21 E	367,007.27	554,601.11	1.39	4,285.63	170.39	
11,530.00	88.40	180.81	7,150.67	4,380.61 S	612.92 E	366,912.29	554,599.82	1.69	4,380.61	177.50	
11,624.00	88.89	181.18	7,152.89	4,474.56 S	611.29 E	366,818.34	554,598.19	0.65	4,474.56	37.05	
11,719.00	90.00	181.79	7,153.81	4,569.53 S	608.83 E	366,723.37	554,595.73	1.33	4,569.53	28.79	
11,814.00	89.63	180.33	7,154.12	4,664.51 S	607.07 E	366,628.39	554,593.97	1.59	4,664.51	-104.22	
11,909.00	89.32	178.94	7,154.99	4,759.50 S	607.68 E	366,533.40	554,594.58	1.50	4,759.50	-102.58	
12,004.00	90.12	178.98	7,155.45	4,854.48 S	609.40 E	366,438.42	554,596.30	0.84	4,854.48	2.86	
12,097.00	91.42	179.64	7,154.20	4,947.46 S	610.52 E	366,345.44	554,597.42	1.57	4,947.46	26.91	
12,192.00	90.80	179.26	7,152.36	5,042.44 S	611.43 E	366,250.46	554,598.33	0.77	5,042.44	-148.50	
12,287.00	91.36	179.40	7,150.57	5,137.42 S	612.54 E	366,155.48	554,599.44	0.61	5,137.42	14.03	
12,382.00	90.93	178.93	7,148.67	5,232.39 S	613.93 E	366,060.51	554,600.83	0.67	5,232.39	-132.46	
12,476.00	91.36	178.80	7,146.80	5,326.35 S	615.79 E	365,966.55	554,602.69	0.48	5,326.35	-16.82	
12,571.00	90.31	179.22	7,145.41	5,421.32 S	617.43 E	365,871.58	554,604.33	1.19	5,421.32	158.20	
12,666.00	89.63	179.05	7,145.46	5,516.31 S	618.86 E	365,776.59	554,605.76	0.74	5,516.31	-165.96	
12,761.00	91.05	179.54	7,144.90	5,611.30 S	620.03 E	365,681.60	554,606.93	1.58	5,611.30	19.04	
12,855.00	89.94	179.27	7,144.08	5,705.29 S	621.01 E	365,587.61	554,607.91	1.22	5,705.29	-166.33	
12,950.00	89.14	178.80	7,144.85	5,800.27 S	622.61 E	365,492.63	554,609.51	0.98	5,800.27	-149.57	
13,044.00	90.12	179.51	7,145.45	5,894.26 S	623.99 E	365,398.64	554,610.89	1.29	5,894.26	35.93	
13,139.00	91.17	179.91	7,144.39	5,989.25 S	624.48 E	365,303.65	554,611.38	1.18	5,989.25	20.85	
13,234.00	90.49	178.99	7,143.01	6,084.23 S	625.39 E	365,208.67	554,612.29	1.20	6,084.23	-126.46	
13,331.00	90.12	178.58	7,142.49	6,181.21 S	627.44 E	365,111.69	554,614.34	0.57	6,181.21	-132.06	
13,426.00	90.12	178.95	7,142.29	6,276.19 S	629.49 E	365,016.71	554,616.39	0.39	6,276.19	90.00	
13,520.00	90.19	179.54	7,142.04	6,370.18 S	630.73 E	364,922.72	554,617.63	0.63	6,370.18	83.23	
13,615.00	89.75	179.72	7,142.09	6,465.18 S	631.34 E	364,827.72	554,618.24	0.50	6,465.18	157.75	
13,709.00	88.71	178.20	7,143.35	6,559.15 S	633.05 E	364,733.75	554,619.95	1.96	6,559.15	-124.39	
13,802.00	88.76	176.64	7,145.41	6,652.03 S	637.24 E	364,640.87	554,624.14	1.68	6,652.03	-88.18	
13,896.00	89.14	175.68	7,147.13	6,745.80 S	643.53 E	364,547.10	554,630.43	1.10	6,745.80	-68.41	
13,991.00	90.12	177.26	7,147.74	6,840.61 S	649.38 E	364,452.29	554,636.28	1.96	6,840.61	58.20	
14,085.00	89.88	177.56	7,147.74	6,934.52 S	653.63 E	364,358.38	554,640.53	0.41	6,934.52	128.66	
14,180.00	89.69	178.07	7,148.10	7,029.45 S	657.25 E	364,263.45	554,644.15	0.57	7,029.45	110.43	

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Measured Depth (usft)	Inclination (°)	Grid Azimuth (°)	Vertical Depth (usft)	Local Coordinates Northing (usft)	Local Coordinates Easting (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Dogleg Rate (°/100usft)	Vertical Section (usft)	Toolface Angle (°)	Comments
14,271.00	89.32	178.71	7,148.88	7,120.41 S	659.80 E	364,172.49	554,646.70	0.81	7,120.41	120.04	Last MWD Survey - 14271.00' MD
14,339.00	89.32	178.71	7,149.69	7,188.39 S	661.34 E	364,104.51	554,648.24	0.00	7,188.39	0.00	Projection to TD - 14339.00' MD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
14,271.00	7,148.88	-7,120.41	659.80	Last MWD Survey - 14271.00' MD
14,339.00	7,149.69	-7,188.39	661.34	Projection to TD - 14339.00' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	180.00	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
123.00	14,271.00	Survey #1	MWD
14,339.00	14,339.00	Survey #2	Blind (OWSG)

Design Targets

Target Name - hit/miss target - Shape	Dip Angle ()	Dip Dir. ()	TVD ()	+N/-S ()	+E/-W ()	Northing ()	Easting ()	Latitude	Longitude
()									

Design Report for Cottonwood 28-33 Fed Com 2BS 7H - Actual

Directional Difficulty Index

Average Dogleg over Survey:	1.84 °/100usft	Maximum Dogleg over Survey:	15.74 °/100usft at 6,638.00 usft
Net Tortousity applicable to Plans:	0.28 °/100usft	Directional Difficulty Index:	6.602

Audit Info

North Reference Sheet for Cottonwood 28-33 Federal - Cottonwood 28-33 Fed Com 2BS 7H - Wellbore #1

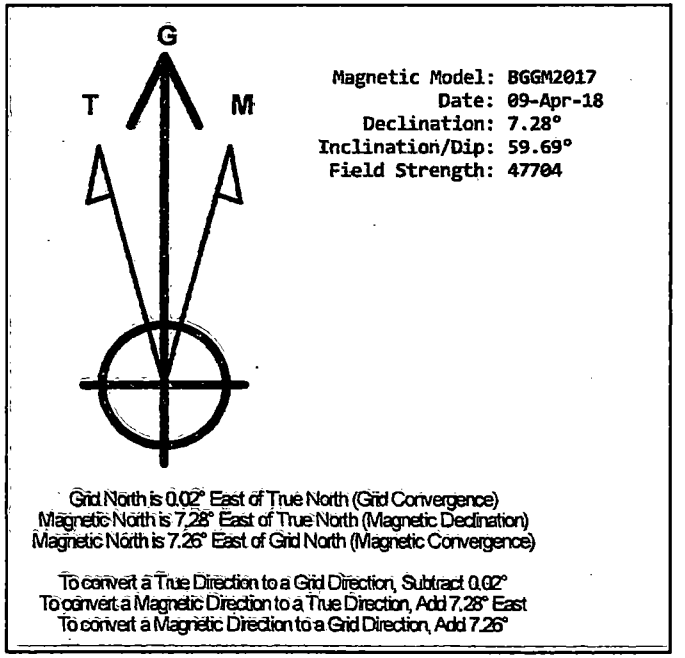
All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.
Vertical Depths are relative to GE 3384 + 22' KB @ 3406.00usft (Nabors M55). Northing and Easting are relative to Cottonwood 28-33 Fed Com 2BS 7H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980
Projection method is Transverse Mercator (Gauss-Kruger)
Central Meridian is 104° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°
False Easting: 541,337.50usft, False Northing: 0.00usft, Scale Reduction: 0.99990927

Grid Coordinates of Well: 371,292.90 usft N, 553,986.90 usft E
Geographical Coordinates of Well: 32° 01' 14.73" N, 104° 17' 33.06" W
Grid Convergence at Surface is: 0.02°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,339.00usft
the Bottom Hole Displacement is 7,218.74usft in the Direction of 174.74° (Grid).

Magnetic Convergence at surface is: -7.26° (9 April 2018, , BGGM2017)



District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
JUL 13 2018
DISTRICT II-ARTESIA O.C.D.

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
[X] AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-44650	64010	WELCH; BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
320688	COTTONWOOD 28-33 FED COM 2BS	7H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372137	CHISHOLM ENERGY OPERATING, LLC	3384'

[10] Surface Location

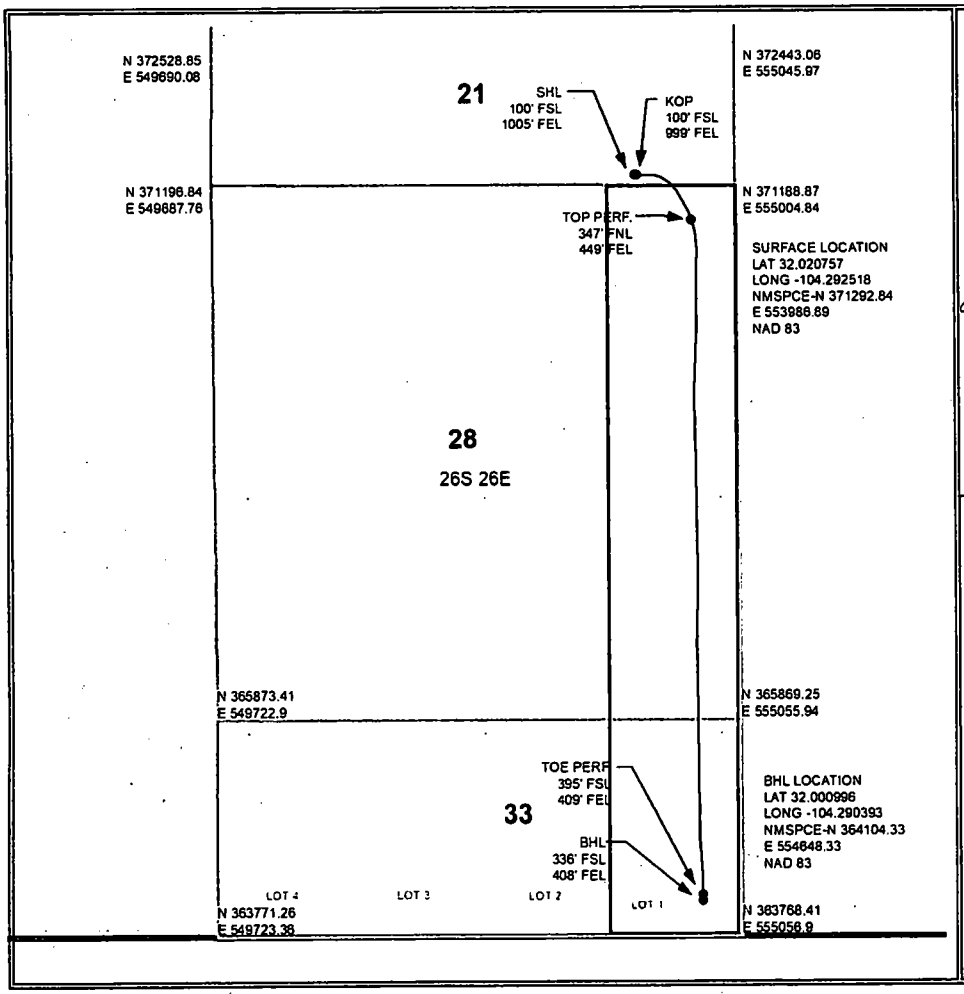
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	21	26 S	26 E		100	SOUTH	1005	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 1	33	26 S	26 E		336	SOUTH	408	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
223.23			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jennifer Elrod 07/06/2018
Signature Date

JENNIFER ELROD
Printed Name

jelrod@chisholmenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number