

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
HobbsFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other			6. If Indian, Allottee or Tribe Name		
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____			7. Unit or CA Agreement Name and No.		
2. Name of Operator MARATHON OIL PERMIAN LLC			Contact: ADRIAN COVARRUBIAS E-Mail: acovarrubias@marathonoil.com		
3. Address 5555 SAN FELIPE HOUSTON, TX 77056			3a. Phone No. (include area code) Ph: 713-296-3368		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface SESW 287FSL 1841FWL At top prod interval reported below SESW 287FSL 1841FWL At total depth NENW 101FNL 1633FWL			8. Lease Name and Well No. CAVE LION 5 TB FEDERAL 8H		
14. Date Spudded 03/04/2019			15. Date T.D. Reached 05/29/2019		
16. Date Completed ☐ D & A ☒ Ready to Prod. 08/01/2019			17. Elevations (DF, KB, RT, GL)* 3262 GL		
18. Total Depth: MD 17261 TVD 12463			19. Plug Back T.D.: MD TVD		
20. Depth Bridge Plug Set: MD TVD			21. Type Electric & Other Mechanical Logs Run (Submit copy of each) MUD AND GR		
22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)					

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J55	54.5	0	1181		1070		0	
12.250	9.625 J55	40.0	0	5403		1675		0	
8.750	7.000 P110	29.0	0	11785		1315		0	
6.125	4.500 P110	13.5	11459	17251		605		11459	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRINGS	12503	17184	12503 TO 17184	0.360	552	ACTIVE OPEN
B)						
C)						
D)						

26. Perforation Record

Depth Interval	Amount and Type of Material
12503 TO 17184	11,376,974 LBS - 40/70; 100-MESH

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
08/02/2019	08/08/2019	24	→	1514.0	2517.0	3904.0			FLOW FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
34	SI	2000.0	→					ACCEPTED FOR RECORD	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						DEC 03 2019
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→					BUREAU OF LAND MANAGEMENT ROSWELL FIELD OFFICE	

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #482726 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Reclamation due: 02/22/2020

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
SALADO	1514	3551	BRINE	SALADO	1514
CASTILE	3551	5108	BRINE	CASTILE	5108
BASE SALT	5108	5350	BRINE	BASE SALT	5108
LAMAR	5350	5401	OIL, GAS, AND WATER	LAMAR	5350
BELL CANYON	5401	6737	OIL, GAS, AND WATER	BELL CANYON	5401
CHERRY CANYON	6737	7878	OIL, GAS, AND WATER	CHERRY CANYON	6737
BRUSHY CANYON	7878	9459	OIL, GAS, AND WATER	BRUSHY CANYON	7878
BONE SPRING	9459	12404	OIL, GAS, AND WATER	BONE SPRING	9459

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.) 2. Geologic Report 3. DST Report 4. Directional Survey
5. Sundry Notice for plugging and cement verification 6. Core Analysis 7. Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #482726 Verified by the BLM Well Information System.
For MARATHON OIL PERMIAN LLC, sent to the Hobbs
Committed to AFMSS for processing by JENNIFER SANCHEZ on 11/18/2019 0

Name (please print) ADRIAN COVARRUBIASTitle CTR - TECHNICIAN HESSignature (Electronic Submission)Date 09/10/2019

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.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-45419	² Pool Code 97088	³ Pool Name WC-025 G-08 S2535340; BONE SPRING
⁴ Property Code	⁵ Property Name CAVE LION 5 TB FEDERAL	⁶ Well Number 8H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3262'

" Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	5	T26S	R35E		287'	SOUTH	1841'	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
C	5	T26S	R35E		101'	NORTH	1633'	WEST	LEA

¹² Dedicated Acres 160.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

¹⁶ SECTION 31 SECTION 32 SECTION 33 SECTION 5 SECTION 4 SECTION 6 SECTION 7 SECTION 8 SECTION 9 CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 832342.14' / Y: 393968.72' B - X: 833663.69' / Y: 393977.99' C - X: 833719.73' / Y: 388693.48' D - X: 832397.11' / Y: 388684.41' CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 791154.74' / Y: 393911.00' B - X: 792476.27' / Y: 393920.25' C - X: 792532.08' / Y: 388635.88' D - X: 791209.47' / Y: 388626.82'	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. Signature: <i>Adrian Covarrubias</i> Date: 9/10/2019 Printed Name: Adrian Covarrubias 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: 06/07/2019 Signature: <i>[Signature]</i> State of Professional Surveyor: [Blank] Certificate Number:

DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 1.000006454
CONVERGENCE: 0.4997137472; NOTE: ALL DIMENSIONS IN U.S. FEET

1	06/07/2019	DEF
REV.	DATE	BY

SHEET 1 OF 1
JOB No. R3757_008

District I
1625 N French Dr., Hobbs, NM 88240
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811 S First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Marathon Oil Permian LLC 5555 San Felipe St., Houston, TX 77056		² OGRID Number 372098
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30 - 025-45419	⁵ Pool Name WC-025 G-08 S2535340; BONE SPRING	⁶ Pool Code 97088
⁷ Property Code 319699	⁸ Property Name CAVE LION 5 TB FEDERAL	⁹ Well Number 8H

II. ¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
N	5	26S	35E		287	SOUTH	1841	WEST	LEA

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	5	26S	35E		101	NORTH	1633	WEST	LEA

¹² Lse Code	¹³ Producing Method Code	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
F					

III. Oil and Gas Transporters

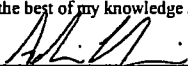
¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
	ORYX GATHERING - CARLSBAD	O
	LUCID ENERGY	G

IV. Well Completion Data

²¹ Spud Date	²² Ready Date	²³ TD	²⁴ PBTD	²⁵ Perforations	²⁶ DHC, MC
3/4/2019	8/1/2019	17261' / 12463'		12503' - 17184'	
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17 1/2"	13 3/8"	1181'	1070		
12 1/4"	9 5/8"	5403'	1675		
8 3/4"	7"	11785'	1315		
6 1/8"	4 1/2"	11459' - 17251'	605		

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
8/2/2019		8/8/2019	24 hrs	0	2000
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method
34	1514	3904	2517		Flowing

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Adrian Covarrubias		Approved by:	
Title: CTR - Technician HES		Title:	
E-mail Address: acovarrubias@marathonoil.com		Approval Date:	
Date: 9/9/2019	Phone: 713-296-3368		



Cave Lion 5 TB Federal #8H
Lea County, NM (NAD27-NME)
Northing: 388917.06
Easting: 791724.71
OH



To convert a Magnetic Direction to a Grid Direction, Add 6.08°
To convert a True Direction to a Grid Direction, Subtract 0.50°

Azimuths to Grid North
True North: -0.50°
Magnetic North: 6.08°

Magnetic Field
Strength: 47709.9snT
Dip Angle: 59.68°
Date: 5/20/2019
Model: HDGM

KB=26.5 @ 3288.50usft



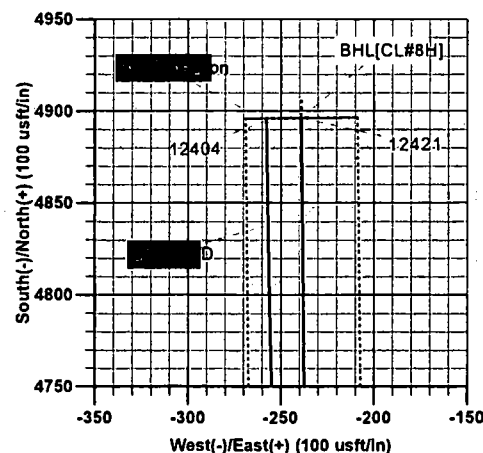
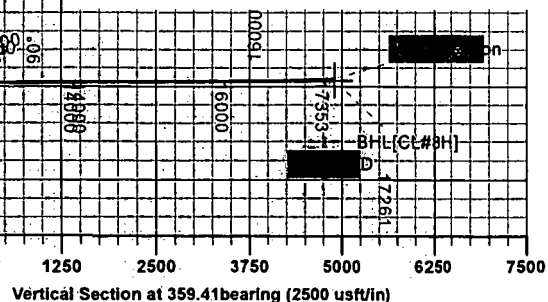
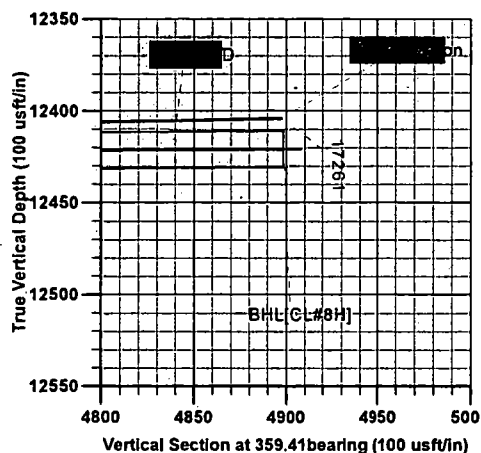
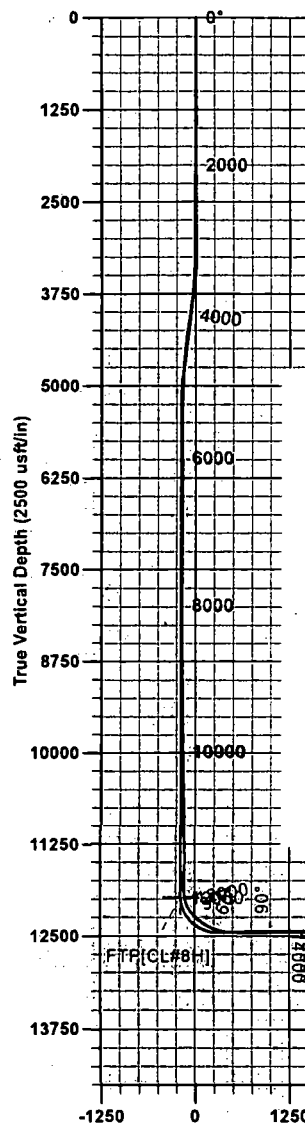
WELL DETAILS: Cave Lion 5 TB Federal #8H

Ground Level: 3262.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	388917.06	791724.71	32° 3' 56.698 N	103° 23' 29.817 W

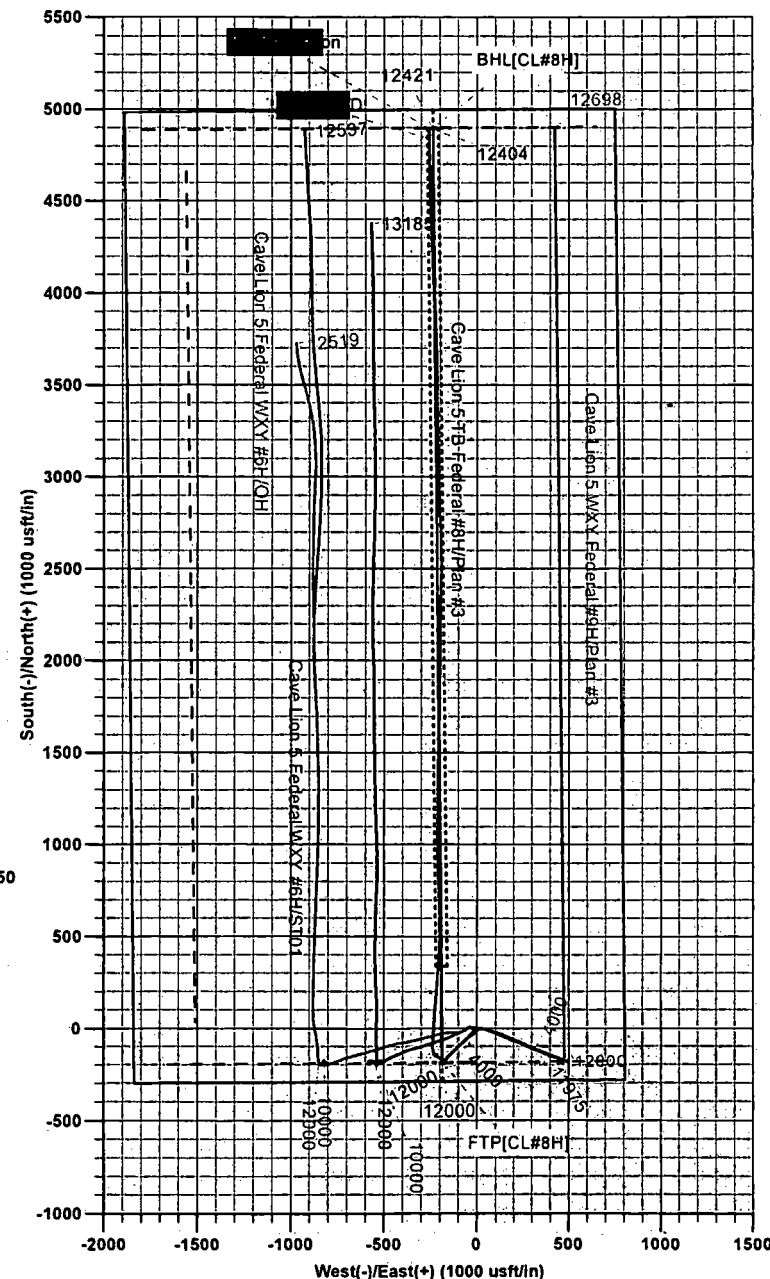
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3280.00	0.00	0.00	3280.00	0.00	0.00	0.00	0.00	0.00
3780.05	10.00	224.74	3777.51	-30.92	-30.64	2.00	224.74	-30.60
4802.56	10.00	224.74	4784.49	-157.06	-155.63	0.00	0.00	-155.45
5302.61	0.00	0.00	5282.00	-187.98	-186.27	2.00	180.00	-186.05
11996.10	0.00	0.00	11975.49	-187.98	-186.27	0.00	0.00	-186.05
12749.43	90.40	359.41	12452.94	292.79	-191.25	12.00	359.41	294.75
17353.21	90.40	359.41	12420.80	4896.22	-238.93	0.00	0.00	4898.42



ANNOTATIONS

TVD	MD	Annotation
12405.36	17204.00	SDI MWD
12404.26	17261.00	8ft Projection



Marathon Oil Permian, LLC
Cave Lion 5 TB Federal #8H - OH

Lea County, NM (NAD27-NME)
Cave Lion Pad
Your Ref:
5/29/2019

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Grid X	Grid Y	SSTVD
0	0	0	0	0	0	0	0	791724.7	388917.1	-3288.5
183	1.12	250.66	182.99	-0.59	-1.69	-0.57	0.61	791723	388916.5	-3105.51
244	0.83	260.1	243.98	-0.87	-2.69	-0.84	0.54	791722	388916.2	-3044.52
335	0.77	275.72	334.97	-0.92	-3.94	-0.88	0.25	791720.8	388916.1	-2953.53
426	0.67	264.27	425.96	-0.91	-5.08	-0.86	0.19	791719.6	388916.2	-2862.54
518	0.49	280.18	517.96	-0.89	-6	-0.83	0.26	791718.7	388916.2	-2770.54
608	0.47	280.86	607.96	-0.76	-6.74	-0.69	0.02	791718	388916.3	-2680.54
700	0.77	305.03	699.95	-0.33	-7.62	-0.25	0.43	791717.1	388916.7	-2588.55
792	0.86	298.29	791.94	0.35	-8.74	0.44	0.14	791716	388917.4	-2496.56
884	0.95	300.2	883.93	1.06	-10	1.16	0.1	791714.7	388918.1	-2404.57
974	1.08	304.37	973.92	1.92	-11.35	2.03	0.17	791713.4	388919	-2314.58
1065	0.93	320.34	1064.9	2.97	-12.53	3.1	0.35	791712.2	388920	-2223.6
1247	1.02	308.68	1246.88	5.12	-14.73	5.27	0.12	791710	388922.2	-2041.62
1341	0.47	147.16	1340.87	5.32	-15.18	5.47	1.57	791709.5	388922.4	-1947.63
1436	1.24	141.37	1435.86	4.19	-14.33	4.33	0.81	791710.4	388921.3	-1852.64
1530	1.7	143.2	1529.83	2.28	-12.85	2.41	0.49	791711.9	388919.3	-1758.67
1624	1.45	144.81	1623.79	0.19	-11.33	0.3	0.27	791713.4	388917.3	-1664.71
1719	1.52	150.82	1718.76	-1.9	-10.03	-1.79	0.18	791714.7	388915.2	-1569.74
1813	1.5	145.85	1812.73	-4	-8.73	-3.91	0.14	791716	388913.1	-1475.77
1907	1.17	138.58	1906.7	-5.74	-7.4	-5.66	0.39	791717.3	388911.3	-1381.8
2002	0.95	131.05	2001.69	-6.98	-6.17	-6.92	0.27	791718.5	388910.1	-1286.81
2096	0.62	129.2	2095.68	-7.82	-5.19	-7.76	0.35	791719.5	388909.2	-1192.82
2190	0.69	163	2189.67	-8.68	-4.63	-8.63	0.41	791720.1	388908.4	-1098.83
2285	0.5	140.92	2284.67	-9.55	-4.2	-9.5	0.31	791720.5	388907.5	-1003.83
2379	1.03	122.45	2378.66	-10.32	-3.23	-10.29	0.61	791721.5	388906.7	-909.84
2474	0.36	152.75	2473.65	-11.04	-2.37	-11.02	0.78	791722.3	388906	-814.85
2568	0.3	104.75	2567.65	-11.37	-2	-11.35	0.29	791722.7	388905.7	-720.85
2662	0.62	146.58	2661.65	-11.86	-1.48	-11.84	0.47	791723.2	388905.2	-626.85
2757	0.51	78.81	2756.64	-12.2	-0.78	-12.19	0.67	791723.9	388904.9	-531.86
2851	0.89	73.25	2850.64	-11.91	0.33	-11.91	0.41	791725	388905.2	-437.86
2945	0.71	52.35	2944.63	-11.35	1.49	-11.36	0.36	791726.2	388905.7	-343.87
3040	0.71	90.79	3039.62	-10.99	2.54	-11.02	0.49	791727.3	388906.1	-248.88
3134	0.17	210.38	3133.62	-11.12	3.06	-11.15	0.86	791727.8	388905.9	-154.88
3228	1.52	227.9	3227.61	-12.08	2.06	-12.1	1.45	791726.8	388905	-60.89
3323	2.51	219.03	3322.55	-14.54	-0.18	-14.54	1.09	791724.5	388902.5	34.05
3417	3.81	225.83	3416.4	-18.31	-3.72	-18.28	1.44	791721	388898.8	127.9
3512	4.82	232.16	3511.13	-22.96	-9.14	-22.87	1.17	791715.6	388894.1	222.63
3606	6.09	233.54	3604.7	-28.35	-16.27	-28.18	1.36	791708.4	388888.7	316.2
3701	7.31	234.63	3699.05	-34.84	-25.25	-34.58	1.29	791699.5	388882.2	410.55
3795	9.06	232.5	3792.09	-42.81	-36	-42.44	1.89	791688.7	388874.3	503.59
3890	10.58	226.17	3885.7	-53.4	-48.22	-52.9	1.96	791676.5	388863.7	597.2

3984	11.14	227.72	3978.02	-65.49	-61.17	-64.86	0.67	791663.5	388851.6	689.52
4079	11.49	226.52	4071.17	-78.17	-74.82	-77.4	0.44	791649.9	388838.9	782.67
4173	11.29	226.35	4163.32	-90.97	-88.27	-90.05	0.22	791636.4	388826.1	874.82
4267	11.23	225.33	4255.51	-103.75	-101.44	-102.7	0.22	791623.3	388813.3	967.01
4362	11.15	225.9	4348.7	-116.65	-114.62	-115.46	0.14	791610.1	388800.4	1060.2
4456	9.91	228.67	4441.12	-128.32	-127.22	-127	1.42	791597.5	388788.7	1152.62
4550	8.2	226.3	4533.95	-138.29	-138.14	-136.86	1.86	791586.6	388778.8	1245.45
4645	6.5	222.52	4628.16	-146.93	-146.67	-145.42	1.86	791578	388770.1	1339.66
4739	5.62	223.22	4721.64	-154.21	-153.42	-152.62	0.94	791571.3	388762.9	1433.14
4834	4.22	219.73	4816.28	-160.29	-158.84	-158.64	1.51	791565.9	388756.8	1527.78
4928	2.96	208.23	4910.1	-165.09	-162.2	-163.41	1.54	791562.5	388752	1621.6
5023	3.21	205.51	5004.96	-169.65	-164.5	-167.95	0.3	791560.2	388747.4	1716.46
5117	2.94	206.69	5098.83	-174.18	-166.72	-172.45	0.3	791558	388742.9	1810.33
5212	2.84	240.53	5193.71	-177.51	-169.86	-175.75	1.77	791554.8	388739.6	1905.21
5306	2.91	256.71	5287.59	-179.21	-174.21	-177.4	0.86	791550.5	388737.9	1999.09
5385	2.98	256.32	5366.49	-180.15	-178.16	-178.31	0.09	791546.6	388736.9	2077.99
5490	1.9	276.78	5471.4	-180.59	-182.54	-178.7	1.31	791542.2	388736.5	2182.9
5585	0.81	348.08	5566.37	-179.75	-184.24	-177.84	1.91	791540.5	388737.3	2277.87
5680	0.82	354.61	5661.36	-178.42	-184.45	-176.51	0.1	791540.3	388738.6	2372.86
5774	0.41	351.26	5755.36	-177.41	-184.56	-175.5	0.44	791540.2	388739.6	2466.86
5868	0.24	164.23	5849.36	-177.27	-184.56	-175.36	0.69	791540.2	388739.8	2560.86
5963	0.2	164.57	5944.36	-177.62	-184.46	-175.71	0.04	791540.3	388739.4	2655.86
6057	0.24	164.26	6038.35	-177.97	-184.36	-176.06	0.04	791540.4	388739.1	2749.85
6152	0.27	143.56	6133.35	-178.34	-184.18	-176.44	0.1	791540.5	388738.7	2844.85
6246	0.15	138.23	6227.35	-178.61	-183.96	-176.71	0.13	791540.8	388738.5	2938.85
6340	0.17	175.86	6321.35	-178.84	-183.87	-176.94	0.11	791540.8	388738.2	3032.85
6435	0.09	236.78	6416.35	-179.02	-183.92	-177.12	0.16	791540.8	388738	3127.85
6529	0.05	254.15	6510.35	-179.08	-184.02	-177.17	0.05	791540.7	388738	3221.85
6624	0.03	264.07	6605.35	-179.09	-184.09	-177.18	0.02	791540.6	388738	3316.85
6718	0.07	346.38	6699.35	-179.04	-184.13	-177.13	0.08	791540.6	388738	3410.85
6813	0.08	290.11	6794.35	-178.96	-184.2	-177.05	0.08	791540.5	388738.1	3505.85
6907	0.13	350.67	6888.35	-178.83	-184.28	-176.92	0.12	791540.4	388738.2	3599.85
7002	0.08	316.28	6983.35	-178.68	-184.35	-176.77	0.08	791540.4	388738.4	3694.85
7096	0.1	73.98	7077.35	-178.61	-184.31	-176.7	0.16	791540.4	388738.5	3788.85
7190	0.31	119.65	7171.35	-178.71	-184.01	-176.8	0.27	791540.7	388738.4	3882.85
7285	0.51	126.44	7266.35	-179.09	-183.45	-177.19	0.22	791541.3	388738	3977.85
7379	0.57	132.53	7360.34	-179.65	-182.77	-177.76	0.09	791541.9	388737.4	4071.84
7473	0.69	124.88	7454.34	-180.29	-181.96	-178.41	0.16	791542.8	388736.8	4165.84
7568	0.86	119.68	7549.33	-180.97	-180.87	-179.1	0.19	791543.8	388736.1	4260.83
7662	0.96	123.04	7643.32	-181.75	-179.6	-179.89	0.12	791545.1	388735.3	4354.82
7757	0.97	127.6	7738.31	-182.67	-178.29	-180.83	0.08	791546.4	388734.4	4449.81
7851	0.94	113.82	7832.29	-183.47	-176.96	-181.64	0.25	791547.8	388733.6	4543.79
7946	0.41	105.2	7927.29	-183.88	-175.92	-182.05	0.57	791548.8	388733.2	4638.79
8040	0.56	127.77	8021.28	-184.24	-175.23	-182.43	0.26	791549.5	388732.8	4732.78
8134	0.66	130.76	8115.28	-184.88	-174.45	-183.07	0.11	791550.3	388732.2	4826.78
8229	0.19	202.47	8210.27	-185.38	-174.1	-183.58	0.66	791550.6	388731.7	4921.77
8323	0.96	293.46	8304.27	-185.21	-174.88	-183.4	1.04	791549.8	388731.9	5015.77
8418	1.08	288.04	8399.25	-184.62	-176.46	-182.79	0.16	791548.2	388732.4	5110.75
8512	0.88	298.11	8493.24	-184	-177.94	-182.16	0.28	791546.8	388733.1	5204.74
8607	0.91	304.65	8588.23	-183.23	-179.21	-181.38	0.11	791545.5	388733.8	5299.73
8701	0.75	308.9	8682.22	-182.42	-180.3	-180.55	0.18	791544.4	388734.6	5393.72
8795	0.63	327.19	8776.21	-181.6	-181.06	-179.73	0.27	791543.7	388735.5	5487.71
8890	0.81	336.49	8871.21	-180.55	-181.61	-178.67	0.23	791543.1	388736.5	5582.71
8984	0.95	333.89	8965.19	-179.24	-182.22	-177.35	0.15	791542.5	388737.8	5676.69
9079	0.76	331.42	9060.18	-177.98	-182.87	-176.08	0.2	791541.8	388739.1	5771.68
9173	0.81	327.06	9154.17	-176.87	-183.53	-174.97	0.08	791541.2	388740.2	5865.67
9268	0.66	323.61	9249.17	-175.87	-184.21	-173.96	0.16	791540.5	388741.2	5960.67
9362	0.55	315.5	9343.16	-175.11	-184.85	-173.2	0.15	791539.9	388742	6054.66

9456	0.66	318.79	9437.16	-174.38	-185.53	-172.46	0.12	791539.2	388742.7	6148.66
9550	0.64	338.59	9531.15	-173.48	-186.07	-171.56	0.24	791538.6	388743.6	6242.65
9644	0.9	319.87	9625.14	-172.43	-186.74	-170.5	0.38	791538	388744.6	6336.64
9739	1.53	319.82	9720.12	-170.89	-188.04	-168.95	0.66	791536.7	388746.2	6431.62
9833	0.98	297.34	9814.1	-169.56	-189.56	-167.6	0.77	791535.1	388747.5	6525.6
9928	0.85	273.9	9909.09	-169.14	-190.99	-167.17	0.41	791533.7	388747.9	6620.59
10022	0.63	298.5	10003.08	-168.85	-192.14	-166.86	0.41	791532.6	388748.2	6714.58
10116	0.7	262.01	10097.07	-168.68	-193.16	-166.68	0.45	791531.6	388748.4	6808.57
10211	0.07	236.25	10192.07	-168.79	-193.78	-166.79	0.67	791530.9	388748.3	6903.57
10305	0.24	115.42	10286.07	-168.91	-193.65	-166.91	0.3	791531.1	388748.2	6997.57
10399	0.83	333.64	10380.07	-168.39	-193.78	-166.38	1.1	791530.9	388748.7	7091.57
10494	1.36	328.94	10475.05	-166.8	-194.67	-164.79	0.57	791530	388750.3	7186.55
10588	1.25	316.16	10569.02	-165.11	-195.95	-163.08	0.33	791528.8	388752	7280.52
10683	1.82	305.08	10663.99	-163.49	-197.9	-161.45	0.67	791526.8	388753.6	7375.49
10777	3.28	301.16	10757.9	-161.24	-201.43	-159.16	1.56	791523.3	388755.8	7469.4
10872	3.49	307.54	10852.73	-158.08	-206.04	-155.95	0.45	791518.7	388759	7564.23
10966	3.74	315.69	10946.54	-154.14	-210.46	-151.96	0.61	791514.3	388762.9	7658.04
11061	2.64	317.42	11041.39	-150.31	-214.1	-148.1	1.16	791510.6	388766.8	7752.89
11155	1.49	317.39	11135.33	-147.82	-216.39	-145.58	1.22	791508.3	388769.2	7846.83
11249	1.38	56.58	11229.31	-146.29	-216.27	-144.06	2.33	791508.4	388770.8	7940.81
11343	0.94	14.44	11323.3	-144.92	-215.14	-142.7	0.99	791509.6	388772.1	8034.8
11438	0.65	306.57	11418.29	-143.85	-215.38	-141.62	0.97	791509.3	388773.2	8129.79
11532	0.98	200.46	11512.28	-144.28	-216.09	-142.05	1.4	791508.6	388772.8	8223.78
11627	1.83	174.08	11607.25	-146.55	-216.21	-144.32	1.1	791508.5	388770.5	8318.75
11721	2.06	218.36	11701.21	-149.37	-217.11	-147.13	1.58	791507.6	388767.7	8412.71
11727	2.1	220.06	11707.2	-149.54	-217.24	-147.3	1.23	791507.5	388767.5	8418.7
11826	2.65	258.68	11806.12	-151.38	-220.66	-149.1	1.67	791504.1	388765.7	8517.62
11921	3.28	327.63	11901.02	-149.51	-224.27	-147.2	3.57	791500.4	388767.6	8612.52
12015	13.72	330.41	11993.86	-137.52	-231.23	-135.13	11.11	791493.5	388779.5	8705.36
12110	21.89	356.09	12084.37	-109.96	-238.02	-107.51	11.74	791486.7	388807.1	8795.87
12205	35.3	3.17	12167.61	-64.67	-237.71	-62.22	14.54	791487	388852.4	8879.11
12299	45.12	4.55	12239.31	-4.2	-233.56	-1.8	10.49	791491.2	388912.9	8950.81
12393	51.09	3.94	12302.05	65.54	-228.4	67.89	6.37	791496.3	388982.6	9013.55
12487	59.01	4.05	12355.86	142.34	-223.03	144.63	8.43	791501.7	389059.4	9067.36
12582	67.04	4.64	12398.92	226.69	-216.6	228.91	8.47	791508.1	389143.8	9110.42
12676	74.18	4.48	12430.1	315.02	-209.56	317.16	7.6	791515.2	389232.1	9141.6
12770	83.29	3.05	12448.45	406.92	-203.53	408.99	9.81	791521.2	389324	9159.95
12864	86.37	0.62	12456.92	500.47	-200.54	502.51	4.17	791524.2	389417.5	9168.42
12959	89.03	359.26	12460.73	595.38	-200.64	597.41	3.14	791524.1	389512.4	9172.23
13053	88.46	358.51	12462.79	689.34	-202.47	691.39	1	791522.2	389606.4	9174.29
13147	90.94	358.31	12463.28	783.29	-205.08	785.36	2.65	791519.6	389700.4	9174.78
13241	90.27	357.63	12462.29	877.23	-208.41	879.33	1.02	791516.3	389794.3	9173.79
13336	92.04	359.97	12460.37	972.18	-210.4	974.29	3.09	791514.3	389889.2	9171.87
13430	92.25	359.85	12456.86	1066.11	-210.54	1068.22	0.26	791514.2	389983.2	9168.36
13524	91.68	359.84	12453.63	1160.06	-210.8	1162.16	0.61	791513.9	390077.1	9165.13
13619	90.5	0.32	12451.83	1255.04	-210.67	1257.14	1.34	791514	390172.1	9163.33
13714	90.34	0.35	12451.13	1350.03	-210.11	1352.12	0.17	791514.6	390267.1	9162.63
13808	89.83	1.04	12450.99	1444.02	-208.97	1446.1	0.91	791515.7	390361.1	9162.49
13903	90.74	1.06	12450.52	1539.01	-207.23	1541.06	0.96	791517.5	390456.1	9162.02
13997	91.64	0.82	12448.57	1632.97	-205.69	1635	0.99	791519	390550	9160.07
14092	92.62	1.17	12445.03	1727.89	-204.04	1729.9	1.1	791520.7	390645	9156.53
14186	91.17	1.03	12441.93	1821.82	-202.24	1823.81	1.55	791522.5	390738.9	9153.43
14280	89.93	0.38	12441.02	1915.81	-201.08	1917.77	1.49	791523.6	390832.9	9152.52
14375	89.9	0.95	12441.16	2010.8	-199.98	2012.75	0.6	791524.7	390927.9	9152.66
14469	89.97	0.43	12441.27	2104.79	-198.84	2106.73	0.56	791525.9	391021.9	9152.77
14564	90.27	0.03	12441.07	2199.79	-198.46	2201.72	0.53	791526.3	391116.9	9152.57
14658	91.48	1.43	12439.64	2293.77	-197.27	2295.68	1.97	791527.4	391210.8	9151.14
14752	90.94	1.89	12437.65	2387.71	-194.54	2389.58	0.75	791530.2	391304.8	9149.15

14847	90.74	0.05	12436.26	2482.68	-192.94	2484.53	1.95	791531.8	391399.8	9147.76
14941	90.23	357.79	12435.46	2576.65	-194.71	2578.52	2.46	791530	391493.7	9146.96
15036	89.87	357.88	12435.38	2671.58	-198.3	2673.48	0.39	791526.4	391588.7	9146.88
15130	89.66	357.58	12435.77	2765.51	-202.02	2767.44	0.39	791522.7	391682.6	9147.27
15225	89.83	358.95	12436.19	2860.46	-204.9	2862.42	1.45	791519.8	391777.5	9147.69
15319	90.44	358.62	12435.97	2954.44	-206.89	2956.41	0.74	791517.8	391871.5	9147.47
15414	91.11	359.13	12434.68	3049.41	-208.75	3051.4	0.89	791516	391966.5	9146.18
15509	90.87	0.01	12433.04	3144.39	-209.47	3146.38	0.96	791515.2	392061.5	9144.54
15603	90.7	358.74	12431.75	3238.38	-210.49	3240.37	1.36	791514.2	392155.5	9143.25
15698	90.1	359.01	12431.09	3333.36	-212.36	3335.37	0.69	791512.4	392250.4	9142.59
15792	90.07	359.85	12430.95	3427.35	-213.29	3429.37	0.89	791511.4	392344.4	9142.45
15886	89.36	359.66	12431.42	3521.35	-213.69	3523.36	0.78	791511	392438.4	9142.92
15981	88.43	357.65	12433.25	3616.3	-215.92	3618.33	2.33	791508.8	392533.4	9144.75
16074	88.99	357.99	12435.34	3709.21	-219.46	3711.27	0.7	791505.3	392626.3	9146.84
16168	89.63	357.9	12436.48	3803.14	-222.83	3805.23	0.69	791501.9	392720.2	9147.98
16262	91.68	357.52	12435.4	3897.05	-226.59	3899.18	2.22	791498.1	392814.1	9146.9
16357	92.45	357.63	12431.98	3991.91	-230.6	3994.07	0.82	791494.1	392909	9143.48
16452	92.11	356.99	12428.2	4086.73	-235.06	4088.93	0.76	791489.7	393003.8	9139.7
16546	92.08	357.45	12424.76	4180.55	-239.61	4182.8	0.49	791485.1	393097.6	9136.26
16641	91.78	357.72	12421.56	4275.41	-243.61	4277.7	0.42	791481.1	393192.5	9133.06
16735	91.94	357.87	12418.51	4369.29	-247.23	4371.61	0.23	791477.5	393286.4	9130.01
16829	92.21	359.03	12415.11	4463.2	-249.77	4465.53	1.27	791474.9	393380.3	9126.61
16923	91.71	359.49	12411.89	4557.13	-250.98	4559.48	0.72	791473.7	393474.2	9123.39
17018	91.41	358.62	12409.31	4652.08	-252.55	4654.44	0.97	791472.2	393569.2	9120.81
17112	91.17	358.51	12407.19	4746.03	-254.9	4748.4	0.28	791469.8	393663.1	9118.69
17204	91.11	359.07	12405.36	4837.99	-256.85	4840.38	0.61	791467.9	393755.1	9116.86
17261	91.11	359.07	12404.26	4894.97	-257.77	4897.37	0	791466.9	393812.1	9115.76

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to KB=26.5. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Slot and calculated along an Azimuth of 359.410° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.
Central meridian is -104.333°.
Grid Convergence at Surface is 0.500°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 17261.00ft.,
the Bottom Hole Displacement is 4901.76ft., in the Direction of 359.410° (Grid).