Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

NMOCD
Hobbs

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.

HOBBS OCD

SUBMIT IN TRIPLICATE - Other instructions on page 2

MAR 22 2018

RECEIVED

5. Lease Serial No.
NMLC065876A

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.
SD WE 24 FED P24 6H

2. Name of Operator
CHEVRON U.S.A.

Contact: LAURA BECERRA
E-Mail: LBECERRA@CHEVRON.COM

9. API Well No.
30-025-43673

3a. Address
6301 DEAUVILLE BLVD.
MIDLAND, TX 79706

3b. Phone No. (include area code)
Ph: 432-687-7665

10. Field and Pool or Exploratory Area
JENNINGS;UPR BN SPR SHALE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*

Sec 24 T26S R32E Mer NMP SESE 200FSL 1210FEL
32.021488 N Lat, 103.623729 W Lon

11. County or Parish, State

LEA 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 Drilling Operations
	☐ 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.

THIS REPORT IS FOR THE SPUD, DRILLING OPERATIONS AND COMPLETION OF THE SUBJECT NEW WELL

PLEASE FIND ATTACHED:
-"As Drilled" C-102
-Actual wellpath report
-Drilling and completion summary
-Wellbore schematic
-Frac disclosure

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

Electronic Submission #405252 verified by the BLM Well Information System
For CHEVRON U.S.A., sent to the Hobbs
Committed to AFMSS for processing by JENNIFER SANCHEZ on 02/28/2018 ()

Name *(Printed/Typed)* LAURA BECERRA — Title PERMITTING SPECIALIST

Signature (Electronic Submission) — Date 02/21/2018

ACCEPTED FOR RECORD
7 6 2018
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

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

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)

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

KB

SD WE 24 FED P24 6H **30-025-43673**
DRILLED NEW OIL WELL AS FOLLOWS:

08/11/2017: Spud well.

SURFACE CASING
8/11/2017: Drill 17 1/2" surface hole 153' – 716' TD. Run 13 3/8", 54.5#, J-55 STC surface casing to 706'. Cement in place.
Cemented w/TAIL 844 sx Class C. Density: 14.80, Yield: 1.33, Fluid Mix Ratio: 6.37. Returns to surface: 98 bbls of cement to surface.
Displace cement with 98 bbls of FW. Bump plug, hold 500 psi over. Plug bumped on calculated displacement.
8/18/2017: Install test plug. Fill stack & choke manifold. Test full BOPE to 250 psi low/5000 psi high. (3500 high on annular). Test 13 3/8" surface casing to 1,500 psi for 30 minutes. Good test. Drill out float equip, cmt, rathole and 10' of new formation to 726'.

8/18/2017-8/19/2017: Drill 726'-4,505'

INTERMEDIATE CASING
8/20/2017: 4,505' TD intermediate hole. Run 9 5/8", 40#, L-80 LTC csg & set @ 4,495'.
Cemented w/LEAD 1,025 sx Class C, Density: 11.90, Yield: 2.43, Fluid mix ratio: 13.75; TAIL 462 sx Class C, Density: 14.80, Yield: 1.33, Fluid Mix Ratio: 6.34.
Displace cement w/338 bbls OBM. Bump plug w/500 psi over final circ pressure. Cement to surface: 198 bbls cement. Full returns throughout job. Plug bumped at calc displacement.
Install pack off. Test to 5000 psi for 15 mins. Good test.

9/8/2017: Full BOPE test. TOC @ 4,405'.
9/9/2017: Test 9 5/8" csg to 2765 psi for 30 minutes. Good test.
9/10/2017: Drill out float equip, cmt & rathole and 10' of formation to 4,505'.

9/10/2017 – 9/22/2017: Drill 4,505'-19,286' TD

PRODUCTION CASING
9/23/2017: Run 5 ½", 20#, HCP-110 BTC casing to 19,278'.
9/24/2017: Cemented w/LEAD 642 sx, Class H, Density: 11.50, Yield: 2.65, Fluid mix ratio: 15.37.
LEAD 1,975 sx, Class H, Density: 12.50, Yield: 1.57, Fluid mix ratio: 8.47.
TAIL 110 sx, Class H, Density: 15.00, Yield: 2.19, Fluid Mix Ratio: 9.53.
Displace cmt w/426 bbls of FW. Bump plug. Hold 500 psi over.
0 bbls of cement to surface, full returns throughout job. Plug bumped on proper displacement. Conduct 30 min inflow/negative test.

9/25/2017: Release rig @ 03:00 hrs

COMPLETED NEW DRILL AS FOLLOWS:
TOC @ 740', PBTD @ 19,189'
10/28/2017: MIRU. TIH w/JB/CBL to 9,210'. Log well from 9,110' to surface.
10/31/2017: Test Production casing to 9800 psi 30 min, pass.
11/3/2017: MIRU frac equipment

11/3/2017 - 12/7/2017 : Perf and frac 51 stages, Upper Bone Spring, from 9,186' - 19,103'. Frac with total Proppant 16,318,702 lbs.

Perforation/Frac/Stimulation Details

Date	Top (FtKB)	Btm (FtKB)	Sand Pumped	Total Sand (Lbs)	Clean Fl./BBLS	Slur Vol/BBLS
12/7/2017	9,186	9,367	Sand 100 & 30/50	321,853	9,469	9,818
12/7/2017	9,379	9,562	Sand 100 & 30/50	320,775	9,746	10,093
12/6/2017	9,574	9,757	Sand 100 & 30/50	321,816	9,493	9,841
12/6/2017	9,769	9,952	Sand 100 & 30/50	319,057	9,608	9,953
12/6/2017	9,964	10,147	Sand 100 & 30/50	318,637	9,409	9,754
12/5/2017	10,159	10,342	Sand 100 & 30/50	320,718	9,533	9,880
12/4/2017	10,354	10,537	Sand 100 & 30/50	322,033	9,526	9,875
12/3/2017	10,549	10,732	Sand 100 & 30/50	313,536	9,413	9,752
12/3/2017	10,744	10,927	Sand 100 & 30/50	321,976	9,565	9,914
12/3/2017	10,939	11,122	Sand 100 & 30/50	321,009	9,311	9,658
12/2/2017	11,134	11,317	Sand 100 & 30/50	321,415	9,562	9,909
12/1/2017	11,329	11,512	Sand 100 & 30/50	321,597	10,156	10,504
12/1/2017	11,524	11,705	Sand 100 & 30/50	320,886	9,923	10,270
11/30/2017	11,720	11,902	Sand 100 & 30/50	321,068	9,302	9,650
11/30/2017	11,914	12,096	Sand 100 & 30/50	323,599	9,784	10,134
11/29/2017	12,109	12,289	Sand 100 & 30/50	321,032	9,368	9,716
11/29/2017	12,304	12,487	Sand 100 & 30/50	337,343	10,065	10,430
11/27/2017	12,499	12,683	Sand 100 & 30/50	321,301	10,116	10,464
11/27/2017	12,694	12,877	Sand 100 & 30/50	322,454	9,980	10,329
11/26/2017	12,889	13,072	Sand 100 & 30/50	322,160	9,719	10,068
11/26/2017	13,084	13,261	Sand 100 & 30/50	323,285	9,574	9,923
11/25/2017	13,279	13,462	Sand 100 & 30/50	321,789	10,489	10,837
11/25/2017	13,474	13,657	Sand 100 & 30/50	321,504	10,354	10,702
11/24/2017	13,669	13,852	Sand 100 & 30/50	321,086	9,389	9,736
11/23/2017	13,864	14,047	Sand 100 & 30/50	321,246	11,475	11,822
11/22/2017	14,059	14,242	Sand 100 & 30/50	322,757	10,363	10,712
11/21/2017	14,254	14,432	Sand 100 & 30/50	323,428	9,999	10,349
11/21/2017	14,449	14,632	Sand 100 & 30/50	321,870	9,944	10,293
11/20/2017	14,644	14,827	Sand 100 & 30/50	321,833	9,988	10,336
11/20/2017	14,839	15,022	Sand 100 & 30/50	321,323	9,974	10,322
11/19/2017	15,034	15,217	Sand 100 & 30/50	321,528	9,943	10,291
11/19/2017	15,229	15,412	Sand 100 & 30/50	321,318	10,448	10,796
11/18/2017	15,424	15,607	Sand 100 & 30/50	322,364	10,103	10,451
11/17/2017	15,619	15,802	Sand 100 & 30/50	320,785	10,989	11,336
11/17/2017	15,814	15,997	Sand 100 & 30/50	320,885	11,245	11,592
11/16/2017	16,009	16,192	Sand 100 & 30/50	333,580	16,355	16,716

11/15/2017	16,204	16,387	Sand 100 & 30/50	321,761	11,841	12,189
11/12/2017	16,399	16,582	Sand 100 & 30/50	324,442	11,476	11,827
11/11/2017	16,594	16,777	Sand 100 & 30/50	319,949	11,840	12,186
11/11/2017	16,789	16,972	Sand 100 & 30/50	321,291	9,930	10,278
11/9/2017	16,984	17,167	Sand 100 & 30/50	322,631	10,349	10,699
11/9/2017	17,179	17,358	Sand 100 & 30/50	322,770	10,125	10,475
11/8/2017	17,374	17,557	Sand 100 & 30/50	323,743	9,899	10,249
11/8/2017	17,569	17,752	Sand 100 & 30/50	321,030	9,996	10,343
11/7/2017	17,764	17,949	Sand 100 & 30/50	321,310	10,312	10,660
11/7/2017	17,959	18,142	Sand 100 & 3rd Sand type	321,579	9,792	10,140
11/6/2017	18,154	18,337	Sand 100 & PW 40/70	320,706	9,876	10,228
11/5/2017	18,349	18,531	Sand 100 & PW 40/70	321,080	12,823	13,175
11/4/2017	18,544	18,725	Sand 100 & PW 40/70	321,002	10,315	10,667
11/4/2017	18,739	18,922	Sand 100 & PW 40/70	320,032	8,805	9,156
11/3/2017	18,934	19,103	Sand 100 & PW 40/70	321,725	9,390	9,743

12/9/17-12/16/17: Waiting on CTU
12/17/17-12/29/17: Casing Cleanout
1/7/2018: Ran 2 7/8" tubing set @ 8,714'. Packer @ 8,699'
1/9/2018: Release rig
1/18/2018: Place well on production

2/7/2018: On 24 hour OPT flowing:
Oil – 1,641
Gas – 2,449
Water – 1,696
GOR – 1,492
Tubing psi – 847
Casing psi – 458
Choke – 64/64
TOC – 740'

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
"As Drilled"

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-43673	97838	JENNINGS; UPPER BONE SPRING SHALE

[4] Property Code	[5] Property Name	[6] Well Number
317518	SD WE 24 FED P24	6H

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3137'

[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	24	26 SOUTH	32 EAST, N.M.P.M.		200'	SOUTH	1210'	EAST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	13	26 SOUTH	32 EAST, N.M.P.M.		175'	NORTH	1241'	EAST	LEA

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

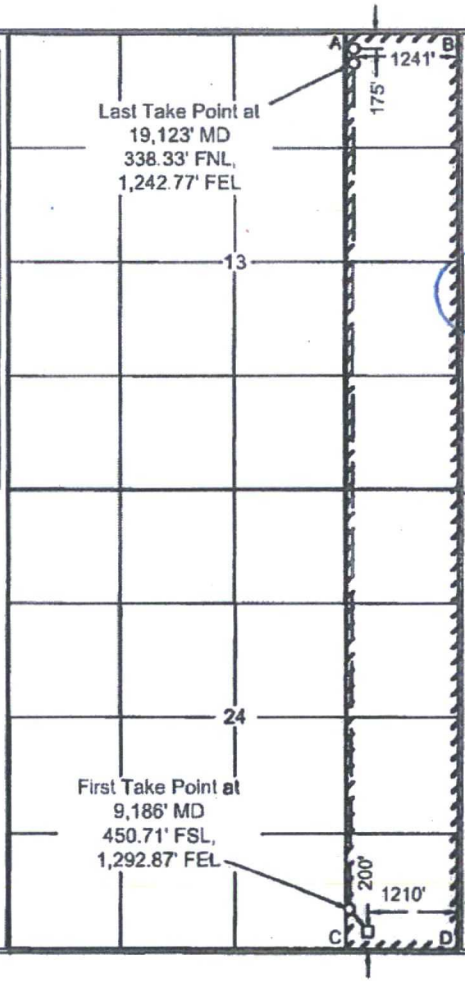
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

AS-DRILLED BOTTOM HOLE LOCATION		LAST TAKE POINT	
X= 719,975	NAD 27	X= 719,975	NAD 27
Y= 382,555		Y= 382,392	
LAT. 32.049769		LAT. 32.049322	
LONG. 103.623349		LONG. 103.623353	
X= 761,162	NAD83	X= 761,162	NAD83
Y= 382,612		Y= 382,449	
LAT. 32.049894		LAT. 32.049447	
LONG. 103.623818		LONG. 103.623823	
SD WE 24 FED P24 6H WELL		FIRST TAKE POINT	
X= 720,070	NAD 27	X= 719,985	NAD 27
Y= 372,221		Y= 372,471	
LAT. 32.021363		LAT. 32.022051	
LONG. 103.623262		LONG. 103.623529	
X= 761,257	NAD83	X= 761,173	NAD83
Y= 372,278		Y= 372,528	
LAT. 32.021488		LAT. 32.022176	
LONG. 103.623729		LONG. 103.623996	
ELEVATION +3137' NAVD 88			

CORNER COORDINATES TABLE (NAD 27)

A - Y=382728.88, X=719883.96
B - Y=382746.10, X=721215.23
C - Y=372020.08, X=719946.66
D - Y=372033.87, X=721281.01



[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 1/16/18
Date

Laura Becerra
Printed Name

LBecerra@Chevron.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.

6-15-2016
Date of Survey

Signature and Seal of Professional Surveyor:

RONALD L. EASTBURN
NEW MEXICO
23006
PROFESSIONAL SURVEYOR

1-5-2018

23006
Certificate Number

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Tranlam
Scale	0.999965	Report Generated	10/13/2017 at 1:08:36 PM
Convergence at slot	0.38° East	Database/Source file	WA_Midland/SD_WE_24_FED_P24_6H_PWB_awp_258.5__-_19229_proj__19286_.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	25.00	720070.00	372221.00	32°01'16.903"N	103°37'23.741"W
Facility Reference Pt			720045.00	372221.00	32°01'16.904"N	103°37'24.031"W
Field Reference Pt			152400.30	0.00	30°59'42.846"N	105°26'33.659"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig: Nabors X-30 (KB) to Facility Vertical Datum	3170.00ft
Horizontal Reference Pt	Slot	Rig: Nabors X-30 (KB) to Mean Sea Level	3170.00ft
Vertical Reference Pt	Rig: Nabors X-30 (KB)	Rig: Nabors X-30 (KB) to Ground Level at Slot (SD WE 24 FED P24 6H)	33.00ft
MD Reference Pt	Rig: Nabors X-30 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.65°

We hereby certify that the surveys contained herein, are to the best of our knowledge a true and accurate account of the well.

MWD COORDINATOR

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

WELLPATH DATA (174 stations) † = Interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	304.000	0.00	0.00	0.00	0.00	720070.00	372221.00	32°01'16.903"N	103°37'23.741"W	0.00	
33.00	0.000	304.000	33.00	0.00	0.00	0.00	720070.00	372221.00	32°01'16.903"N	103°37'23.741"W	0.00	
258.50	0.600	304.000	258.50	0.67	0.66	-0.98	720069.02	372221.66	32°01'16.909"N	103°37'23.752"W	0.27	
458.50	0.500	230.000	458.49	0.70	0.68	-2.52	720067.48	372221.68	32°01'16.910"N	103°37'23.770"W	0.33	
638.50	0.800	228.000	638.48	-0.64	-0.66	-4.05	720065.95	372220.34	32°01'16.897"N	103°37'23.788"W	0.17	
683.50	0.800	205.000	683.47	-1.13	-1.16	-4.42	720065.58	372219.84	32°01'16.892"N	103°37'23.792"W	0.71	
797.00	0.850	169.760	796.96	-2.67	-2.70	-4.60	720065.40	372218.30	32°01'16.876"N	103°37'23.794"W	0.44	
976.00	1.600	184.550	975.92	-6.47	-6.50	-4.56	720065.44	372214.50	32°01'16.839"N	103°37'23.794"W	0.45	
1153.00	1.920	201.420	1152.84	-11.69	-11.72	-5.84	720064.16	372209.28	32°01'16.787"N	103°37'23.809"W	0.34	
1330.00	2.220	205.690	1329.72	-17.52	-17.57	-8.41	720061.59	372203.43	32°01'16.729"N	103°37'23.840"W	0.19	
1508.00	2.930	205.560	1507.54	-24.71	-24.78	-11.87	720058.13	372196.22	32°01'16.658"N	103°37'23.880"W	0.40	
1685.00	3.460	207.680	1684.27	-33.50	-33.60	-16.30	720053.70	372187.41	32°01'16.571"N	103°37'23.932"W	0.31	
1862.00	4.070	213.840	1860.88	-43.41	-43.54	-22.28	720047.72	372177.46	32°01'16.473"N	103°37'24.003"W	0.41	
2041.00	4.900	213.060	2039.33	-55.04	-55.23	-29.99	720040.01	372165.78	32°01'16.358"N	103°37'24.093"W	0.46	
2218.00	4.690	209.630	2215.71	-67.62	-67.85	-37.69	720032.31	372153.15	32°01'16.234"N	103°37'24.184"W	0.20	
2395.00	3.080	207.290	2392.30	-78.10	-78.37	-43.45	720026.55	372142.63	32°01'16.130"N	103°37'24.251"W	0.91	
2572.00	2.760	207.280	2569.07	-86.09	-86.38	-47.58	720022.42	372134.62	32°01'16.051"N	103°37'24.300"W	0.18	
2750.00	3.550	208.590	2746.80	-94.71	-95.03	-52.18	720017.82	372125.97	32°01'15.966"N	103°37'24.354"W	0.45	
2927.00	2.800	203.150	2923.53	-103.47	-103.82	-56.51	720013.50	372117.19	32°01'15.879"N	103°37'24.405"W	0.46	
3104.00	1.730	210.220	3100.39	-109.73	-110.10	-59.55	720010.45	372110.90	32°01'15.817"N	103°37'24.441"W	0.62	
3281.00	1.020	177.180	3277.34	-113.61	-113.98	-60.82	720009.18	372107.02	32°01'15.779"N	103°37'24.456"W	0.59	
3458.00	1.870	105.260	3454.29	-115.96	-116.32	-57.95	720012.05	372104.69	32°01'15.756"N	103°37'24.423"W	1.03	
3635.00	0.560	40.900	3631.25	-116.09	-116.42	-54.60	720015.40	372104.58	32°01'15.754"N	103°37'24.384"W	0.96	
3813.00	0.770	349.470	3809.24	-114.26	-114.59	-54.25	720015.75	372106.42	32°01'15.772"N	103°37'24.379"W	0.34	
3990.00	1.160	26.180	3986.22	-111.48	-111.81	-53.68	720016.32	372109.19	32°01'15.800"N	103°37'24.373"W	0.40	
4167.00	1.820	67.770	4163.16	-108.83	-109.14	-50.29	720019.72	372111.86	32°01'15.826"N	103°37'24.333"W	0.69	
4344.00	2.470	99.020	4340.04	-108.41	-108.68	-43.92	720026.09	372112.33	32°01'15.830"N	103°37'24.259"W	0.74	
4432.00	2.220	111.870	4427.97	-109.36	-109.61	-40.46	720029.54	372111.40	32°01'15.821"N	103°37'24.219"W	0.66	12 1/4 BH MWD 797' - 4432'
4611.00	2.050	119.910	4606.85	-112.28	-112.50	-34.47	720035.53	372108.51	32°01'15.792"N	103°37'24.149"W	0.19	
4789.00	2.070	37.010	4784.77	-111.33	-111.52	-29.77	720040.23	372109.49	32°01'15.801"N	103°37'24.095"W	1.53	

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

WELLPATH DATA (174 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4967.00	1.850	39.230	4962.66	-106.56	-106.72	-26.02	720043.98	372114.28	32°01'15.848"N	103°37'24.051"W	0.13	
5144.00	1.400	318.350	5139.61	-102.74	-102.89	-25.65	720044.35	372118.11	32°01'15.886"N	103°37'24.046"W	1.21	
5321.00	1.150	314.490	5316.57	-99.86	-100.03	-28.36	720041.65	372120.97	32°01'15.915"N	103°37'24.078"W	0.15	
5498.00	0.960	318.100	5493.54	-97.50	-97.69	-30.61	720039.39	372123.32	32°01'15.938"N	103°37'24.104"W	0.11	
5675.00	0.820	304.780	5670.51	-95.66	-95.86	-32.64	720037.36	372125.14	32°01'15.956"N	103°37'24.127"W	0.14	
5852.00	0.670	290.130	5847.50	-94.57	-94.78	-34.66	720035.35	372126.22	32°01'15.967"N	103°37'24.150"W	0.14	
6029.00	0.520	290.270	6024.49	-93.92	-94.15	-36.38	720033.62	372126.86	32°01'15.974"N	103°37'24.170"W	0.08	
6206.00	0.530	288.020	6201.48	-93.38	-93.61	-37.91	720032.09	372127.39	32°01'15.979"N	103°37'24.188"W	0.01	
6383.00	0.440	286.630	6378.48	-92.92	-93.17	-39.34	720030.66	372127.84	32°01'15.983"N	103°37'24.205"W	0.05	
6560.00	0.120	280.310	6555.47	-92.69	-92.94	-40.18	720029.83	372128.06	32°01'15.986"N	103°37'24.214"W	0.18	
6737.00	0.410	258.970	6732.47	-92.77	-93.03	-40.98	720029.02	372127.98	32°01'15.985"N	103°37'24.224"W	0.17	
6914.00	0.910	245.070	6909.46	-93.48	-93.74	-42.88	720027.13	372127.26	32°01'15.978"N	103°37'24.246"W	0.29	
7091.00	1.080	237.270	7086.43	-94.95	-95.23	-45.55	720024.45	372125.77	32°01'15.963"N	103°37'24.277"W	0.12	
7269.00	0.930	242.170	7264.41	-96.52	-96.82	-48.24	720021.76	372124.19	32°01'15.948"N	103°37'24.308"W	0.10	
7446.00	1.270	231.560	7441.37	-98.39	-98.71	-51.05	720018.95	372122.30	32°01'15.929"N	103°37'24.341"W	0.22	
7623.00	1.170	217.210	7618.33	-101.04	-101.37	-53.68	720016.32	372119.64	32°01'15.903"N	103°37'24.372"W	0.18	
7800.00	0.840	220.360	7795.31	-103.45	-103.79	-55.61	720014.39	372117.21	32°01'15.879"N	103°37'24.394"W	0.19	
7977.00	1.050	226.550	7972.28	-105.54	-105.90	-57.63	720012.37	372115.11	32°01'15.859"N	103°37'24.418"W	0.13	
8155.00	1.190	226.410	8150.25	-107.92	-108.29	-60.15	720009.85	372112.71	32°01'15.835"N	103°37'24.447"W	0.08	
8332.00	1.110	224.420	8327.21	-110.40	-110.78	-62.68	720007.32	372110.22	32°01'15.811"N	103°37'24.477"W	0.05	
8492.00	1.530	215.150	8487.17	-113.24	-113.64	-65.00	720005.01	372107.37	32°01'15.783"N	103°37'24.504"W	0.29	
8581.00	4.410	338.610	8576.09	-111.01	-111.42	-66.93	720003.07	372109.58	32°01'15.805"N	103°37'24.526"W	6.07	
8669.00	20.610	350.510	8661.72	-92.44	-92.87	-70.74	719999.26	372128.13	32°01'15.988"N	103°37'24.569"W	18.54	
8758.00	28.930	350.420	8742.46	-55.66	-56.13	-76.92	719993.08	372164.87	32°01'16.352"N	103°37'24.638"W	9.35	
8846.00	34.640	356.660	8817.25	-9.62	-10.12	-81.92	719988.08	372210.88	32°01'16.808"N	103°37'24.693"W	7.48	
8934.00	41.770	358.610	8886.36	44.73	44.22	-84.10	719985.91	372265.22	32°01'17.346"N	103°37'24.714"W	8.22	
9023.00	51.770	0.610	8947.25	109.49	108.98	-84.44	719985.56	372329.97	32°01'17.987"N	103°37'24.713"W	11.35	
9111.00	60.300	359.770	8996.37	182.40	181.89	-84.23	719985.77	372402.89	32°01'18.708"N	103°37'24.705"W	9.73	
9204.00	70.050	359.980	9035.36	266.71	266.20	-84.41	719985.60	372487.19	32°01'19.542"N	103°37'24.701"W	10.49	
9293.00	78.750	2.430	9059.28	352.31	351.81	-82.57	719987.44	372572.80	32°01'20.390"N	103°37'24.673"W	10.13	

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

WELLPATH DATA (174 stations) † = Interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9332.00†	81.750	2.457	9065.88	390.69	390.21	-80.93	719989.08	372611.19	32°01'20.769"N	103°37'24.651"W	7.69	8 3/4 BH MWD 4611' - 8332'
9381.00	85.520	2.490	9071.31	439.32	438.85	-78.83	719991.18	372659.83	32°01'21.251"N	103°37'24.623"W	7.69	
9469.00	87.190	2.530	9076.91	527.03	526.58	-74.98	719995.02	372747.56	32°01'22.119"N	103°37'24.571"W	1.90	
9558.00	91.730	3.450	9077.75	615.85	615.43	-70.34	719999.66	372836.41	32°01'22.997"N	103°37'24.511"W	5.20	
9646.00	91.270	3.180	9075.44	703.64	703.26	-65.25	720004.75	372924.23	32°01'23.866"N	103°37'24.445"W	0.61	
9734.00	88.610	3.630	9075.54	791.45	791.09	-60.03	720009.98	373012.06	32°01'24.735"N	103°37'24.377"W	3.07	
9822.00	85.780	3.150	9079.84	879.14	878.83	-54.83	720015.17	373099.79	32°01'25.603"N	103°37'24.310"W	3.26	
9911.00	88.060	1.890	9084.62	967.90	967.60	-50.92	720019.08	373188.57	32°01'26.481"N	103°37'24.258"W	2.93	
9999.00	89.410	2.320	9086.57	1055.79	1055.52	-47.69	720022.31	373276.48	32°01'27.351"N	103°37'24.214"W	1.61	
10088.00	90.150	1.860	9086.91	1144.71	1144.46	-44.45	720025.56	373365.42	32°01'28.231"N	103°37'24.169"W	0.98	
10176.00	89.880	1.680	9086.88	1232.65	1232.42	-41.73	720028.27	373453.37	32°01'29.101"N	103°37'24.131"W	0.37	
10264.00	90.370	359.010	9086.69	1320.63	1320.41	-41.20	720028.80	373541.36	32°01'29.972"N	103°37'24.118"W	3.08	
10353.00	91.730	358.620	9085.06	1409.61	1409.37	-43.04	720026.96	373630.32	32°01'30.852"N	103°37'24.133"W	1.59	
10442.00	87.100	356.320	9085.97	1498.51	1498.25	-46.96	720023.04	373719.19	32°01'31.732"N	103°37'24.172"W	5.81	
10530.00	84.940	355.220	9092.08	1586.09	1585.79	-53.44	720016.56	373806.73	32°01'32.599"N	103°37'24.240"W	2.75	
10619.00	86.610	358.320	9098.64	1674.72	1674.39	-58.44	720011.57	373895.33	32°01'33.476"N	103°37'24.291"W	3.95	
10707.00	90.370	359.920	9100.96	1762.67	1762.34	-59.79	720010.22	373983.27	32°01'34.346"N	103°37'24.300"W	4.64	
10795.00	90.030	359.380	9100.65	1850.67	1850.33	-60.32	720009.68	374071.26	32°01'35.217"N	103°37'24.300"W	0.73	
10884.00	88.460	359.430	9101.82	1939.66	1939.32	-61.25	720008.76	374160.24	32°01'36.097"N	103°37'24.304"W	1.76	
10973.00	90.060	2.050	9102.97	2028.62	2028.29	-60.10	720009.90	374249.22	32°01'36.978"N	103°37'24.284"W	3.45	
11061.00	89.850	1.320	9103.04	2116.57	2116.25	-57.51	720012.49	374337.17	32°01'37.848"N	103°37'24.247"W	0.86	
11150.00	91.390	0.380	9102.08	2205.54	2205.23	-56.19	720013.81	374426.15	32°01'38.729"N	103°37'24.225"W	2.03	
11241.00	88.640	358.960	9102.05	2296.53	2296.22	-56.71	720013.29	374517.14	32°01'39.629"N	103°37'24.224"W	3.40	
11331.00	85.680	355.200	9106.51	2386.30	2385.97	-61.29	720008.71	374606.88	32°01'40.517"N	103°37'24.270"W	5.31	
11422.00	85.310	355.910	9113.66	2476.79	2476.41	-68.32	720001.68	374697.32	32°01'41.413"N	103°37'24.345"W	0.88	
11513.00	91.970	358.240	9115.82	2567.61	2567.21	-72.96	719997.05	374788.12	32°01'42.312"N	103°37'24.392"W	7.75	
11604.00	94.100	359.450	9111.00	2658.47	2658.06	-74.79	719995.21	374878.96	32°01'43.211"N	103°37'24.406"W	2.69	
11694.00	94.110	359.820	9104.56	2748.24	2747.83	-75.36	719994.64	374968.72	32°01'44.099"N	103°37'24.406"W	0.41	
11786.00	93.920	359.510	9098.12	2840.01	2839.60	-75.90	719994.11	375060.49	32°01'45.007"N	103°37'24.405"W	0.39	
11877.00	94.130	358.990	9091.73	2930.78	2930.37	-77.08	719992.92	375151.26	32°01'45.905"N	103°37'24.412"W	0.61	

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

WELLPATH DATA (174 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11968.00	94.130	358.730	9085.18	3021.54	3021.11	-78.89	719991.11	375242.00	32°01'46.804"N	103°37'24.426"W	0.28	
12056.00	94.610	358.240	9078.47	3109.26	3108.83	-81.21	719988.79	375329.71	32°01'47.672"N	103°37'24.447"W	0.78	
12145.00	92.440	359.490	9073.00	3198.08	3197.63	-82.97	719987.03	375418.51	32°01'48.551"N	103°37'24.460"W	2.81	
12233.00	89.750	358.430	9071.32	3286.05	3285.59	-84.57	719985.44	375506.47	32°01'49.421"N	103°37'24.472"W	3.29	
12322.00	88.370	359.660	9072.78	3375.03	3374.56	-86.05	719983.95	375595.44	32°01'50.302"N	103°37'24.482"W	2.08	
12411.00	91.630	359.760	9072.78	3464.01	3463.55	-86.50	719983.50	375684.42	32°01'51.182"N	103°37'24.481"W	3.66	
12500.00	92.560	0.810	9069.52	3552.95	3552.49	-86.06	719983.95	375773.36	32°01'52.062"N	103°37'24.469"W	1.58	
12588.00	93.400	1.080	9064.95	3640.81	3640.36	-84.61	719985.40	375861.22	32°01'52.932"N	103°37'24.445"W	1.00	
12677.00	89.910	357.940	9062.38	3729.74	3729.29	-85.37	719984.63	375950.15	32°01'53.812"N	103°37'24.447"W	5.27	
12765.00	90.590	357.390	9061.99	3817.69	3817.22	-88.96	719981.05	376038.07	32°01'54.682"N	103°37'24.482"W	0.99	
12853.00	89.260	359.430	9062.11	3905.66	3905.18	-91.40	719978.61	376126.03	32°01'55.553"N	103°37'24.504"W	2.77	
12942.00	89.540	1.300	9063.04	3994.65	3994.16	-90.83	719979.17	376215.02	32°01'56.433"N	103°37'24.491"W	2.12	
13030.00	85.780	359.580	9066.63	4082.54	4082.07	-90.15	719979.85	376302.92	32°01'57.303"N	103°37'24.476"W	4.70	
13119.00	88.920	1.770	9070.75	4171.42	4170.95	-89.10	719980.90	376391.80	32°01'58.183"N	103°37'24.457"W	4.30	
13207.00	90.090	3.390	9071.51	4259.30	4258.86	-85.14	719984.86	376479.70	32°01'59.052"N	103°37'24.404"W	2.27	
13296.00	88.490	1.150	9072.61	4348.19	4347.77	-81.62	719988.38	376568.61	32°01'59.932"N	103°37'24.357"W	3.09	
13384.00	88.280	0.710	9075.09	4436.13	4435.72	-80.19	719989.81	376656.56	32°02'00.802"N	103°37'24.333"W	0.55	
13473.00	87.900	0.100	9078.06	4525.07	4524.67	-79.56	719990.44	376745.50	32°02'01.682"N	103°37'24.319"W	0.81	
13562.00	87.840	359.560	9081.37	4614.01	4613.61	-79.83	719990.18	376834.44	32°02'02.562"N	103°37'24.316"W	0.61	
13650.00	86.760	359.060	9085.51	4701.91	4701.50	-80.88	719989.12	376922.33	32°02'03.432"N	103°37'24.321"W	1.35	
13739.00	89.140	358.890	9088.70	4790.84	4790.43	-82.48	719987.53	377011.25	32°02'04.312"N	103°37'24.333"W	2.68	
13827.00	89.970	359.110	9089.38	4878.83	4878.41	-84.01	719985.99	377099.23	32°02'05.183"N	103°37'24.344"W	0.98	
13916.00	89.690	358.020	9089.64	4967.81	4967.38	-86.24	719983.76	377188.19	32°02'06.063"N	103°37'24.363"W	1.26	
14004.00	88.340	357.450	9091.16	5055.75	5055.29	-89.72	719980.29	377276.11	32°02'06.934"N	103°37'24.397"W	1.67	
14093.00	86.760	358.710	9094.98	5144.63	5144.16	-92.70	719977.31	377364.97	32°02'07.813"N	103°37'24.425"W	2.27	
14182.00	87.960	0.560	9099.06	5233.53	5233.06	-93.26	719976.74	377453.86	32°02'08.693"N	103°37'24.424"W	2.48	
14270.00	88.370	0.700	9101.88	5321.47	5321.01	-92.30	719977.71	377541.81	32°02'09.563"N	103°37'24.406"W	0.49	
14359.00	87.660	0.460	9104.96	5410.40	5409.95	-91.39	719978.61	377630.75	32°02'10.443"N	103°37'24.389"W	0.84	
14447.00	91.260	0.720	9105.79	5498.37	5497.92	-90.49	719979.51	377718.72	32°02'11.314"N	103°37'24.372"W	4.10	
14537.00	91.790	0.800	9103.39	5588.33	5587.88	-89.30	719980.71	377808.68	32°02'12.204"N	103°37'24.351"W	0.60	

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

WELLPATH DATA (174 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14626.00	93.460	0.420	9099.32	5677.22	5676.78	-88.35	719981.65	377897.57	32°02'13.084"N	103°37'24.333"W	1.92	
14714.00	90.740	359.120	9096.09	5765.15	5764.71	-88.70	719981.30	377985.50	32°02'13.954"N	103°37'24.331"W	3.43	
14803.00	87.010	358.030	9097.84	5854.10	5853.65	-90.91	719979.09	378074.43	32°02'14.834"N	103°37'24.350"W	4.37	
14891.00	87.160	357.520	9102.32	5941.94	5941.47	-94.33	719975.68	378162.25	32°02'15.703"N	103°37'24.383"W	0.60	
14980.00	87.560	359.490	9106.42	6030.82	6030.34	-96.65	719973.36	378251.12	32°02'16.583"N	103°37'24.403"W	2.26	
15069.00	89.410	359.380	9108.77	6119.78	6119.30	-97.52	719972.48	378340.07	32°02'17.463"N	103°37'24.406"W	2.08	
15157.00	91.080	359.530	9108.39	6207.78	6207.29	-98.36	719971.64	378428.06	32°02'18.334"N	103°37'24.409"W	1.91	
15246.00	91.380	359.540	9106.48	6296.76	6296.27	-99.08	719970.92	378517.03	32°02'19.214"N	103°37'24.411"W	0.34	
15334.00	90.150	359.240	9105.31	6384.75	6384.26	-100.02	719969.98	378605.02	32°02'20.085"N	103°37'24.415"W	1.44	
15422.00	88.830	357.810	9106.09	6472.72	6472.22	-102.28	719967.72	378692.98	32°02'20.956"N	103°37'24.435"W	2.21	
15511.00	91.110	358.940	9106.14	6561.69	6561.18	-104.81	719965.20	378781.93	32°02'21.836"N	103°37'24.457"W	2.86	
15599.00	90.340	358.250	9105.02	6649.67	6649.14	-106.96	719963.04	378869.89	32°02'22.707"N	103°37'24.475"W	1.17	
15688.00	89.230	359.960	9105.36	6738.66	6738.12	-108.36	719961.65	378958.87	32°02'23.587"N	103°37'24.485"W	2.29	
15776.00	89.410	0.000	9106.40	6826.65	6826.12	-108.39	719961.62	379046.86	32°02'24.458"N	103°37'24.478"W	0.21	
15865.00	89.630	359.280	9107.15	6915.65	6915.11	-108.95	719961.06	379135.85	32°02'25.339"N	103°37'24.478"W	0.85	
15953.00	89.010	358.250	9108.19	7003.63	7003.08	-110.84	719959.16	379223.82	32°02'26.209"N	103°37'24.493"W	1.37	
16042.00	89.660	359.340	9109.23	7092.61	7092.06	-112.71	719957.29	379312.79	32°02'27.090"N	103°37'24.508"W	1.43	
16131.49	90.650	359.140	9108.98	7182.10	7181.54	-113.90	719956.10	379402.27	32°02'27.976"N	103°37'24.515"W	1.13	
16219.00	88.310	359.710	9109.78	7269.60	7269.03	-114.78	719955.23	379489.76	32°02'28.841"N	103°37'24.519"W	2.75	
16308.00	88.710	1.690	9112.09	7358.55	7357.99	-113.69	719956.31	379578.72	32°02'29.722"N	103°37'24.499"W	2.27	
16396.00	89.480	1.570	9113.48	7446.49	7445.95	-111.19	719958.82	379666.67	32°02'30.592"N	103°37'24.464"W	0.89	
16485.00	89.690	0.850	9114.13	7535.45	7534.92	-109.31	719960.70	379755.64	32°02'31.472"N	103°37'24.435"W	0.84	
16573.00	93.610	1.910	9111.59	7623.35	7622.84	-107.19	719962.81	379843.56	32°02'32.342"N	103°37'24.404"W	4.61	
16662.00	94.930	1.460	9104.97	7712.05	7711.55	-104.58	719965.42	379932.27	32°02'33.220"N	103°37'24.367"W	1.57	
16750.00	93.610	0.790	9098.41	7799.77	7799.29	-102.86	719967.14	380020.00	32°02'34.088"N	103°37'24.340"W	1.68	
16839.00	87.900	359.020	9097.24	7888.72	7888.24	-103.01	719967.00	380108.95	32°02'34.968"N	103°37'24.335"W	6.72	
16927.00	87.350	358.640	9100.89	7976.64	7976.15	-104.80	719965.20	380196.85	32°02'35.838"N	103°37'24.349"W	0.76	
17016.00	88.120	358.660	9104.41	8065.56	8065.05	-106.90	719963.11	380285.75	32°02'36.718"N	103°37'24.367"W	0.87	
17104.00	87.780	357.850	9107.55	8153.47	8152.96	-109.58	719960.43	380373.65	32°02'37.588"N	103°37'24.391"W	1.00	
17192.00	86.980	0.580	9111.58	8241.37	8240.85	-110.78	719959.22	380461.54	32°02'38.458"N	103°37'24.398"W	3.23	

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

WELLPATH DATA (174 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17281.00	90.680	2.630	9113.39	8330.28	8329.77	-108.29	719961.72	380550.46	32°02'39.338"N	103°37'24.362"W	4.75	
17370.00	91.570	1.640	9111.65	8419.18	8418.69	-104.97	719965.03	380639.38	32°02'40.217"N	103°37'24.317"W	1.50	
17459.00	92.840	1.410	9108.22	8508.06	8507.59	-102.61	719967.40	380728.27	32°02'41.097"N	103°37'24.283"W	1.45	
17547.00	92.530	0.290	9104.10	8595.94	8595.48	-101.30	719968.70	380816.16	32°02'41.966"N	103°37'24.261"W	1.32	
17635.00	91.140	359.320	9101.28	8683.89	8683.44	-101.60	719968.40	380904.11	32°02'42.837"N	103°37'24.258"W	1.93	
17724.00	92.560	359.480	9098.41	8772.84	8772.38	-102.53	719967.47	380993.05	32°02'43.717"N	103°37'24.262"W	1.61	
17812.00	91.480	0.360	9095.31	8860.79	8860.32	-102.66	719967.35	381080.99	32°02'44.587"N	103°37'24.256"W	1.58	
17900.00	92.430	0.050	9092.31	8948.73	8948.27	-102.34	719967.66	381168.94	32°02'45.458"N	103°37'24.246"W	1.14	
17989.00	90.030	359.310	9090.39	9037.70	9037.24	-102.84	719967.17	381257.90	32°02'46.338"N	103°37'24.245"W	2.82	
18077.00	89.630	358.290	9090.66	9125.69	9125.22	-104.68	719965.32	381345.88	32°02'47.209"N	103°37'24.260"W	1.25	
18166.00	90.180	358.150	9090.80	9214.66	9214.18	-107.45	719962.56	381434.83	32°02'48.089"N	103°37'24.285"W	0.64	
18254.00	88.610	356.710	9091.73	9302.59	9302.08	-111.39	719958.61	381522.73	32°02'48.959"N	103°37'24.324"W	2.42	
18343.00	88.340	359.570	9094.10	9391.52	9390.99	-114.28	719955.73	381611.64	32°02'49.839"N	103°37'24.351"W	3.23	
18432.00	92.310	3.150	9093.60	9480.44	9479.93	-112.17	719957.84	381700.58	32°02'50.719"N	103°37'24.320"W	6.01	
18520.00	93.570	2.800	9089.08	9568.18	9567.70	-107.61	719962.40	381788.34	32°02'51.587"N	103°37'24.260"W	1.49	
18608.00	92.160	1.270	9084.68	9655.99	9655.53	-104.49	719965.52	381876.17	32°02'52.456"N	103°37'24.217"W	2.36	
18697.00	89.380	1.150	9083.49	9744.94	9744.49	-102.61	719967.40	381965.13	32°02'53.337"N	103°37'24.188"W	3.13	
18786.00	88.860	1.070	9084.86	9833.90	9833.46	-100.88	719969.12	382054.09	32°02'54.217"N	103°37'24.162"W	0.59	
18874.00	90.400	2.120	9085.42	9921.84	9921.42	-98.43	719971.57	382142.05	32°02'55.087"N	103°37'24.126"W	2.12	
18962.00	88.710	0.750	9086.11	10009.79	10009.39	-96.23	719973.77	382230.01	32°02'55.957"N	103°37'24.094"W	2.47	
19051.00	89.880	0.380	9087.20	10098.77	10098.37	-95.35	719974.65	382319.00	32°02'56.838"N	103°37'24.077"W	1.38	
19140.00	90.620	359.840	9086.81	10187.76	10187.37	-95.18	719974.82	382407.99	32°02'57.719"N	103°37'24.068"W	1.03	
19229.00	92.150	0.200	9084.66	10276.73	10276.34	-95.15	719974.85	382496.96	32°02'58.599"N	103°37'24.061"W	1.77	8 1/2 BH MWD 8492' - 19229'
19286.00	92.150	0.200	9082.52	10333.69	10333.30	-94.95	719975.05	382553.92	32°02'59.163"N	103°37'24.054"W	0.00	Projection to TD: 19286'

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SD WE 24 FED P24 6H FTP	9086.00	0.00	0.00	720070.00	372221.00	32°01'16.903"N	103°37'23.741"W	point
SD WE 24 FED P24 6H ip1	9087.00	5002.47	-86.28	719983.72	377223.28	32°02'06.411"N	103°37'24.361"W	point
SD WE 24 FED P24 6H ip3	9100.00	7326.69	-100.56	719969.44	379547.42	32°02'29.411"N	103°37'24.349"W	point
SD WE 24 FED P24 6H PBHL rev 3	9110.00	10329.39	-119.00	719951.00	382550.00	32°02'59.126"N	103°37'24.334"W	rectangle
SD WE 24 FED P24 6H ip2	9110.00	6097.01	-92.99	719977.01	378317.78	32°02'17.242"N	103°37'24.355"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD WE 24 FED P24 6H PWB Ref Wellpath: SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
33.00	683.50	ISCWSA MWD, Rev. 4 (Standard)	Imported survey 258.5' - 683.5'	SD WE 24 FED P24 6H PWB
683.50	4432.00	BHI NaviTrak (Standard)	12 1/4 BH MWD 797' - 4432'	SD WE 24 FED P24 6H PWB
4432.00	8332.00	BHI NaviTrak (Standard)	8 3/4 BH MWD 4611' - 8332'	SD WE 24 FED P24 6H PWB
8332.00	19229.00	BHI NaviTrak (Standard)	8 1/2 BH MWD 8492' - 19229'	SD WE 24 FED P24 6H PWB
19229.00	19286.00	Blind Drilling (std)	Projection to bit	SD WE 24 FED P24 6H PWB

Actual Wellpath Report

SD WE 24 FED P24 6H PWB_awp 258.5' - 19229'proj: 19286'

REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 6H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 6H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 6H PWB
Facility	SD WE 24 Fed P24		

COMMENTS

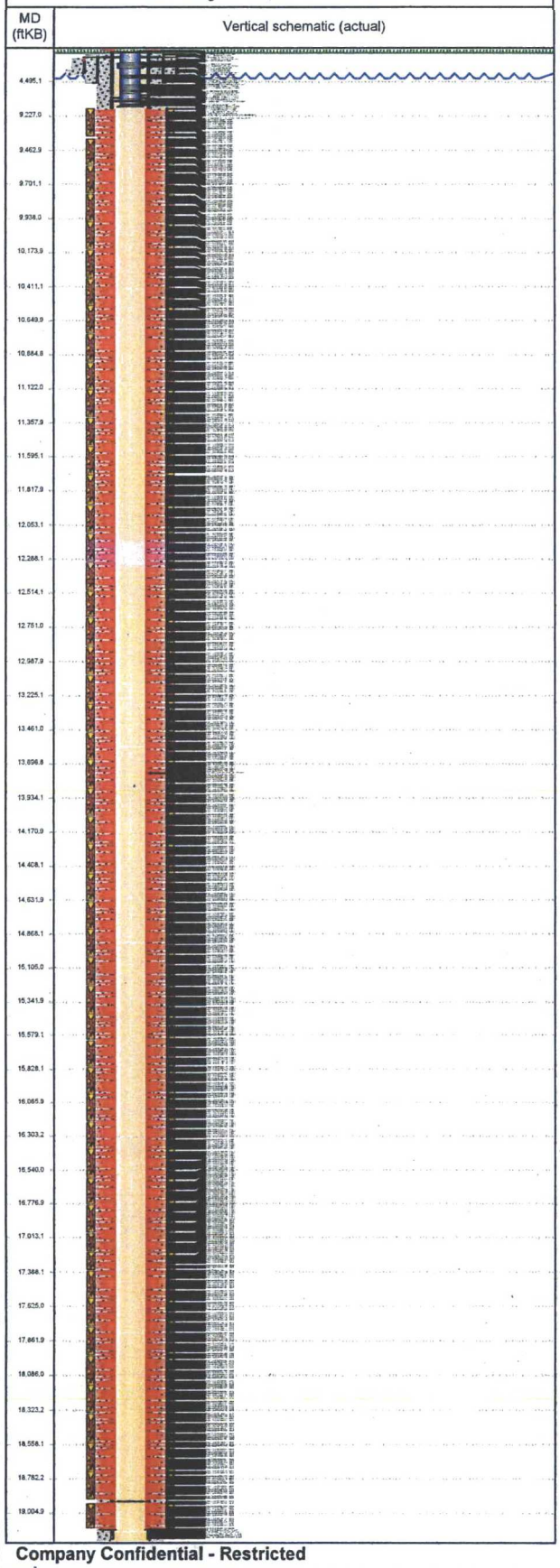
Wellpath general comments

Well: SD WE 24 Federal P24 No. 6H
Field: Jennings/Upper BN SPRN, Shale
Rig: Nabors X30
Location: Lea Co., NM
API: 30-025-43673-00
Latitude: 32° 01' 16.903" N
Longitude: 103° 37' 23.741" W
DF Elevation: 3170 feet
Elev. GL: 3137 feet
Proposed Direction: 359.65°
PBHL: 19286 feet
Duration: 08/18/2017-09/20/2017
FSE's: D. Hardeman
SO#: 8708441
12 1/4 BH MWD 797' - 4432'
8 3/4 BH MWD 4611' - 8332'
8 1/2 BH MWD 8492' - 19229'
Projection to TD: 19286'

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:26 AM



Job Details

Job Category	Start Date	Rig/Unit End Date
Completion	10/31/2017	
Completion	1/7/2018	1/9/2018

Casing Strings

Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top Thread	Set Depth (MD) (ftKB)
Conductor					153
Surface	13 3/8	54.50	J-55	ST&C	706
Intermediate Casing 1	9 5/8	40.00	L-80	LT&C	4,495
Production Casing	5 1/2	20.00	HCP110	TXPBTC	19,278

Tubing Strings

Tubing - Production set at 8,713.6ftKB on 1/9/2018 08:30

Tubing Description	Run Date	String Length (ft)	Set Depth (MD) (ftKB)
Tubing - Production	1/9/2018	8,681.63	8,713.6

Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Btm (ftKB)
Tubing Hanger	1	2 7/8			0.50	32.4
Tubing	1	2 7/8	6.50	L-80	31.95	64.4
10' Pup jt		3.667	6.50	L-80	10.08	74.5
6' Pup jt		3.667	6.50	L-80	6.10	80.6
4' Pup jt		3.667	6.50	L-80	4.04	84.6
2' Pup jt	1	2 7/8	6.50	L-80	2.06	86.7
Tubing	54	2 7/8	6.50	L-80	1,707.74	1,794.4
Gas Lift Mandrel #08	1	2 7/8	6.50	L-80	4.10	1,798.5
Tubing	48	2 7/8	6.50	L-80	1,517.58	3,316.1
Gas Lift Mandrel #07	1	2 7/8	6.50	L-80	4.10	3,320.2
Tubing	43	2 7/8	6.50	L-80	1,359.46	4,679.6
Gas Lift Mandrel #06	1	2 7/8	6.50	L-80	4.10	4,683.7
Tubing	37	2 7/8	6.50	L-80	1,169.23	5,853.0
Gas Lift Mandrel #05	1	2 7/8	6.50	L-80	4.10	5,857.1
Tubing	32	2 7/8	6.50	L-80	1,009.65	6,866.7
Gas Lift Mandrel #04	1	2 7/8	6.50	L-80	4.10	6,870.8
Tubing	26	2 7/8	6.50	L-80	822.69	7,693.5
Gas Lift Mandrel #03	1	2 7/8	6.50	L-80	4.10	7,697.6
Tubing	21	2 7/8	6.50	L-80	665.26	8,362.9
Gas Lift Mandrel #02	1	2 7/8	6.50	L-80	4.10	8,367.0
Tubing	9	2 7/8	6.50	L-80	284.74	8,651.7
Gas Lift Mandrel #01 (SMORE)	1	2 7/8	6.50	L-80	7.10	8,658.8
Tubing	1	2 7/8	6.50	L-80	31.68	8,690.5
On-Off Tool		4 1/2			1.45	8,691.9
450-193 Baker Hornet Packer	1	4 1/2			7.65	8,699.6
6' Pup Jt	1	2 7/8	4.70	L-80	6.18	8,705.8
2.312" XN Profile NPL w/ 2.210 NG	1	2 7/8	6.50		1.15	8,706.9
6' Pup Jt	1	2 7/8	4.70	L-80	6.20	8,713.1
2 3/8" pump out plug w/ 7 pins	1	3.667			0.44	8,713.6

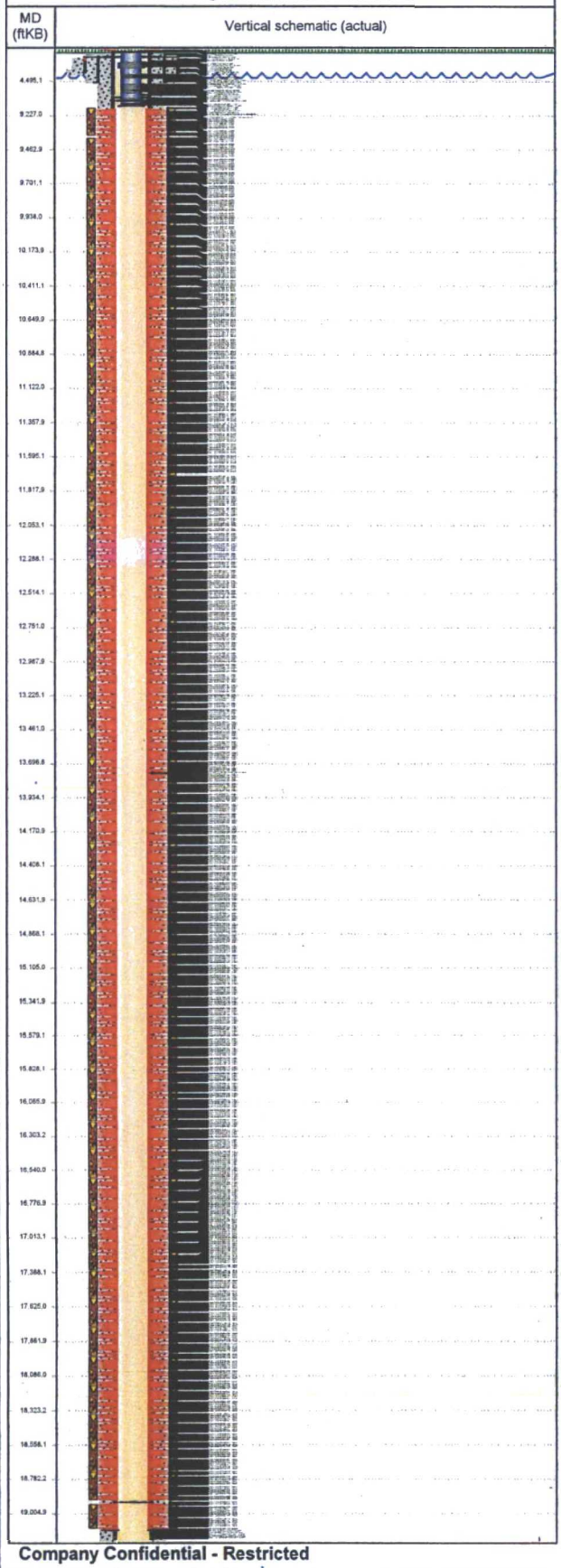
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/17/2017			2.0	0	Avalon, Original Hole
11/17/2017			2.0	0	Avalon, Original Hole
12/7/2017	0.0	1.0	3.0	3	Avalon, Original Hole
12/7/2017	9,186.0	9,187.0	2.0	2	Avalon, Original Hole
12/7/2017	9,198.0	9,199.0	2.0	2	Avalon, Original Hole
12/7/2017	9,212.0	9,213.0	2.0	2	Avalon, Original Hole
12/7/2017	9,226.0	9,227.0	2.0	2	Avalon, Original Hole
12/7/2017	9,240.0	9,241.0	2.0	2	Avalon, Original Hole
12/7/2017	9,254.0	9,255.0	2.0	2	Avalon, Original Hole
12/7/2017	9,268.0	9,269.0	2.0	2	Avalon, Original Hole
12/7/2017	9,282.0	9,283.0	3.0	3	Avalon, Original Hole
12/7/2017	9,296.0	9,297.0	3.0	3	Avalon, Original Hole
12/7/2017	9,310.0	9,311.0	3.0	3	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:30 AM



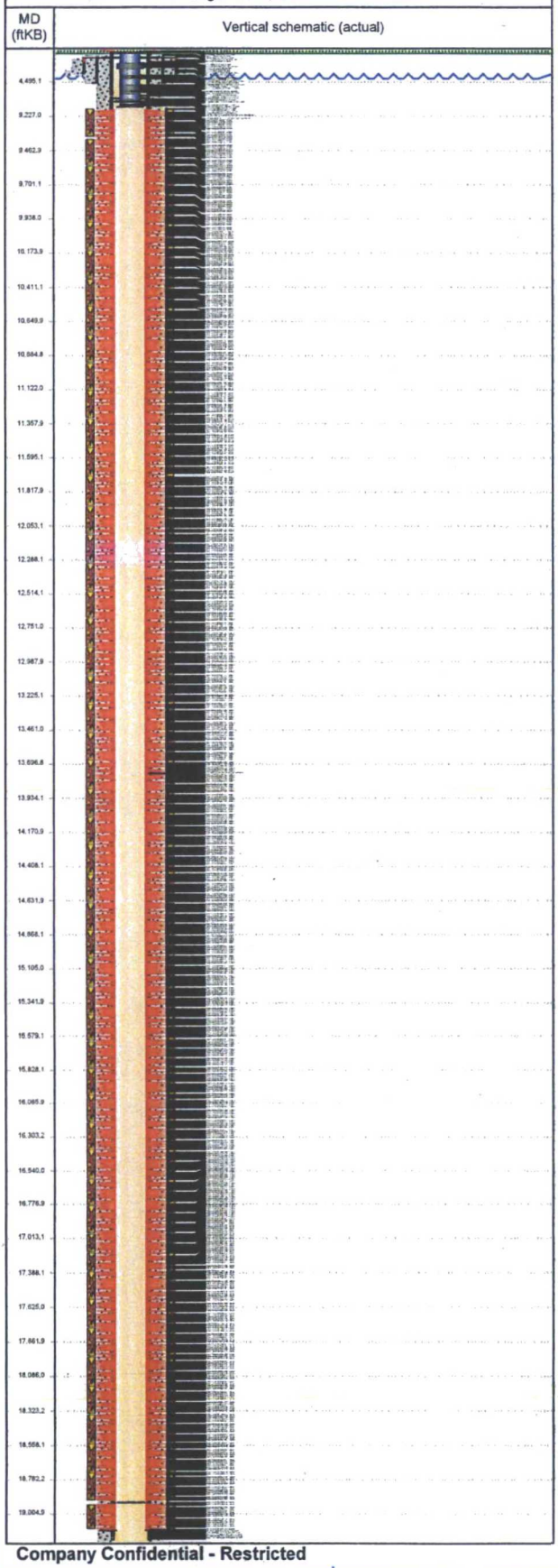
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/7/2017	9,324.0	9,325.0	3.0	3	Avalon, Original Hole
12/7/2017	9,338.0	9,339.0	3.0	3	Avalon, Original Hole
12/7/2017	9,353.0	9,354.0	4.0	4	Avalon, Original Hole
12/7/2017	9,366.0	9,367.0	6.0	6	Avalon, Original Hole
12/7/2017	9,379.0	9,380.0	2.0	2	Avalon, Original Hole
12/7/2017	9,393.0	9,394.0	2.0	2	Avalon, Original Hole
12/7/2017	9,407.0	9,408.0	2.0	2	Avalon, Original Hole
12/7/2017	9,421.0	9,422.0	2.0	2	Avalon, Original Hole
12/7/2017	9,433.0	9,434.0	2.0	2	Avalon, Original Hole
12/7/2017	9,449.0	9,450.0	2.0	2	Avalon, Original Hole
12/7/2017	9,463.0	9,464.0	2.0	2	Avalon, Original Hole
12/7/2017	9,477.0	9,478.0	3.0	3	Avalon, Original Hole
12/7/2017	9,491.0	9,492.0	3.0	3	Avalon, Original Hole
12/7/2017	9,505.0	9,506.0	3.0	3	Avalon, Original Hole
12/7/2017	9,521.0	9,522.0	3.0	3	Avalon, Original Hole
12/7/2017	9,547.0	9,548.0	4.0	4	Avalon, Original Hole
12/7/2017	9,561.0	9,562.0	6.0	6	Avalon, Original Hole
12/6/2017	9,574.0	9,575.0	2.0	2	Avalon, Original Hole
12/6/2017	9,588.0	9,589.0	2.0	2	Avalon, Original Hole
12/6/2017	9,600.0	9,601.0	2.0	2	Avalon, Original Hole
12/6/2017	9,616.0	9,617.0	2.0	2	Avalon, Original Hole
12/6/2017	9,630.0	9,631.0	2.0	2	Avalon, Original Hole
12/6/2017	9,642.0	9,643.0	2.0	2	Avalon, Original Hole
12/6/2017	9,658.0	9,659.0	2.0	2	Avalon, Original Hole
12/6/2017	9,672.0	9,673.0	3.0	3	Avalon, Original Hole
12/6/2017	9,688.0	9,689.0	3.0	3	Avalon, Original Hole
12/6/2017	9,700.0	9,701.0	3.0	3	Avalon, Original Hole
12/6/2017	9,714.0	9,715.0	3.0	3	Avalon, Original Hole
12/6/2017	9,726.0	9,727.0	3.0	3	Avalon, Original Hole
12/6/2017	9,742.0	9,743.0	4.0	4	Avalon, Original Hole
12/6/2017	9,756.0	9,757.0	6.0	6	Avalon, Original Hole
12/6/2017	9,769.0	9,770.0	2.0	2	Avalon, Original Hole
12/6/2017	9,783.0	9,784.0	2.0	2	Avalon, Original Hole
12/6/2017	9,797.0	9,798.0	2.0	2	Avalon, Original Hole
12/6/2017	9,811.0	9,812.0	2.0	2	Avalon, Original Hole
12/6/2017	9,825.0	9,826.0	2.0	2	Avalon, Original Hole
12/6/2017	9,839.0	9,840.0	2.0	2	Avalon, Original Hole
12/6/2017	9,855.0	9,856.0	2.0	2	Avalon, Original Hole
12/6/2017	9,867.0	9,868.0	3.0	3	Avalon, Original Hole
12/6/2017	9,881.0	9,882.0	3.0	3	Avalon, Original Hole
12/6/2017	9,893.0	9,894.0	3.0	3	Avalon, Original Hole
12/6/2017	9,909.0	9,910.0	3.0	3	Avalon, Original Hole
12/6/2017	9,923.0	9,924.0	3.0	3	Avalon, Original Hole
12/6/2017	9,937.0	9,938.0	4.0	4	Avalon, Original Hole
12/6/2017	9,951.0	9,952.0	6.0	6	Avalon, Original Hole
12/6/2017	9,964.0	9,965.0	2.0	2	Avalon, Original Hole
12/6/2017	9,978.0	9,979.0	2.0	2	Avalon, Original Hole
12/6/2017	9,992.0	9,993.0	2.0	2	Avalon, Original Hole
12/6/2017	10,006.0	10,007.0	2.0	2	Avalon, Original Hole
12/6/2017	10,020.0	10,021.0	2.0	2	Avalon, Original Hole
12/6/2017	10,034.0	10,035.0	2.0	2	Avalon, Original Hole
12/6/2017	10,048.0	10,049.0	2.0	2	Avalon, Original Hole
12/6/2017	10,062.0	10,063.0	3.0	3	Avalon, Original Hole
12/6/2017	10,076.0	10,077.0	3.0	3	Avalon, Original Hole
12/6/2017	10,090.0	10,091.0	3.0	3	Avalon, Original Hole
12/6/2017	10,104.0	10,105.0	3.0	3	Avalon, Original Hole
12/6/2017	10,118.0	10,119.0	3.0	3	Avalon, Original Hole
12/6/2017	10,132.0	10,133.0	4.0	4	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:34 AM



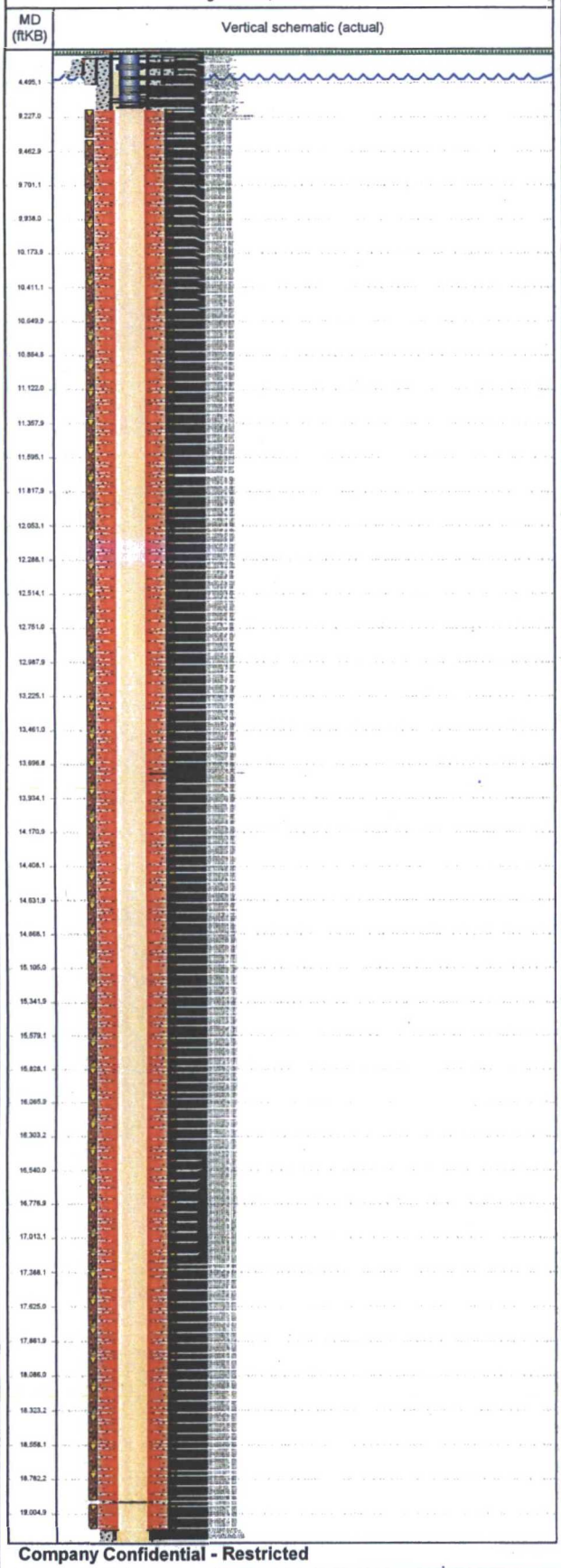
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/6/2017	10,146.0	10,147.0	6.0	6	Avalon, Original Hole
12/5/2017	10,159.0	10,160.0	2.0	2	Avalon, Original Hole
12/5/2017	10,173.0	10,174.0	2.0	2	Avalon, Original Hole
12/5/2017	10,187.0	10,188.0	2.0	2	Avalon, Original Hole
12/5/2017	10,201.0	10,202.0	2.0	2	Avalon, Original Hole
12/5/2017	10,215.0	10,216.0	2.0	2	Avalon, Original Hole
12/5/2017	10,229.0	10,230.0	2.0	2	Avalon, Original Hole
12/5/2017	10,243.0	10,244.0	2.0	2	Avalon, Original Hole
12/5/2017	10,257.0	10,258.0	3.0	3	Avalon, Original Hole
12/5/2017	10,271.0	10,272.0	3.0	3	Avalon, Original Hole
12/5/2017	10,285.0	10,286.0	3.0	3	Avalon, Original Hole
12/5/2017	10,299.0	10,300.0	3.0	3	Avalon, Original Hole
12/5/2017	10,313.0	10,314.0	3.0	3	Avalon, Original Hole
12/5/2017	10,327.0	10,328.0	4.0	4	Avalon, Original Hole
12/5/2017	10,341.0	10,342.0	6.0	6	Avalon, Original Hole
12/4/2017	10,354.0	10,355.0	2.0	2	Avalon, Original Hole
12/4/2017	10,368.0	10,369.0	2.0	2	Avalon, Original Hole
12/4/2017	10,382.0	10,383.0	2.0	2	Avalon, Original Hole
12/4/2017	10,396.0	10,397.0	2.0	2	Avalon, Original Hole
12/4/2017	10,410.0	10,411.0	2.0	2	Avalon, Original Hole
12/4/2017	10,424.0	10,425.0	2.0	2	Avalon, Original Hole
12/4/2017	10,438.0	10,439.0	2.0	2	Avalon, Original Hole
12/4/2017	10,452.0	10,453.0	3.0	3	Avalon, Original Hole
12/4/2017	10,466.0	10,467.0	3.0	3	Avalon, Original Hole
12/4/2017	10,480.0	10,481.0	3.0	3	Avalon, Original Hole
12/4/2017	10,494.0	10,495.0	3.0	3	Avalon, Original Hole
12/4/2017	10,508.0	10,509.0	3.0	3	Avalon, Original Hole
12/4/2017	10,522.0	10,523.0	4.0	4	Avalon, Original Hole
12/4/2017	10,536.0	10,537.0	5.0	5	Avalon, Original Hole
12/3/2017	10,549.0	10,550.0	2.0	2	Avalon, Original Hole
12/3/2017	10,563.0	10,564.0	2.0	2	Avalon, Original Hole
12/3/2017	10,577.0	10,578.0	2.0	2	Avalon, Original Hole
12/3/2017	10,591.0	10,592.0	2.0	2	Avalon, Original Hole
12/3/2017	10,604.0	10,605.0	2.0	2	Avalon, Original Hole
12/3/2017	10,619.0	10,620.0	2.0	2	Avalon, Original Hole
12/3/2017	10,633.0	10,634.0	2.0	2	Avalon, Original Hole
12/3/2017	10,649.0	10,650.0	3.0	3	Avalon, Original Hole
12/3/2017	10,661.0	10,662.0	3.0	3	Avalon, Original Hole
12/3/2017	10,675.0	10,676.0	3.0	3	Avalon, Original Hole
12/3/2017	10,689.0	10,690.0	3.0	3	Avalon, Original Hole
12/3/2017	10,703.0	10,704.0	3.0	3	Avalon, Original Hole
12/3/2017	10,717.0	10,718.0	4.0	4	Avalon, Original Hole
12/3/2017	10,731.0	10,732.0	5.0	5	Avalon, Original Hole
12/3/2017	10,744.0	10,745.0	2.0	2	Avalon, Original Hole
12/3/2017	10,758.0	10,759.0	2.0	2	Avalon, Original Hole
12/3/2017	10,770.0	10,771.0	2.0	2	Avalon, Original Hole
12/3/2017	10,786.0	10,787.0	2.0	2	Avalon, Original Hole
12/3/2017	10,800.0	10,801.0	2.0	2	Avalon, Original Hole
12/3/2017	10,812.0	10,813.0	2.0	2	Avalon, Original Hole
12/3/2017	10,828.0	10,829.0	2.0	2	Avalon, Original Hole
12/3/2017	10,842.0	10,843.0	3.0	3	Avalon, Original Hole
12/3/2017	10,856.0	10,857.0	3.0	3	Avalon, Original Hole
12/3/2017	10,870.0	10,871.0	3.0	3	Avalon, Original Hole
12/3/2017	10,884.0	10,885.0	3.0	3	Avalon, Original Hole
12/3/2017	10,898.0	10,899.0	3.0	3	Avalon, Original Hole
12/3/2017	10,912.0	10,913.0	4.0	4	Avalon, Original Hole
12/3/2017	10,926.0	10,927.0	5.0	5	Avalon, Original Hole
12/2/2017	10,939.0	10,940.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:38 AM



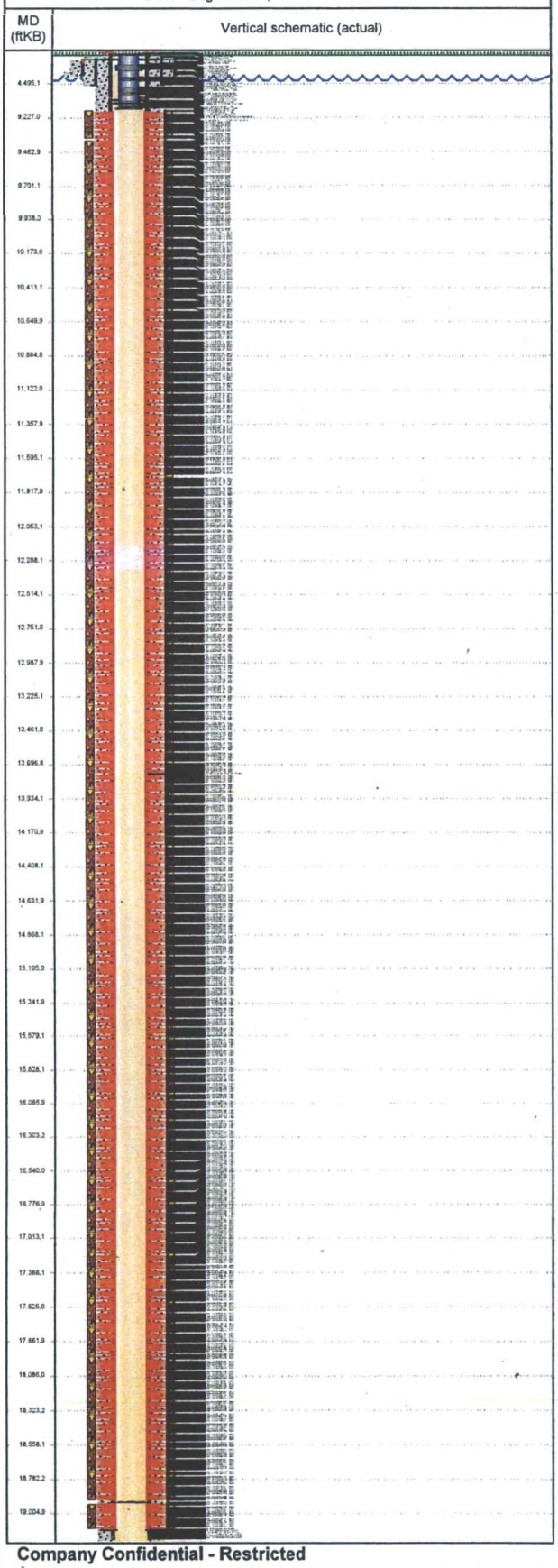
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/2/2017	10,953.0	10,954.0	2.0	2	Avalon, Original Hole
12/2/2017	10,967.0	10,968.0	2.0	2	Avalon, Original Hole
12/2/2017	10,981.0	10,982.0	2.0	2	Avalon, Original Hole
12/2/2017	10,995.0	10,996.0	2.0	2	Avalon, Original Hole
12/2/2017	11,009.0	11,010.0	2.0	2	Avalon, Original Hole
12/2/2017	11,023.0	11,024.0	2.0	2	Avalon, Original Hole
12/2/2017	11,037.0	11,038.0	3.0	3	Avalon, Original Hole
12/2/2017	11,051.0	11,052.0	3.0	3	Avalon, Original Hole
12/2/2017	11,065.0	11,066.0	3.0	3	Avalon, Original Hole
12/2/2017	11,079.0	11,080.0	3.0	3	Avalon, Original Hole
12/2/2017	11,093.0	11,094.0	3.0	3	Avalon, Original Hole
12/2/2017	11,105.0	11,106.0	4.0	4	Avalon, Original Hole
12/2/2017	11,121.0	11,122.0	5.0	5	Avalon, Original Hole
12/2/2017	11,134.0	11,135.0	2.0	2	Avalon, Original Hole
12/2/2017	11,148.0	11,149.0	2.0	2	Avalon, Original Hole
12/2/2017	11,162.0	11,163.0	2.0	2	Avalon, Original Hole
12/2/2017	11,176.0	11,177.0	2.0	2	Avalon, Original Hole
12/2/2017	11,190.0	11,191.0	2.0	2	Avalon, Original Hole
12/2/2017	11,204.0	11,205.0	2.0	2	Avalon, Original Hole
12/2/2017	11,218.0	11,219.0	2.0	2	Avalon, Original Hole
12/2/2017	11,231.0	11,232.0	3.0	3	Avalon, Original Hole
12/2/2017	11,246.0	11,247.0	3.0	3	Avalon, Original Hole
12/2/2017	11,260.0	11,261.0	3.0	3	Avalon, Original Hole
12/2/2017	11,274.0	11,275.0	3.0	3	Avalon, Original Hole
12/2/2017	11,288.0	11,289.0	3.0	3	Avalon, Original Hole
12/2/2017	11,302.0	11,303.0	4.0	4	Avalon, Original Hole
12/2/2017	11,316.0	11,317.0	5.0	5	Avalon, Original Hole
12/1/2017	11,329.0	11,330.0	2.0	2	Avalon, Original Hole
12/1/2017	11,343.0	11,344.0	2.0	2	Avalon, Original Hole
12/1/2017	11,357.0	11,358.0	2.0	2	Avalon, Original Hole
12/1/2017	11,371.0	11,372.0	2.0	2	Avalon, Original Hole
12/1/2017	11,385.0	11,386.0	2.0	2	Avalon, Original Hole
12/1/2017	11,399.0	11,400.0	2.0	2	Avalon, Original Hole
12/1/2017	11,413.0	11,414.0	2.0	2	Avalon, Original Hole
12/1/2017	11,427.0	11,428.0	3.0	3	Avalon, Original Hole
12/1/2017	11,441.0	11,442.0	3.0	3	Avalon, Original Hole
12/1/2017	11,455.0	11,456.0	3.0	3	Avalon, Original Hole
12/1/2017	11,469.0	11,470.0	3.0	3	Avalon, Original Hole
12/1/2017	11,483.0	11,484.0	3.0	3	Avalon, Original Hole
12/1/2017	11,497.0	11,498.0	4.0	4	Avalon, Original Hole
12/1/2017	11,511.0	11,512.0	5.0	5	Avalon, Original Hole
12/1/2017	11,524.0	11,525.0	2.0	2	Avalon, Original Hole
12/1/2017	11,538.0	11,539.0	2.0	2	Avalon, Original Hole
12/1/2017	11,552.0	11,553.0	2.0	2	Avalon, Original Hole
12/1/2017	11,566.0	11,567.0	2.0	2	Avalon, Original Hole
12/1/2017	11,580.0	11,581.0	2.0	2	Avalon, Original Hole
12/1/2017	11,594.0	11,595.0	2.0	2	Avalon, Original Hole
12/1/2017	11,608.0	11,609.0	2.0	2	Avalon, Original Hole
12/1/2017	11,622.0	11,623.0	3.0	3	Avalon, Original Hole
12/1/2017	11,636.0	11,637.0	3.0	3	Avalon, Original Hole
12/1/2017	11,650.0	11,651.0	3.0	3	Avalon, Original Hole
12/1/2017	11,664.0	11,665.0	3.0	3	Avalon, Original Hole
12/1/2017	11,680.0	11,681.0	3.0	3	Avalon, Original Hole
12/1/2017	11,692.0	11,693.0	4.0	4	Avalon, Original Hole
12/1/2017	11,704.0	11,705.0	5.0	5	Avalon, Original Hole
11/30/2017	11,720.0	11,721.0	2.0	2	Avalon, Original Hole
11/30/2017	11,733.0	11,734.0	2.0	2	Avalon, Original Hole
11/30/2017	11,747.0	11,748.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:41 AM



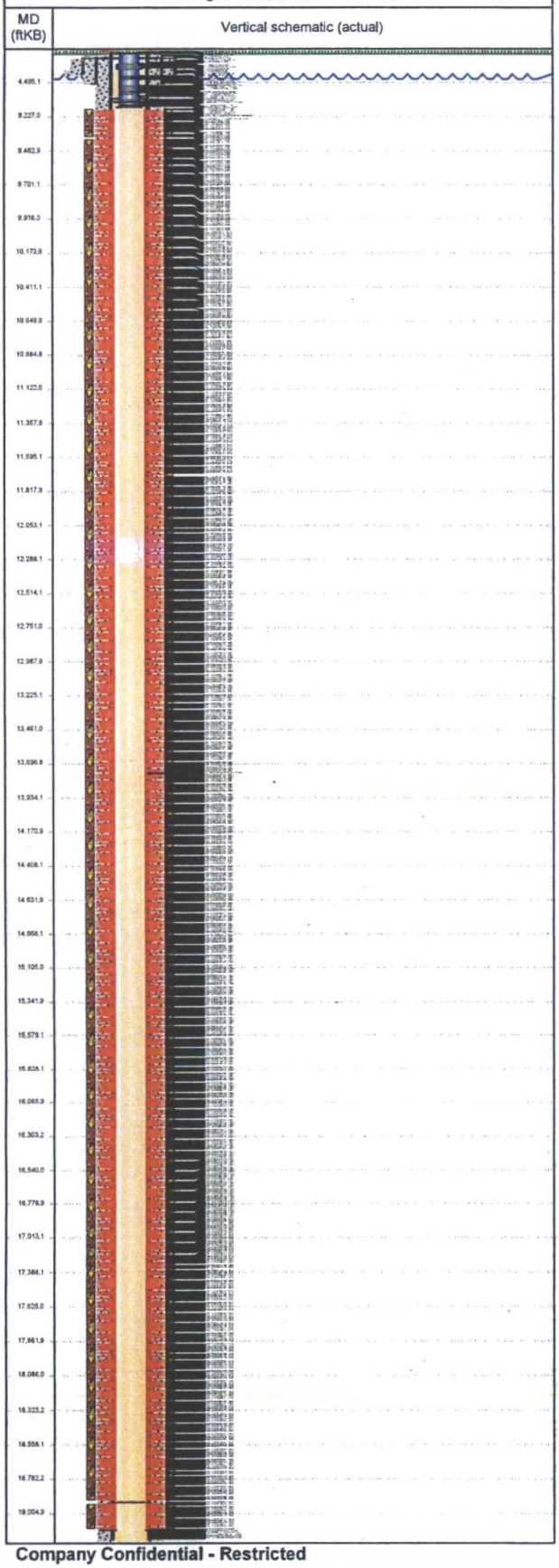
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/30/2017	11,763.0	11,764.0	2.0	2	Avalon, Original Hole
11/30/2017	11,775.0	11,776.0	2.0	2	Avalon, Original Hole
11/30/2017	11,789.0	11,790.0	2.0	2	Avalon, Original Hole
11/30/2017	11,803.0	11,804.0	2.0	2	Avalon, Original Hole
11/30/2017	11,817.0	11,818.0	3.0	3	Avalon, Original Hole
11/30/2017	11,831.0	11,832.0	3.0	3	Avalon, Original Hole
11/30/2017	11,845.0	11,846.0	3.0	3	Avalon, Original Hole
11/30/2017	11,859.0	11,860.0	3.0	3	Avalon, Original Hole
11/30/2017	11,875.0	11,876.0	3.0	3	Avalon, Original Hole
11/30/2017	11,888.0	11,889.0	4.0	4	Avalon, Original Hole
11/30/2017	11,901.0	11,902.0	5.0	5	Avalon, Original Hole
11/30/2017	11,914.0	11,915.0	2.0	2	Avalon, Original Hole
11/30/2017	11,928.0	11,929.0	2.0	2	Avalon, Original Hole
11/30/2017	11,942.0	11,943.0	2.0	2	Avalon, Original Hole
11/30/2017	11,956.0	11,957.0	2.0	2	Avalon, Original Hole
11/30/2017	11,971.0	11,972.0	2.0	2	Avalon, Original Hole
11/30/2017	11,984.0	11,985.0	2.0	2	Avalon, Original Hole
11/30/2017	11,998.0	11,999.0	2.0	2	Avalon, Original Hole
11/30/2017	12,013.0	12,014.0	3.0	3	Avalon, Original Hole
11/30/2017	12,026.0	12,027.0	3.0	3	Avalon, Original Hole
11/30/2017	12,040.0	12,041.0	3.0	3	Avalon, Original Hole
11/30/2017	12,052.0	12,053.0	3.0	3	Avalon, Original Hole
11/30/2017	12,068.0	12,069.0	3.0	3	Avalon, Original Hole
11/30/2017	12,082.0	12,083.0	4.0	4	Avalon, Original Hole
11/30/2017	12,095.0	12,096.0	5.0	5	Avalon, Original Hole
11/29/2017	12,109.0	12,110.0	2.0	2	Avalon, Original Hole
11/29/2017	12,123.0	12,124.0	2.0	2	Avalon, Original Hole
11/29/2017	12,136.0	12,137.0	2.0	2	Avalon, Original Hole
11/29/2017	12,151.0	12,152.0	2.0	2	Avalon, Original Hole
11/29/2017	12,165.0	12,166.0	2.0	2	Avalon, Original Hole
11/29/2017	12,178.0	12,179.0	2.0	2	Avalon, Original Hole
11/29/2017	12,193.0	12,194.0	2.0	2	Avalon, Original Hole
11/29/2017	12,207.0	12,208.0	3.0	3	Avalon, Original Hole
11/29/2017	12,221.0	12,222.0	3.0	3	Avalon, Original Hole
11/29/2017	12,235.0	12,236.0	3.0	3	Avalon, Original Hole
11/29/2017	12,249.0	12,250.0	3.0	3	Avalon, Original Hole
11/29/2017	12,262.0	12,263.0	3.0	3	Avalon, Original Hole
11/29/2017	12,277.0	12,278.0	4.0	4	Avalon, Original Hole
11/29/2017	12,288.0	12,289.0	5.0	5	Avalon, Original Hole
11/29/2017	12,304.0	12,305.0	2.0	2	Avalon, Original Hole
11/29/2017	12,318.0	12,319.0	2.0	2	Avalon, Original Hole
11/29/2017	12,332.0	12,333.0	2.0	2	Avalon, Original Hole
11/29/2017	12,347.0	12,348.0	2.0	2	Avalon, Original Hole
11/29/2017	12,360.0	12,361.0	2.0	2	Avalon, Original Hole
11/29/2017	12,374.0	12,375.0	2.0	2	Avalon, Original Hole
11/29/2017	12,388.0	12,389.0	2.0	2	Avalon, Original Hole
11/29/2017	12,402.0	12,403.0	3.0	3	Avalon, Original Hole
11/29/2017	12,416.0	12,417.0	3.0	3	Avalon, Original Hole
11/29/2017	12,430.0	12,431.0	3.0	3	Avalon, Original Hole
11/29/2017	12,444.0	12,445.0	3.0	3	Avalon, Original Hole
11/29/2017	12,458.0	12,459.0	3.0	3	Avalon, Original Hole
11/29/2017	12,472.0	12,473.0	4.0	4	Avalon, Original Hole
11/29/2017	12,486.0	12,487.0	5.0	5	Avalon, Original Hole
11/27/2017	12,499.0	12,500.0	2.0	2	Avalon, Original Hole
11/27/2017	12,513.0	12,514.0	2.0	2	Avalon, Original Hole
11/27/2017	12,527.0	12,528.0	2.0	2	Avalon, Original Hole
11/27/2017	12,541.0	12,542.0	2.0	2	Avalon, Original Hole
11/27/2017	12,555.0	12,556.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:45 AM



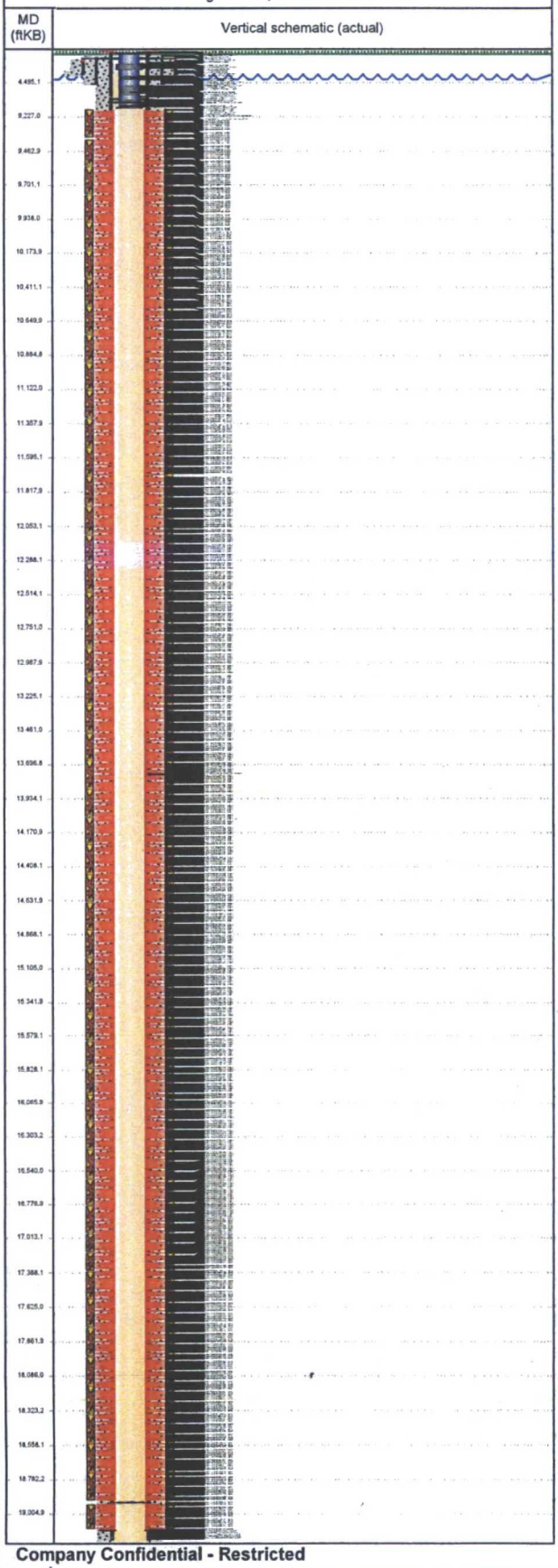
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/27/2017	12,569.0	12,570.0	2.0	2	Avalon, Original Hole
11/27/2017	12,583.0	12,584.0	2.0	2	Avalon, Original Hole
11/27/2017	12,597.0	12,598.0	3.0	3	Avalon, Original Hole
11/27/2017	12,611.0	12,612.0	3.0	3	Avalon, Original Hole
11/27/2017	12,625.0	12,626.0	3.0	3	Avalon, Original Hole
11/27/2017	12,639.0	12,640.0	3.0	3	Avalon, Original Hole
11/27/2017	12,653.0	12,654.0	3.0	3	Avalon, Original Hole
11/27/2017	12,667.0	12,668.0	4.0	4	Avalon, Original Hole
11/27/2017	12,682.0	12,683.0	5.0	5	Avalon, Original Hole
11/27/2017	12,694.0	12,695.0	2.0	2	Avalon, Original Hole
11/27/2017	12,708.0	12,709.0	2.0	2	Avalon, Original Hole
11/27/2017	12,722.0	12,723.0	2.0	2	Avalon, Original Hole
11/27/2017	12,736.0	12,737.0	2.0	2	Avalon, Original Hole
11/27/2017	12,750.0	12,751.0	2.0	2	Avalon, Original Hole
11/27/2017	12,764.0	12,765.0	2.0	2	Avalon, Original Hole
11/27/2017	12,778.0	12,779.0	2.0	2	Avalon, Original Hole
11/27/2017	12,792.0	12,793.0	3.0	3	Avalon, Original Hole
11/27/2017	12,806.0	12,807.0	3.0	3	Avalon, Original Hole
11/27/2017	12,820.0	12,821.0	3.0	3	Avalon, Original Hole
11/27/2017	12,834.0	12,835.0	3.0	3	Avalon, Original Hole
11/27/2017	12,848.0	12,849.0	3.0	3	Avalon, Original Hole
11/27/2017	12,862.0	12,863.0	4.0	4	Avalon, Original Hole
11/27/2017	12,876.0	12,877.0	5.0	5	Avalon, Original Hole
11/26/2017	12,889.0	12,890.0	2.0	2	Avalon, Original Hole
11/26/2017	12,903.0	12,904.0	2.0	2	Avalon, Original Hole
11/26/2017	12,917.0	12,918.0	2.0	2	Avalon, Original Hole
11/26/2017	12,931.0	12,932.0	2.0	2	Avalon, Original Hole
11/26/2017	12,945.0	12,946.0	2.0	2	Avalon, Original Hole
11/26/2017	12,959.0	12,960.0	2.0	2	Avalon, Original Hole
11/26/2017	12,973.0	12,974.0	2.0	2	Avalon, Original Hole
11/26/2017	12,987.0	12,988.0	3.0	3	Avalon, Original Hole
11/26/2017	13,001.0	13,002.0	3.0	3	Avalon, Original Hole
11/26/2017	13,015.0	13,016.0	3.0	3	Avalon, Original Hole
11/26/2017	13,029.0	13,030.0	3.0	3	Avalon, Original Hole
11/26/2017	13,043.0	13,044.0	3.0	3	Avalon, Original Hole
11/26/2017	13,057.0	13,058.0	4.0	4	Avalon, Original Hole
11/26/2017	13,071.0	13,072.0	5.0	5	Avalon, Original Hole
11/26/2017	13,084.0	13,085.0	2.0	2	Avalon, Original Hole
11/26/2017	13,098.0	13,099.0	2.0	2	Avalon, Original Hole
11/26/2017	13,112.0	13,113.0	2.0	2	Avalon, Original Hole
11/26/2017	13,126.0	13,127.0	2.0	2	Avalon, Original Hole
11/26/2017	13,140.0	13,141.0	2.0	2	Avalon, Original Hole
11/26/2017	13,154.0	13,155.0	2.0	2	Avalon, Original Hole
11/26/2017	13,168.0	13,169.0	2.0	2	Avalon, Original Hole
11/26/2017	13,182.0	13,183.0	3.0	3	Avalon, Original Hole
11/26/2017	13,196.0	13,197.0	3.0	3	Avalon, Original Hole
11/26/2017	13,210.0	13,211.0	3.0	3	Avalon, Original Hole
11/26/2017	13,224.0	13,225.0	3.0	3	Avalon, Original Hole
11/26/2017	13,238.0	13,239.0	3.0	3	Avalon, Original Hole
11/26/2017	13,248.0	13,249.0	4.0	4	Avalon, Original Hole
11/26/2017	13,260.0	13,261.0	5.0	5	Avalon, Original Hole
11/25/2017	13,279.0	13,280.0	2.0	2	Avalon, Original Hole
11/25/2017	13,293.0	13,294.0	2.0	2	Avalon, Original Hole
11/25/2017	13,307.0	13,308.0	2.0	2	Avalon, Original Hole
11/25/2017	13,321.0	13,322.0	2.0	2	Avalon, Original Hole
11/25/2017	13,335.0	13,336.0	2.0	2	Avalon, Original Hole
11/25/2017	13,349.0	13,350.0	2.0	2	Avalon, Original Hole
11/25/2017	13,363.0	13,364.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:49 AM



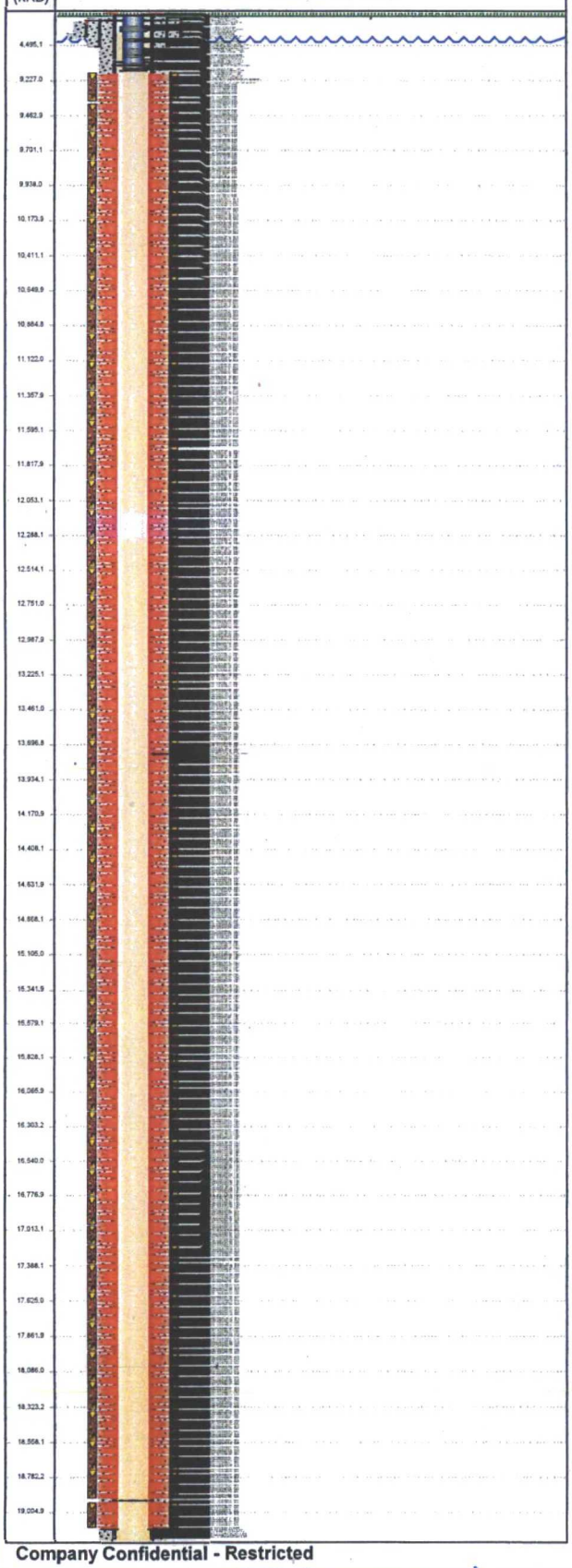
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/25/2017	13,377.0	13,378.0	3.0	3	Avalon, Original Hole
11/25/2017	13,391.0	13,392.0	3.0	3	Avalon, Original Hole
11/25/2017	13,405.0	13,406.0	3.0	3	Avalon, Original Hole
11/25/2017	13,419.0	13,420.0	3.0	3	Avalon, Original Hole
11/25/2017	13,433.0	13,434.0	3.0	3	Avalon, Original Hole
11/25/2017	13,447.0	13,448.0	4.0	4	Avalon, Original Hole
11/25/2017	13,461.0	13,462.0	5.0	5	Avalon, Original Hole
11/25/2017	13,474.0	13,475.0	2.0	2	Avalon, Original Hole
11/25/2017	13,488.0	13,489.0	2.0	2	Avalon, Original Hole
11/25/2017	13,502.0	13,503.0	2.0	2	Avalon, Original Hole
11/25/2017	13,516.0	13,517.0	2.0	2	Avalon, Original Hole
11/25/2017	13,530.0	13,531.0	2.0	2	Avalon, Original Hole
11/25/2017	13,544.0	13,545.0	2.0	2	Avalon, Original Hole
11/25/2017	13,558.0	13,559.0	2.0	2	Avalon, Original Hole
11/25/2017	13,570.0	13,571.0	3.0	3	Avalon, Original Hole
11/25/2017	13,586.0	13,587.0	3.0	3	Avalon, Original Hole
11/25/2017	13,600.0	13,601.0	3.0	3	Avalon, Original Hole
11/25/2017	13,612.0	13,613.0	3.0	3	Avalon, Original Hole
11/25/2017	13,628.0	13,629.0	3.0	3	Avalon, Original Hole
11/25/2017	13,642.0	13,643.0	4.0	4	Avalon, Original Hole
11/24/2017	13,656.0	13,657.0	5.0	5	Avalon, Original Hole
11/24/2017	13,669.0	13,670.0	2.0	2	Avalon, Original Hole
11/24/2017	13,683.0	13,684.0	2.0	2	Avalon, Original Hole
11/24/2017	13,697.0	13,698.0	2.0	2	Avalon, Original Hole
11/24/2017	13,711.0	13,712.0	2.0	2	Avalon, Original Hole
11/24/2017	13,725.0	13,726.0	2.0	2	Avalon, Original Hole
11/24/2017	13,739.0	13,740.0	2.0	2	Avalon, Original Hole
11/24/2017	13,753.0	13,754.0	2.0	2	Avalon, Original Hole
11/24/2017	13,767.0	13,768.0	3.0	3	Avalon, Original Hole
11/24/2017	13,781.0	13,782.0	3.0	3	Avalon, Original Hole
11/24/2017	13,795.0	13,796.0	3.0	3	Avalon, Original Hole
11/24/2017	13,809.0	13,810.0	3.0	3	Avalon, Original Hole
11/24/2017	13,823.0	13,824.0	3.0	3	Avalon, Original Hole
11/24/2017	13,837.0	13,838.0	4.0	4	Avalon, Original Hole
11/24/2017	13,851.0	13,852.0	5.0	5	Avalon, Original Hole
11/23/2017	13,864.0	13,865.0	2.0	2	Avalon, Original Hole
11/23/2017	13,876.0	13,877.0	2.0	2	Avalon, Original Hole
11/23/2017	13,892.0	13,893.0	2.0	2	Avalon, Original Hole
11/23/2017	13,906.0	13,907.0	2.0	2	Avalon, Original Hole
11/23/2017	13,919.0	13,920.0	2.0	2	Avalon, Original Hole
11/23/2017	13,934.0	13,935.0	2.0	2	Avalon, Original Hole
11/23/2017	13,948.0	13,949.0	2.0	2	Avalon, Original Hole
11/23/2017	13,962.0	13,963.0	3.0	3	Avalon, Original Hole
11/23/2017	13,976.0	13,977.0	3.0	3	Avalon, Original Hole
11/23/2017	13,990.0	13,991.0	3.0	3	Avalon, Original Hole
11/23/2017	14,004.0	14,005.0	3.0	3	Avalon, Original Hole
11/23/2017	14,018.0	14,019.0	3.0	3	Avalon, Original Hole
11/23/2017	14,032.0	14,033.0	4.0	4	Avalon, Original Hole
11/23/2017	14,046.0	14,047.0	5.0	5	Avalon, Original Hole
11/22/2017	14,059.0	14,060.0	2.0	2	Avalon, Original Hole
11/22/2017	14,073.0	14,074.0	2.0	2	Avalon, Original Hole
11/22/2017	14,087.0	14,088.0	2.0	2	Avalon, Original Hole
11/22/2017	14,101.0	14,102.0	2.0	2	Avalon, Original Hole
11/22/2017	14,115.0	14,116.0	2.0	2	Avalon, Original Hole
11/22/2017	14,129.0	14,130.0	2.0	2	Avalon, Original Hole
11/22/2017	14,143.0	14,144.0	2.0	2	Avalon, Original Hole
11/22/2017	14,157.0	14,158.0	3.0	3	Avalon, Original Hole
11/22/2017	14,171.0	14,172.0	3.0	3	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:52 AM



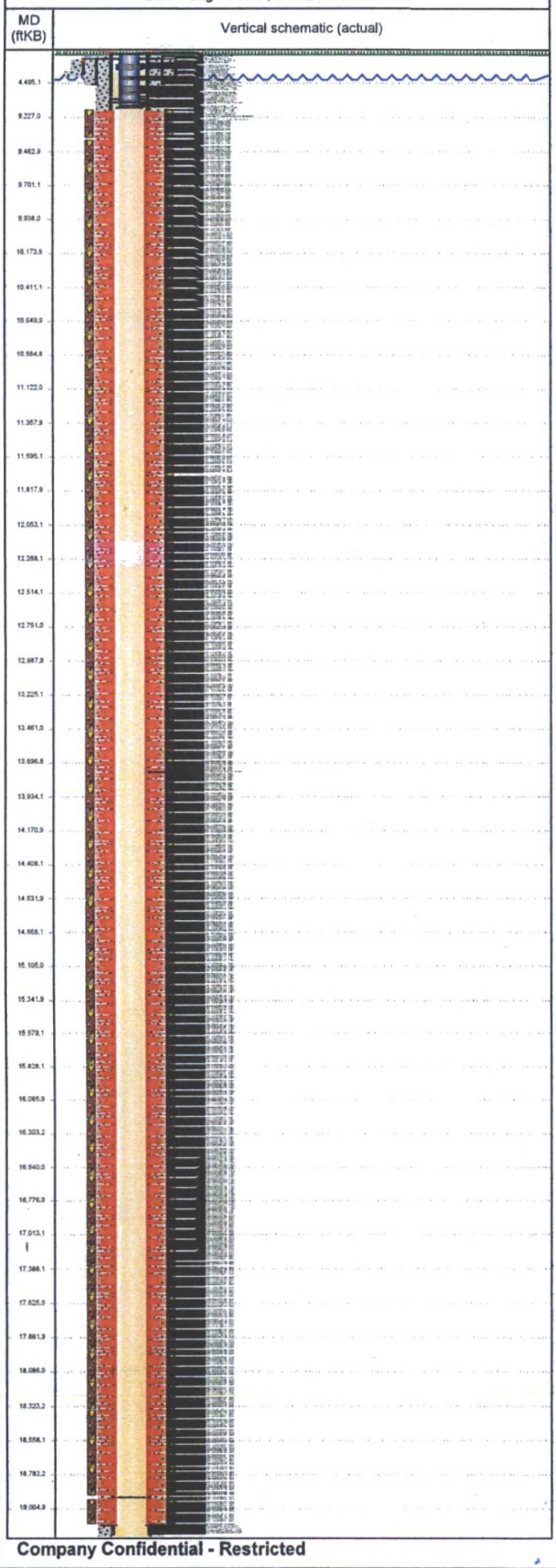
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/22/2017	14,185.0	14,186.0	3.0	3	Avalon, Original Hole
11/22/2017	14,199.0	14,200.0	3.0	3	Avalon, Original Hole
11/22/2017	14,213.0	14,214.0	3.0	3	Avalon, Original Hole
11/22/2017	14,227.0	14,228.0	4.0	4	Avalon, Original Hole
11/22/2017	14,241.0	14,242.0	5.0	5	Avalon, Original Hole
11/21/2017	14,254.0	14,255.0	2.0	2	Avalon, Original Hole
11/21/2017	14,269.0	14,270.0	2.0	2	Avalon, Original Hole
11/21/2017	14,282.0	14,283.0	2.0	2	Avalon, Original Hole
11/21/2017	14,296.0	14,297.0	2.0	2	Avalon, Original Hole
11/21/2017	14,308.0	14,309.0	2.0	2	Avalon, Original Hole
11/21/2017	14,324.0	14,325.0	2.0	2	Avalon, Original Hole
11/21/2017	14,338.0	14,339.0	2.0	2	Avalon, Original Hole
11/21/2017	14,352.0	14,353.0	3.0	3	Avalon, Original Hole
11/21/2017	14,366.0	14,367.0	3.0	3	Avalon, Original Hole
11/21/2017	14,380.0	14,381.0	3.0	3	Avalon, Original Hole
11/21/2017	14,394.0	14,395.0	3.0	3	Avalon, Original Hole
11/21/2017	14,408.0	14,409.0	3.0	3	Avalon, Original Hole
11/21/2017	14,422.0	14,423.0	4.0	4	Avalon, Original Hole
11/21/2017	14,431.0	14,432.0	5.0	5	Avalon, Original Hole
11/21/2017	14,449.0	14,450.0	2.0	2	Avalon, Original Hole
11/21/2017	14,463.0	14,464.0	2.0	2	Avalon, Original Hole
11/21/2017	14,477.0	14,478.0	2.0	2	Avalon, Original Hole
11/21/2017	14,491.0	14,492.0	2.0	2	Avalon, Original Hole
11/21/2017	14,505.0	14,506.0	2.0	2	Avalon, Original Hole
11/21/2017	14,519.0	14,520.0	2.0	2	Avalon, Original Hole
11/21/2017	14,533.0	14,534.0	2.0	2	Avalon, Original Hole
11/21/2017	14,547.0	14,548.0	3.0	3	Avalon, Original Hole
11/21/2017	14,561.0	14,562.0	3.0	3	Avalon, Original Hole
11/21/2017	14,577.0	14,578.0	3.0	3	Avalon, Original Hole
11/21/2017	14,589.0	14,590.0	3.0	3	Avalon, Original Hole
11/21/2017	14,603.0	14,604.0	3.0	3	Avalon, Original Hole
11/21/2017	14,617.0	14,618.0	4.0	4	Avalon, Original Hole
11/21/2017	14,631.0	14,632.0	5.0	5	Avalon, Original Hole
11/20/2017	14,644.0	14,645.0	2.0	2	Avalon, Original Hole
11/20/2017	14,658.0	14,659.0	2.0	2	Avalon, Original Hole
11/20/2017	14,672.0	14,673.0	2.0	2	Avalon, Original Hole
11/20/2017	14,686.0	14,687.0	2.0	2	Avalon, Original Hole
11/20/2017	14,700.0	14,701.0	2.0	2	Avalon, Original Hole
11/20/2017	14,714.0	14,715.0	2.0	2	Avalon, Original Hole
11/20/2017	14,728.0	14,729.0	2.0	2	Avalon, Original Hole
11/20/2017	14,742.0	14,743.0	3.0	3	Avalon, Original Hole
11/20/2017	14,756.0	14,757.0	3.0	3	Avalon, Original Hole
11/20/2017	14,770.0	14,771.0	3.0	3	Avalon, Original Hole
11/20/2017	14,784.0	14,785.0	3.0	3	Avalon, Original Hole
11/20/2017	14,798.0	14,799.0	3.0	3	Avalon, Original Hole
11/20/2017	14,812.0	14,813.0	4.0	4	Avalon, Original Hole
11/20/2017	14,826.0	14,827.0	6.0	6	Avalon, Original Hole
11/20/2017	14,839.0	14,840.0	2.0	2	Avalon, Original Hole
11/20/2017	14,853.0	14,854.0	2.0	2	Avalon, Original Hole
11/20/2017	14,867.0	14,868.0	2.0	2	Avalon, Original Hole
11/20/2017	14,881.0	14,882.0	2.0	2	Avalon, Original Hole
11/20/2017	14,895.0	14,896.0	2.0	2	Avalon, Original Hole
11/20/2017	14,909.0	14,910.0	2.0	2	Avalon, Original Hole
11/20/2017	14,923.0	14,924.0	2.0	2	Avalon, Original Hole
11/20/2017	14,937.0	14,938.0	3.0	3	Avalon, Original Hole
11/20/2017	14,951.0	14,952.0	3.0	3	Avalon, Original Hole
11/20/2017	14,965.0	14,966.0	3.0	3	Avalon, Original Hole
11/20/2017	14,979.0	14,980.0	3.0	3	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:43:57 AM



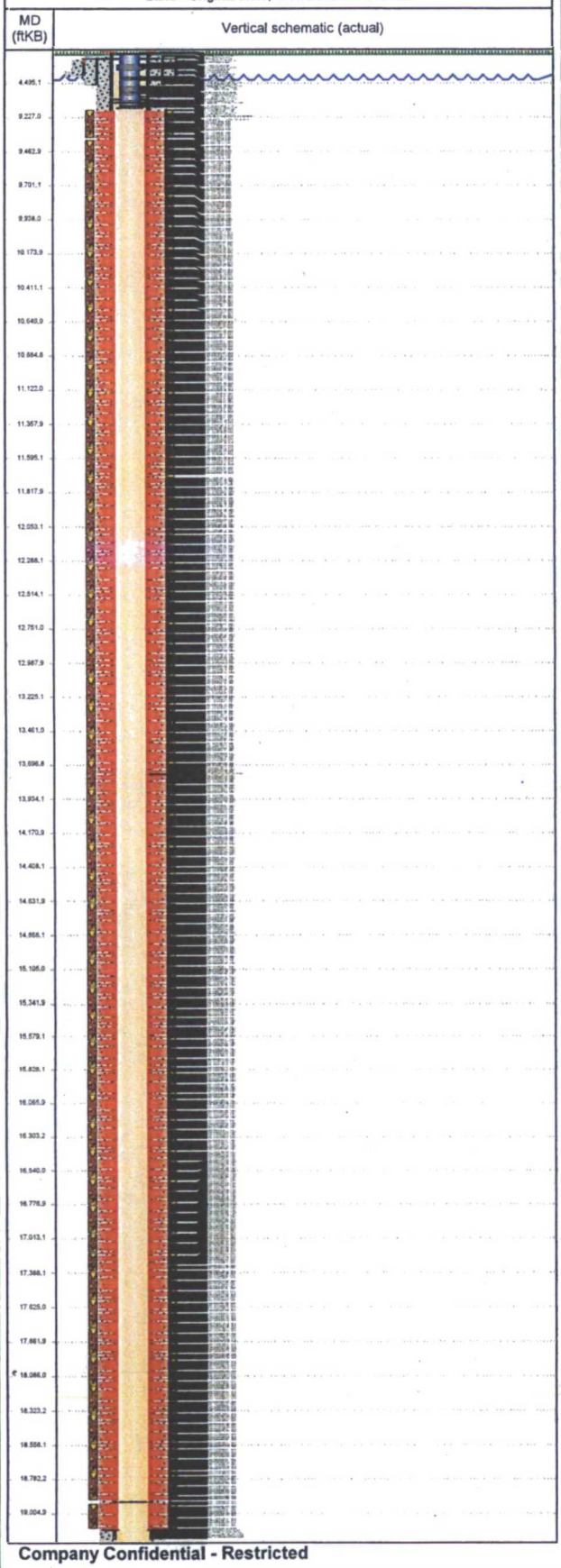
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/20/2017	14,993.0	14,994.0	3.0	3	Avalon, Original Hole
11/20/2017	15,007.0	15,008.0	4.0	4	Avalon, Original Hole
11/20/2017	15,021.0	15,022.0	6.0	6	Avalon, Original Hole
11/19/2017	15,034.0	15,035.0	2.0	2	Avalon, Original Hole
11/19/2017	15,048.0	15,049.0	2.0	2	Avalon, Original Hole
11/19/2017	15,062.0	15,063.0	2.0	2	Avalon, Original Hole
11/19/2017	15,076.0	15,077.0	2.0	2	Avalon, Original Hole
11/19/2017	15,090.0	15,091.0	2.0	2	Avalon, Original Hole
11/19/2017	15,104.0	15,105.0	2.0	2	Avalon, Original Hole
11/19/2017	15,118.0	15,119.0	2.0	2	Avalon, Original Hole
11/19/2017	15,132.0	15,133.0	3.0	3	Avalon, Original Hole
11/19/2017	15,146.0	15,147.0	3.0	3	Avalon, Original Hole
11/19/2017	15,160.0	15,161.0	3.0	3	Avalon, Original Hole
11/19/2017	15,174.0	15,175.0	3.0	3	Avalon, Original Hole
11/19/2017	15,188.0	15,189.0	3.0	3	Avalon, Original Hole
11/19/2017	15,202.0	15,203.0	4.0	4	Avalon, Original Hole
11/19/2017	15,216.0	15,217.0	6.0	6	Avalon, Original Hole
11/19/2017	15,229.0	15,230.0	2.0	2	Avalon, Original Hole
11/19/2017	15,243.0	15,244.0	2.0	2	Avalon, Original Hole
11/19/2017	15,257.0	15,258.0	2.0	2	Avalon, Original Hole
11/19/2017	15,271.0	15,272.0	2.0	2	Avalon, Original Hole
11/19/2017	15,283.0	15,284.0	2.0	2	Avalon, Original Hole
11/19/2017	15,299.0	15,300.0	2.0	2	Avalon, Original Hole
11/19/2017	15,313.0	15,314.0	2.0	2	Avalon, Original Hole
11/19/2017	15,327.0	15,328.0	3.0	3	Avalon, Original Hole
11/19/2017	15,341.0	15,342.0	3.0	3	Avalon, Original Hole
11/19/2017	15,355.0	15,356.0	3.0	3	Avalon, Original Hole
11/19/2017	15,369.0	15,370.0	3.0	3	Avalon, Original Hole
11/19/2017	15,383.0	15,384.0	3.0	3	Avalon, Original Hole
11/19/2017	15,397.0	15,398.0	4.0	4	Avalon, Original Hole
11/19/2017	15,411.0	15,412.0	6.0	6	Avalon, Original Hole
11/18/2017	15,424.0	15,425.0	2.0	2	Avalon, Original Hole
11/18/2017	15,438.0	15,439.0	2.0	2	Avalon, Original Hole
11/18/2017	15,452.0	15,453.0	2.0	2	Avalon, Original Hole
11/18/2017	15,466.0	15,467.0	2.0	2	Avalon, Original Hole
11/18/2017	15,480.0	15,481.0	2.0	2	Avalon, Original Hole
11/18/2017	15,494.0	15,495.0	2.0	2	Avalon, Original Hole
11/18/2017	15,508.0	15,509.0	2.0	2	Avalon, Original Hole
11/18/2017	15,522.0	15,523.0	3.0	3	Avalon, Original Hole
11/18/2017	15,536.0	15,537.0	3.0	3	Avalon, Original Hole
11/18/2017	15,550.0	15,551.0	3.0	3	Avalon, Original Hole
11/18/2017	15,564.0	15,565.0	3.0	3	Avalon, Original Hole
11/18/2017	15,578.0	15,579.0	3.0	3	Avalon, Original Hole
11/18/2017	15,592.0	15,593.0	4.0	4	Avalon, Original Hole
11/18/2017	15,606.0	15,607.0	6.0	6	Avalon, Original Hole
11/17/2017	15,619.0	15,620.0	2.0	2	Avalon, Original Hole
11/17/2017	15,634.0	15,635.0	2.0	2	Avalon, Original Hole
11/17/2017	15,647.0	15,648.0	2.0	2	Avalon, Original Hole
11/17/2017	15,661.0	15,662.0	2.0	2	Avalon, Original Hole
11/17/2017	15,676.0	15,677.0	2.0	2	Avalon, Original Hole
11/17/2017	15,689.0	15,690.0	2.0	2	Avalon, Original Hole
11/17/2017	15,703.0	15,704.0	3.0	3	Avalon, Original Hole
11/17/2017	15,715.0	15,716.0	3.0	3	Avalon, Original Hole
11/17/2017	15,731.0	15,732.0	3.0	3	Avalon, Original Hole
11/17/2017	15,745.0	15,746.0	3.0	3	Avalon, Original Hole
11/17/2017	15,759.0	15,760.0	3.0	3	Avalon, Original Hole
11/17/2017	15,773.0	15,774.0	4.0	4	Avalon, Original Hole
11/17/2017	15,787.0	15,788.0	6.0	6	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:03 AM



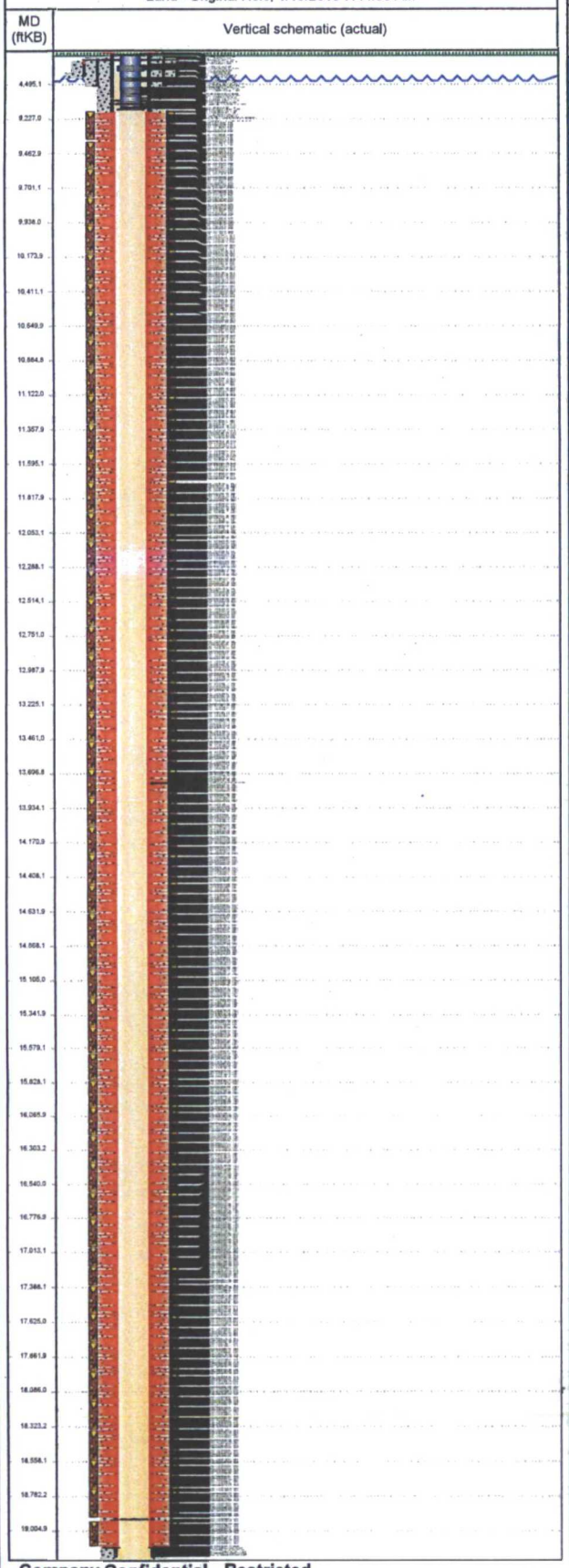
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/17/2017	15,814.0	15,815.0	2.0	2	Avalon, Original Hole
11/17/2017	15,828.0	15,829.0	2.0	2	Avalon, Original Hole
11/17/2017	15,842.0	15,843.0	2.0	2	Avalon, Original Hole
11/17/2017	15,856.0	15,857.0	2.0	2	Avalon, Original Hole
11/17/2017	15,870.0	15,871.0	2.0	2	Avalon, Original Hole
11/17/2017	15,884.0	15,885.0	2.0	2	Avalon, Original Hole
11/17/2017	15,898.0	15,899.0	3.0	3	Avalon, Original Hole
11/17/2017	15,912.0	15,913.0	3.0	3	Avalon, Original Hole
11/17/2017	15,926.0	15,927.0	3.0	3	Avalon, Original Hole
11/17/2017	15,940.0	15,941.0	3.0	3	Avalon, Original Hole
11/17/2017	15,954.0	15,955.0	3.0	3	Avalon, Original Hole
11/17/2017	15,968.0	15,969.0	4.0	4	Avalon, Original Hole
11/17/2017	15,982.0	15,983.0	6.0	6	Avalon, Original Hole
11/16/2017	16,009.0	16,010.0	2.0	2	Avalon, Original Hole
11/16/2017	16,023.0	16,024.0	2.0	2	Avalon, Original Hole
11/16/2017	16,037.0	16,038.0	2.0	2	Avalon, Original Hole
11/16/2017	16,051.0	16,052.0	2.0	2	Avalon, Original Hole
11/16/2017	16,065.0	16,066.0	2.0	2	Avalon, Original Hole
11/16/2017	16,079.0	16,080.0	2.0	2	Avalon, Original Hole
11/16/2017	16,093.0	16,094.0	2.0	2	Avalon, Original Hole
11/16/2017	16,107.0	16,108.0	3.0	3	Avalon, Original Hole
11/16/2017	16,121.0	16,122.0	3.0	3	Avalon, Original Hole
11/16/2017	16,135.0	16,136.0	3.0	3	Avalon, Original Hole
11/16/2017	16,149.0	16,150.0	3.0	3	Avalon, Original Hole
11/16/2017	16,163.0	16,164.0	3.0	3	Avalon, Original Hole
11/16/2017	16,177.0	16,178.0	4.0	4	Avalon, Original Hole
11/16/2017	16,191.0	16,192.0	6.0	6	Avalon, Original Hole
11/15/2017	16,204.0	16,205.0	2.0	2	Avalon, Original Hole
11/15/2017	16,218.0	16,219.0	2.0	2	Avalon, Original Hole
11/15/2017	16,232.0	16,233.0	2.0	2	Avalon, Original Hole
11/15/2017	16,246.0	16,247.0	2.0	2	Avalon, Original Hole
11/15/2017	16,260.0	16,261.0	2.0	2	Avalon, Original Hole
11/15/2017	16,274.0	16,275.0	2.0	2	Avalon, Original Hole
11/15/2017	16,288.0	16,289.0	2.0	2	Avalon, Original Hole
11/15/2017	16,302.0	16,303.0	3.0	3	Avalon, Original Hole
11/15/2017	16,316.0	16,317.0	3.0	3	Avalon, Original Hole
11/15/2017	16,330.0	16,331.0	3.0	3	Avalon, Original Hole
11/15/2017	16,344.0	16,345.0	3.0	3	Avalon, Original Hole
11/15/2017	16,358.0	16,359.0	3.0	3	Avalon, Original Hole
11/15/2017	16,372.0	16,373.0	4.0	4	Avalon, Original Hole
11/15/2017	16,386.0	16,387.0	6.0	6	Avalon, Original Hole
11/12/2017	16,399.0	16,400.0	2.0	2	Avalon, Original Hole
11/12/2017	16,413.0	16,414.0	2.0	2	Avalon, Original Hole
11/12/2017	16,427.0	16,428.0	2.0	2	Avalon, Original Hole
11/12/2017	16,441.0	16,442.0	2.0	2	Avalon, Original Hole
11/12/2017	16,455.0	16,456.0	2.0	2	Avalon, Original Hole
11/12/2017	16,469.0	16,470.0	2.0	2	Avalon, Original Hole
11/12/2017	16,483.0	16,484.0	2.0	2	Avalon, Original Hole
11/12/2017	16,497.0	16,498.0	3.0	3	Avalon, Original Hole
11/12/2017	16,511.0	16,512.0	3.0	3	Avalon, Original Hole
11/12/2017	16,525.0	16,526.0	3.0	3	Avalon, Original Hole
11/12/2017	16,539.0	16,540.0	3.0	3	Avalon, Original Hole
11/12/2017	16,553.0	16,554.0	3.0	3	Avalon, Original Hole
11/12/2017	16,567.0	16,568.0	4.0	4	Avalon, Original Hole
11/12/2017	16,581.0	16,582.0	6.0	6	Avalon, Original Hole
11/11/2017	16,594.0	16,595.0	2.0	2	Avalon, Original Hole
11/11/2017	16,608.0	16,609.0	2.0	2	Avalon, Original Hole
11/11/2017	16,622.0	16,623.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:08 AM



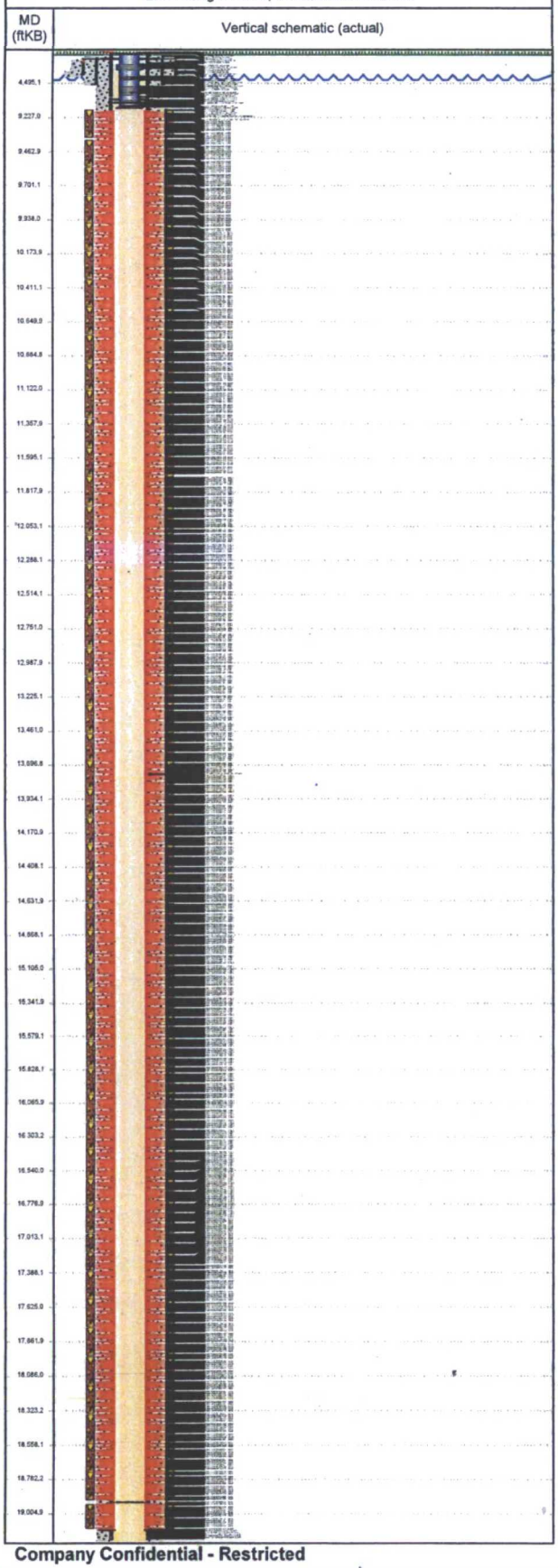
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/11/2017	16,636.0	16,637.0	2.0	2	Avalon, Original Hole
11/11/2017	16,650.0	16,651.0	2.0	2	Avalon, Original Hole
11/11/2017	16,664.0	16,665.0	2.0	2	Avalon, Original Hole
11/11/2017	16,678.0	16,679.0	2.0	2	Avalon, Original Hole
11/11/2017	16,692.0	16,693.0	3.0	3	Avalon, Original Hole
11/11/2017	16,706.0	16,707.0	3.0	3	Avalon, Original Hole
11/11/2017	16,720.0	16,721.0	3.0	3	Avalon, Original Hole
11/11/2017	16,734.0	16,735.0	3.0	3	Avalon, Original Hole
11/11/2017	16,748.0	16,749.0	3.0	3	Avalon, Original Hole
11/11/2017	16,762.0	16,763.0	4.0	4	Avalon, Original Hole
11/11/2017	16,776.0	16,777.0	6.0	6	Avalon, Original Hole
11/11/2017	16,789.0	16,790.0	2.0	2	Avalon, Original Hole
11/11/2017	16,803.0	16,804.0	2.0	2	Avalon, Original Hole
11/11/2017	16,817.0	16,818.0	2.0	2	Avalon, Original Hole
11/11/2017	16,831.0	16,832.0	2.0	2	Avalon, Original Hole
11/11/2017	16,845.0	16,846.0	2.0	2	Avalon, Original Hole
11/11/2017	16,859.0	16,860.0	2.0	2	Avalon, Original Hole
11/11/2017	16,873.0	16,874.0	2.0	2	Avalon, Original Hole
11/11/2017	16,887.0	16,888.0	3.0	3	Avalon, Original Hole
11/11/2017	16,901.0	16,902.0	3.0	3	Avalon, Original Hole
11/11/2017	16,915.0	16,916.0	3.0	3	Avalon, Original Hole
11/11/2017	16,929.0	16,930.0	3.0	3	Avalon, Original Hole
11/11/2017	16,943.0	16,944.0	3.0	3	Avalon, Original Hole
11/11/2017	16,957.0	16,958.0	4.0	4	Avalon, Original Hole
11/11/2017	16,971.0	16,972.0	6.0	6	Avalon, Original Hole
11/9/2017	16,984.0	16,985.0	2.0	2	Avalon, Original Hole
11/9/2017	16,984.0	16,985.0	2.0	2	Avalon, Original Hole
11/9/2017	16,998.0	16,999.0	2.0	2	Avalon, Original Hole
11/9/2017	16,998.0	16,999.0	2.0	2	Avalon, Original Hole
11/9/2017	17,012.0	17,013.0	2.0	2	Avalon, Original Hole
11/9/2017	17,012.0	17,013.0	2.0	2	Avalon, Original Hole
11/9/2017	17,026.0	17,027.0	2.0	2	Avalon, Original Hole
11/9/2017	17,082.0	17,083.0	3.0	3	Avalon, Original Hole
11/9/2017	17,082.0	17,083.0	3.0	3	Avalon, Original Hole
11/9/2017	17,096.0	17,097.0	3.0	3	Avalon, Original Hole
11/9/2017	17,096.0	17,097.0	3.0	3	Avalon, Original Hole
11/9/2017	17,110.0	17,111.0	3.0	3	Avalon, Original Hole
11/9/2017	17,152.0	17,153.0	4.0	4	Avalon, Original Hole
11/9/2017	17,166.0	17,167.0	6.0	6	Avalon, Original Hole
11/9/2017	17,179.0	17,180.0	2.0	2	Avalon, Original Hole
11/9/2017	17,179.0	17,180.0	2.0	2	Avalon, Original Hole
11/9/2017	17,193.0	17,194.0	2.0	2	Avalon, Original Hole
11/9/2017	17,193.0	17,194.0	2.0	2	Avalon, Original Hole
11/9/2017	17,207.0	17,208.0	2.0	2	Avalon, Original Hole
11/9/2017	17,207.0	17,208.0	2.0	2	Avalon, Original Hole
11/9/2017	17,221.0	17,222.0	2.0	2	Avalon, Original Hole
11/9/2017	17,277.0	17,278.0	3.0	3	Avalon, Original Hole
11/9/2017	17,277.0	17,278.0	3.0	3	Avalon, Original Hole
11/9/2017	17,291.0	17,292.0	3.0	3	Avalon, Original Hole
11/9/2017	17,291.0	17,292.0	3.0	3	Avalon, Original Hole
11/9/2017	17,305.0	17,306.0	3.0	3	Avalon, Original Hole
11/9/2017	17,347.0	17,348.0	4.0	4	Avalon, Original Hole
11/9/2017	17,357.0	17,358.0	6.0	6	Avalon, Original Hole
11/8/2017	17,374.0	17,375.0	2.0	2	Avalon, Original Hole
11/8/2017	17,388.0	17,389.0	2.0	2	Avalon, Original Hole
11/8/2017	17,402.0	17,403.0	2.0	2	Avalon, Original Hole
11/8/2017	17,416.0	17,417.0	2.0	2	Avalon, Original Hole
11/8/2017	17,430.0	17,431.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:12 AM



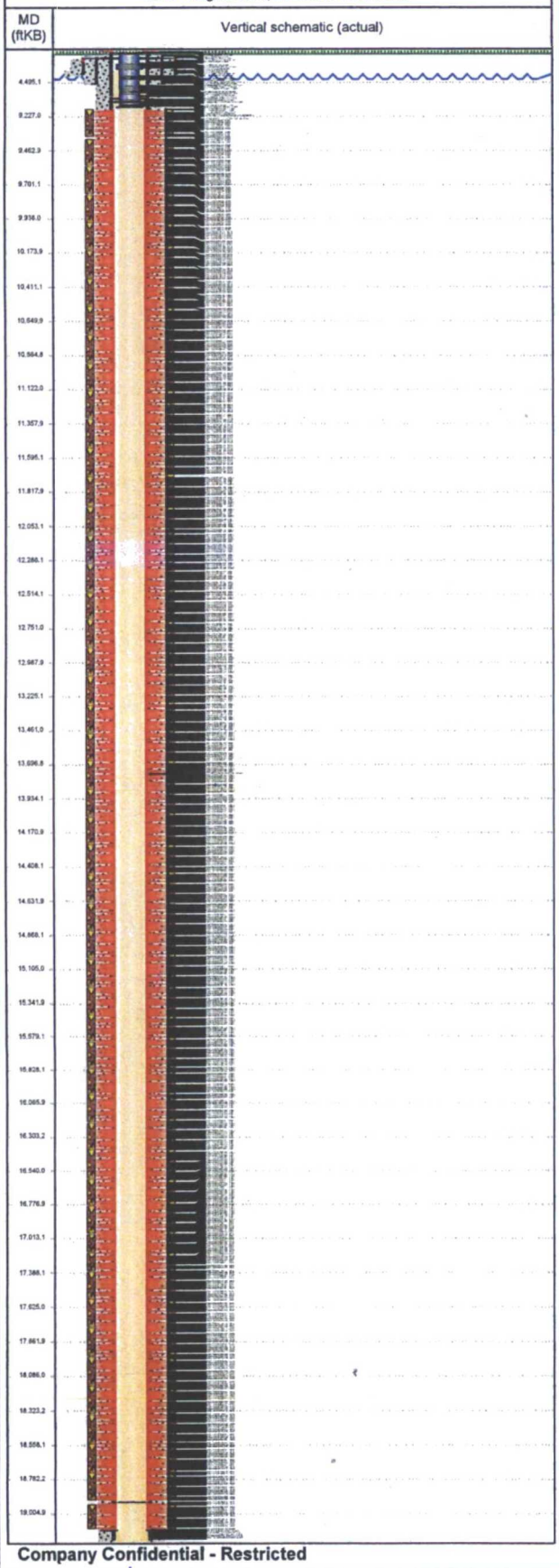
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/8/2017	17,444.0	17,445.0	2.0	2	Avalon, Original Hole
11/8/2017	17,458.0	17,459.0	2.0	2	Avalon, Original Hole
11/8/2017	17,472.0	17,473.0	3.0	3	Avalon, Original Hole
11/8/2017	17,485.0	17,486.0	3.0	3	Avalon, Original Hole
11/8/2017	17,500.0	17,501.0	3.0	3	Avalon, Original Hole
11/8/2017	17,514.0	17,515.0	3.0	3	Avalon, Original Hole
11/8/2017	17,528.0	17,529.0	3.0	3	Avalon, Original Hole
11/8/2017	17,542.0	17,543.0	4.0	4	Avalon, Original Hole
11/8/2017	17,556.0	17,557.0	6.0	6	Avalon, Original Hole
11/8/2017	17,569.0	17,570.0	2.0	2	Avalon, Original Hole
11/8/2017	17,583.0	17,584.0	2.0	2	Avalon, Original Hole
11/8/2017	17,597.0	17,598.0	2.0	2	Avalon, Original Hole
11/8/2017	17,611.0	17,612.0	2.0	2	Avalon, Original Hole
11/8/2017	17,625.0	17,626.0	2.0	2	Avalon, Original Hole
11/8/2017	17,639.0	17,640.0	2.0	2	Avalon, Original Hole
11/8/2017	17,653.0	17,654.0	2.0	2	Avalon, Original Hole
11/8/2017	17,667.0	17,668.0	3.0	3	Avalon, Original Hole
11/8/2017	17,681.0	17,682.0	3.0	3	Avalon, Original Hole
11/8/2017	17,695.0	17,696.0	3.0	3	Avalon, Original Hole
11/8/2017	17,709.0	17,710.0	3.0	3	Avalon, Original Hole
11/8/2017	17,723.0	17,724.0	3.0	3	Avalon, Original Hole
11/8/2017	17,737.0	17,738.0	4.0	4	Avalon, Original Hole
11/8/2017	17,751.0	17,752.0	6.0	6	Avalon, Original Hole
11/7/2017	17,764.0	17,765.0	2.0	2	Avalon, Original Hole
11/7/2017	17,778.0	17,779.0	2.0	2	Avalon, Original Hole
11/7/2017	17,792.0	17,793.0	2.0	2	Avalon, Original Hole
11/7/2017	17,806.0	17,807.0	2.0	2	Avalon, Original Hole
11/7/2017	17,820.0	17,821.0	2.0	2	Avalon, Original Hole
11/7/2017	17,834.0	17,835.0	2.0	2	Avalon, Original Hole
11/7/2017	17,848.0	17,849.0	2.0	2	Avalon, Original Hole
11/7/2017	17,862.0	17,863.0	3.0	3	Avalon, Original Hole
11/7/2017	17,876.0	17,877.0	3.0	3	Avalon, Original Hole
11/7/2017	17,890.0	17,891.0	3.0	3	Avalon, Original Hole
11/7/2017	17,902.0	17,903.0	3.0	3	Avalon, Original Hole
11/7/2017	17,918.0	17,919.0	3.0	3	Avalon, Original Hole
11/7/2017	17,932.0	17,933.0	4.0	4	Avalon, Original Hole
11/7/2017	17,948.0	17,949.0	6.0	6	Avalon, Original Hole
11/7/2017	17,959.0	17,960.0	2.0	2	Avalon, Original Hole
11/7/2017	17,973.0	17,974.0	2.0	2	Avalon, Original Hole
11/7/2017	17,987.0	17,988.0	2.0	2	Avalon, Original Hole
11/7/2017	18,001.0	18,002.0	2.0	2	Avalon, Original Hole
11/7/2017	18,015.0	18,016.0	2.0	2	Avalon, Original Hole
11/7/2017	18,029.0	18,030.0	2.0	2	Avalon, Original Hole
11/7/2017	18,043.0	18,044.0	2.0	2	Avalon, Original Hole
11/7/2017	18,057.0	18,058.0	3.0	3	Avalon, Original Hole
11/7/2017	18,071.0	18,072.0	3.0	3	Avalon, Original Hole
11/7/2017	18,085.0	18,086.0	3.0	3	Avalon, Original Hole
11/7/2017	18,099.0	18,100.0	3.0	3	Avalon, Original Hole
11/7/2017	18,113.0	18,114.0	3.0	3	Avalon, Original Hole
11/7/2017	18,127.0	18,128.0	4.0	4	Avalon, Original Hole
11/7/2017	18,141.0	18,142.0	6.0	6	Avalon, Original Hole
11/6/2017	18,154.0	18,155.0	2.0	2	Avalon, Original Hole
11/6/2017	18,168.0	18,169.0	2.0	2	Avalon, Original Hole
11/6/2017	18,182.0	18,183.0	2.0	2	Avalon, Original Hole
11/6/2017	18,196.0	18,197.0	2.0	2	Avalon, Original Hole
11/6/2017	18,210.0	18,211.0	2.0	2	Avalon, Original Hole
11/6/2017	18,224.0	18,225.0	2.0	2	Avalon, Original Hole
11/6/2017	18,238.0	18,239.0	2.0	2	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:16 AM



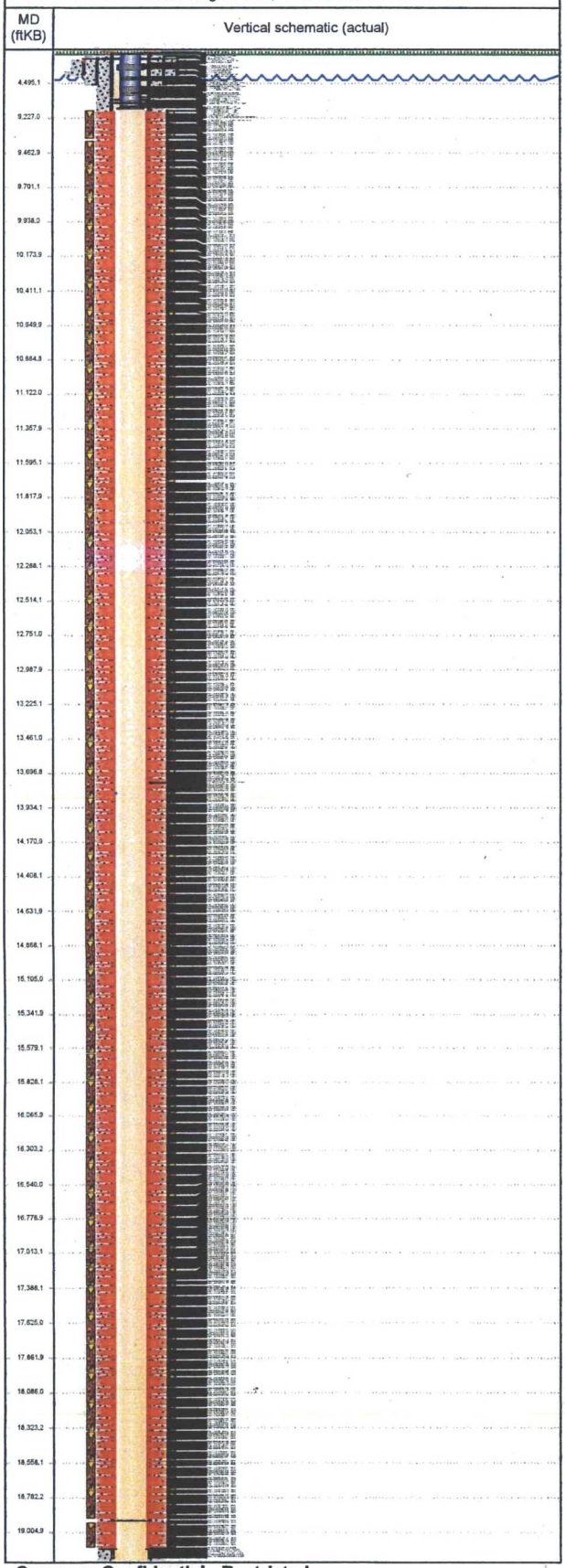
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/6/2017	18,252.0	18,253.0	3.0	3	Avalon, Original Hole
11/6/2017	18,266.0	18,267.0	3.0	3	Avalon, Original Hole
11/6/2017	18,280.0	18,281.0	3.0	3	Avalon, Original Hole
11/6/2017	18,294.0	18,295.0	3.0	3	Avalon, Original Hole
11/6/2017	18,308.0	18,309.0	3.0	3	Avalon, Original Hole
11/6/2017	18,322.0	18,323.0	4.0	4	Avalon, Original Hole
11/6/2017	18,336.0	18,337.0	5.0	5	Avalon, Original Hole
11/5/2017	18,349.0	18,350.0	2.0	2	Avalon, Original Hole
11/5/2017	18,363.0	18,364.0	2.0	2	Avalon, Original Hole
11/5/2017	18,377.0	18,378.0	2.0	2	Avalon, Original Hole
11/5/2017	18,391.0	18,392.0	2.0	2	Avalon, Original Hole
11/5/2017	18,405.0	18,406.0	2.0	2	Avalon, Original Hole
11/5/2017	18,419.0	18,420.0	2.0	2	Avalon, Original Hole
11/5/2017	18,433.0	18,434.0	2.0	2	Avalon, Original Hole
11/5/2017	18,446.0	18,447.0	3.0	3	Avalon, Original Hole
11/5/2017	18,461.0	18,462.0	3.0	3	Avalon, Original Hole
11/5/2017	18,475.0	18,476.0	3.0	3	Avalon, Original Hole
11/5/2017	18,490.0	18,491.0	3.0	3	Avalon, Original Hole
11/5/2017	18,503.0	18,504.0	3.0	3	Avalon, Original Hole
11/5/2017	18,517.0	18,518.0	4.0	4	Avalon, Original Hole
11/5/2017	18,530.0	18,531.0	5.0	5	Avalon, Original Hole
11/4/2017	18,544.0	18,545.0	2.0	2	Avalon, Original Hole
11/4/2017	18,558.0	18,559.0	2.0	2	Avalon, Original Hole
11/4/2017	18,572.0	18,573.0	2.0	2	Avalon, Original Hole
11/4/2017	18,586.0	18,587.0	2.0	2	Avalon, Original Hole
11/4/2017	18,600.0	18,601.0	2.0	2	Avalon, Original Hole
11/4/2017	18,614.0	18,615.0	2.0	2	Avalon, Original Hole
11/4/2017	18,628.0	18,629.0	2.0	2	Avalon, Original Hole
11/4/2017	18,642.0	18,643.0	3.0	3	Avalon, Original Hole
11/4/2017	18,656.0	18,657.0	3.0	3	Avalon, Original Hole
11/4/2017	18,670.0	18,671.0	3.0	3	Avalon, Original Hole
11/4/2017	18,684.0	18,685.0	3.0	3	Avalon, Original Hole
11/4/2017	18,698.0	18,699.0	3.0	3	Avalon, Original Hole
11/4/2017	18,712.0	18,713.0	4.0	4	Avalon, Original Hole
11/4/2017	18,724.0	18,725.0	5.0	5	Avalon, Original Hole
11/4/2017	18,739.0	18,740.0	2.0	2	Avalon, Original Hole
11/4/2017	18,753.0	18,754.0	2.0	2	Avalon, Original Hole
11/4/2017	18,766.0	18,767.0	2.0	2	Avalon, Original Hole
11/4/2017	18,781.0	18,782.0	2.0	2	Avalon, Original Hole
11/4/2017	18,795.0	18,796.0	2.0	2	Avalon, Original Hole
11/4/2017	18,805.0	18,806.0	2.0	2	Avalon, Original Hole
11/4/2017	18,823.0	18,824.0	2.0	2	Avalon, Original Hole
11/4/2017	18,837.0	18,838.0	3.0	3	Avalon, Original Hole
11/4/2017	18,847.0	18,848.0	3.0	3	Avalon, Original Hole
11/4/2017	18,865.0	18,866.0	3.0	3	Avalon, Original Hole
11/4/2017	18,879.0	18,880.0	3.0	3	Avalon, Original Hole
11/4/2017	18,893.0	18,894.0	3.0	3	Avalon, Original Hole
11/4/2017	18,907.0	18,908.0	4.0	4	Avalon, Original Hole
11/4/2017	18,921.0	18,922.0	6.0	6	Avalon, Original Hole
11/3/2017	18,934.0	18,935.0	2.0	2	Avalon, Original Hole
11/3/2017	18,948.0	18,949.0	2.0	2	Avalon, Original Hole
11/3/2017	18,962.0	18,963.0	2.0	2	Avalon, Original Hole
11/3/2017	18,976.0	18,977.0	2.0	2	Avalon, Original Hole
11/3/2017	18,990.0	18,991.0	2.0	2	Avalon, Original Hole
11/3/2017	19,004.0	19,005.0	2.0	2	Avalon, Original Hole
11/3/2017	19,018.0	19,019.0	3.0	3	Avalon, Original Hole
11/3/2017	19,032.0	19,033.0	3.0	3	Avalon, Original Hole
11/3/2017	19,046.0	19,047.0	3.0	3	Avalon, Original Hole

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:19 AM



Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/3/2017	19,060.0	19,061.0	3.0	3	Avalon, Original Hole
11/3/2017	19,074.0	19,075.0	3.0	3	Avalon, Original Hole
11/3/2017	19,088.0	19,089.0	4.0	4	Avalon, Original Hole
11/3/2017	19,102.0	19,103.0	6.0	6	Avalon, Original Hole

Other Strings

Run Date	Pull Date	Set Depth (ftKB)	Com

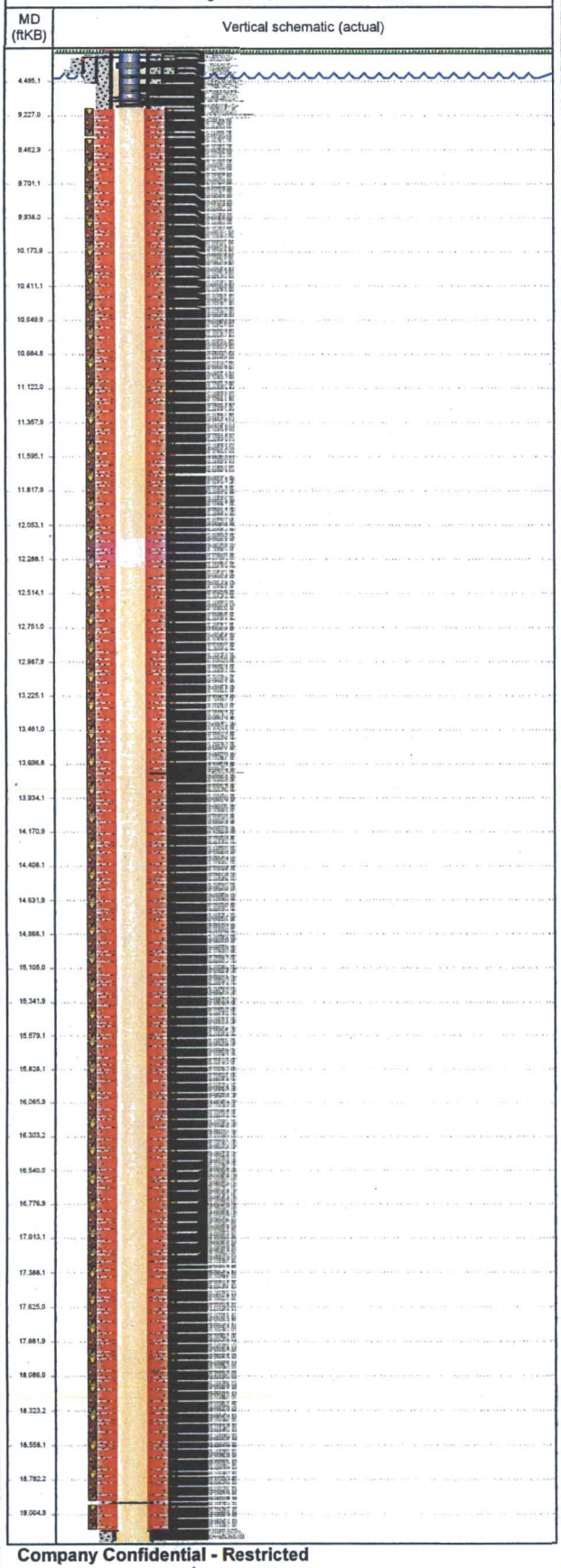
Other In Hole

Des	Top (ftKB)	Btm (ftKB)	Run Date	Pull Date	Com
Packer (retrievable)	8,620.0	8,642.0	12/29/2017		CT set packer after drill out. 2 7/8" Profile Nipple 2.312 X Desc. OD ID Leng Profile Nipple 3.15 2.312X 1.24' 450 Hornet Packer 4.5 2.375 7.72' 2 7/8" Sub 3.667 2.441 6.18' Profile XN 2 7/8" ID NO GO 2.210 3.667 2.312XN 1.15' 2 7/8" Sub 3.667 2.441 6.2' Pump Out Plug 7 Pins (2590 psi) 3.667 2.441 0.44' Middle Element at 8620'
Composite Frac Plug (drop ball)	9,375.0	9,377.0	12/7/2017	12/17/2017	Stage 51
Composite Frac Plug (drop ball)	9,570.0	9,572.0	12/7/2017	12/17/2017	Stage 50
Composite Frac Plug (drop ball)	9,765.0	9,767.0	12/6/2017	12/18/2017	Stage 49
Composite Frac Plug (drop ball)	9,960.0	9,962.0	12/6/2017	12/18/2017	Stage 48
Composite Frac Plug (drop ball)	10,156.0	10,158.0	12/6/2017	12/18/2017	Stage 47
Composite Frac Plug (drop ball)	10,350.0	10,352.0	12/5/2017	12/18/2017	Stage 46
Composite Frac Plug (drop ball)	10,545.0	10,546.0	12/4/2017	12/18/2017	Stage 45
Composite Frac Plug (drop ball)	10,740.0	10,741.0	12/3/2017	12/18/2017	Stage 44
Composite Frac Plug (drop ball)	10,935.0	10,936.0	12/3/2017	12/18/2017	Stage 43
Composite Frac Plug (drop ball)	11,130.0	11,131.0	12/2/2017	12/18/2017	Stage 42
Composite Frac Plug (drop ball)	11,325.0	11,326.0	12/2/2017	12/18/2017	Stage 41
Composite Frac Plug (drop ball)	11,520.0	11,521.0	12/1/2017	12/18/2017	Stage 40
Composite Frac Plug (drop ball)	11,712.0	11,713.0	12/1/2017	12/18/2017	Stage 39
Composite Frac Plug (drop ball)	11,910.0	11,911.0	11/30/2017	12/18/2017	Stage 38

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:23 AM



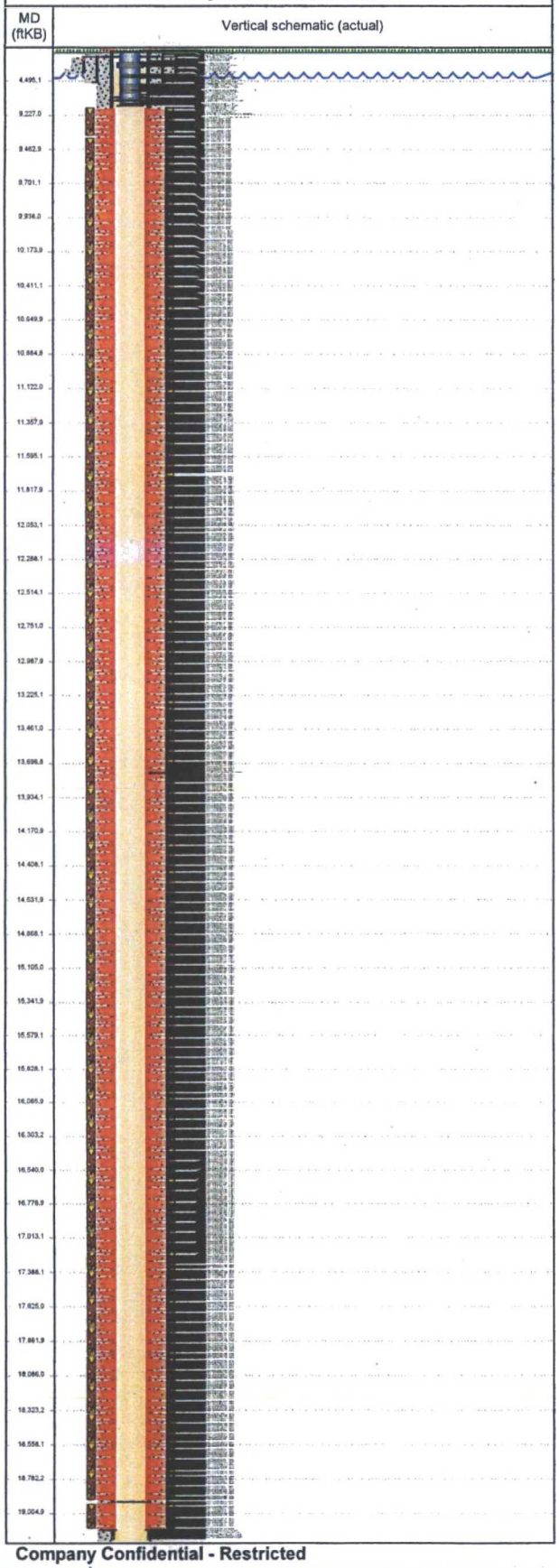
Other In Hole

Des	Top (ftKB)	Btm (ftKB)	Run Date	Pull Date	Com
Composite Frac Plug (drop ball)	12,105.0	12,106.0	11/30/2017	12/18/2017	Stage 37
Composite Frac Plug (drop ball)	12,296.0	12,297.0	11/29/2017	12/18/2017	Stage 36
Composite Frac Plug (drop ball)	12,495.0	12,496.0	11/29/2017	12/18/2017	Stage 35
Composite Frac Plug (drop ball)	12,690.0	12,691.0	11/27/2017	12/18/2017	Stage 34
Composite Frac Plug (drop ball)	12,885.0	12,886.0	11/27/2017	12/18/2017	Stage 33
Composite Frac Plug (drop ball)	13,080.0	13,081.0	11/26/2017	12/18/2017	Stage 32
Composite Frac Plug (drop ball)	13,268.0	13,269.0	11/26/2017	12/18/2017	Stage 31
Composite Frac Plug (drop ball)	13,470.0	13,471.0	11/25/2017	12/18/2017	Stage 30
Composite Frac Plug (drop ball)	13,665.0	13,666.0	11/24/2017	12/18/2017	Stage 29
Composite Frac Plug (drop ball)	13,860.0	13,861.0	11/24/2017	12/18/2017	Stage 28
Composite Frac Plug (drop ball)	14,055.0	14,056.0	11/23/2017	12/18/2017	Stage 27
Composite Frac Plug (drop ball)	14,250.0	14,251.0	11/22/2017	12/18/2017	Stage 26
Composite Frac Plug (drop ball)	14,439.0	14,440.0	11/21/2017	12/19/2017	Stage 25
Composite Frac Plug (drop ball)	14,640.0	14,641.0	11/21/2017	12/19/2017	Stage 24
Composite Frac Plug (drop ball)	14,835.0	14,837.0	11/20/2017	12/19/2017	Stage 23
Composite Frac Plug (drop ball)	15,030.0	15,032.0	11/20/2017	12/19/2017	Stage 22
Composite Frac Plug (drop ball)	15,225.0	15,227.0	11/19/2017	12/19/2017	Stage 21
Composite Frac Plug (drop ball)	15,420.0	15,422.0	11/19/2017	12/19/2017	Stage 20
Composite Frac Plug (drop ball)	15,615.0	15,617.0	11/18/2017	12/19/2017	Stage 19
Composite Frac Plug (drop ball)	15,810.0	15,812.0	11/17/2017	12/19/2017	Stage 18
Composite Frac Plug (drop ball)	16,005.0	16,007.0	11/17/2017	12/19/2017	Stage 17
Composite Frac Plug (drop ball)	16,200.0	16,202.0	11/16/2017	12/19/2017	Stage 16
Composite Frac Plug (drop ball)	16,395.0	16,397.0	11/15/2017	12/20/2017	Stage 15
Composite Frac Plug (drop ball)	16,590.0	16,592.0	11/12/2017	12/20/2017	Stage 14
Composite Frac Plug (drop ball)	16,785.0	16,787.0	11/11/2017	12/20/2017	Stage 13
Composite Frac Plug (drop ball)	16,980.0	16,982.0	11/11/2017	12/20/2017	Stage 12
Composite Frac Plug (drop ball)	17,175.0	17,177.0	11/9/2017	12/20/2017	Stage 11
Composite Frac Plug (drop ball)	17,365.0	17,367.0	11/9/2017	12/20/2017	Stage 10
Composite Frac Plug (drop ball)	17,565.0	17,567.0	11/8/2017	12/20/2017	Stage 9
Composite Frac Plug (drop ball)	17,760.0	17,762.0	11/8/2017	12/20/2017	Stage 8
Composite Frac Plug (drop ball)	17,955.0	17,957.0	11/7/2017	12/21/2017	Stage 7
Composite Frac Plug (drop ball)	18,149.0	18,151.0	11/7/2017	12/21/2017	Stage 6

Wellbore Schematic

Well Name	Lease	Field Name	Business Unit
SD WE 24 FED P24 6H	SD WE 24 FED P24	JENNINGS	Mid-Continent

Land - Original Hole, 1/16/2018 7:44:28 AM



Other In Hole

Des	Top (ftKB)	Btm (ftKB)	Run Date	Pull Date	Com
Composite Frac Plug (drop ball)	18,345.0	18,346.0	11/6/2017	12/28/2017	Stage 5
Composite Frac Plug (drop ball)	18,538.0	18,539.0	11/5/2017	12/28/2017	Stage 4
Composite Frac Plug (drop ball)	18,733.0	18,734.0	11/4/2017	12/28/2017	Stage 3
Composite Frac Plug (drop ball)	18,930.0	18,932.0	11/4/2017		Stage 2

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	2017-12-07
State:	New Mexico
County:	Lea
API Number:	3002543673
Operator Name:	CHEVRON - PERMIAN BASIN-EBUS
Well Name and Number:	P24 6H
Longitude:	-103.62
Latitude:	32.02
Long/Lat Projection:	
Indian/Federal:	none
Production Type:	
True Vertical Depth (TVD):	0
Total Water Volume (gal)*:	21,754,064

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Max Ingredient Concentration in Additive (% by mass)**	Max Ingredient Concentration in HF Fluid (% by mass)**	Ingredient Mass lbs	Comments	Company	First Name	Last Name	Email	Phone
Fresh Water	Operator	Base Fluid	Water	7732-18-5	100.00%	90.94599%	181210751	Density = 8.330					
BA-20 BUFFERING AGENT	Halliburton	Buffer	Listed Below	Listed Below			0	NA					
Cla-Web(TM) II	Halliburton	Clay Stabilizer	Listed Below	Listed Below			0	NA					
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor	Listed Below	Listed Below			0	NA					
HCL >10%	Halliburton	Solvent	Listed Below	Listed Below			0	NA					
MC B-8626	Halliburton	Biocide	Listed Below	Listed Below			0	NA					
OPTIFLO-III DELAYED RELEASE BREAKER	Halliburton	Breaker	Listed Below	Listed Below			0	NA					
OptiKleen-WF(TM)	Halliburton	Concentrate	Listed Below	Listed Below			0	NA					
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant	Listed Below	Listed Below			0	NA					
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant	Listed Below	Listed Below			0	NA					
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Listed Below	Listed Below			0	NA					
LD-7795	Halliburton	Scale Inhibitor	Listed Below	Listed Below			0	NA					
EXCELERATE LX-1	Halliburton	Friction Reducer	Listed Below	Listed Below			0	NA					
FDP-S1225-15	Halliburton	Surfactant	Listed Below	Listed Below			0	NA					

FDP-S1248-16	Halliburton	Diverting Agent	Listed Below	Listed Below			0	NA					
Ingredients	Listed Above	Listed Above	Acetic acid	64-19-7	30.00%	0.00294%	5850						
			Alcohols, C12-13	66455-14-9	30.00%	0.02976%	59304						
			Alcohols, C12-16	68551-12-2	5.00%	0.00496%	9884						
			Amine	Proprietary	0.10%	0.00003%	54	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226	Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Amine salts	Proprietary	1.00%	0.00029%	588		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Ammonium acetate	631-61-8	100.00%	0.00979%	19499						
			Ammonium compound	Proprietary	30.00%	0.00804%	16018		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Ammonium persulfate	7727-54-0	100.00%	0.00282%	5625						
			Chlorine compound	Proprietary	30.00%	0.00804%	16018		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Crystalline silica, quartz	14808-60-7	100.00%	8.24131%	16420888						
			Cured acrylic resin	Proprietary	30.00%	0.00085%	1688		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Didecyldimethylammonium chloride	7173-51-5	10.00%	0.00137%	2732						
			Ethanol	64-17-5	5.00%	0.00069%	1366						
			Ethoxylated alcohols	Proprietary	30.00%	0.00023%	454		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Fatty acids, tall oil	Proprietary	30.00%	0.00023%	454		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Glutaraldehyde	111-30-8	30.00%	0.00411%	8196						
			Guar gum	9000-30-0	100.00%	0.09830%	195863						
			Hydrochloric acid	7647-01-0	30.00%	0.14284%	284610						
			Hydrotreated light petroluem distillate	64742-47-8	30.00%	0.02048%	40814						
			Methanol	67-56-1	60.00%	0.00046%	907						
			Olefins	Proprietary	5.00%	0.00009%	184		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Organophosphonic acid	Proprietary	30.00%	0.00307%	6121		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Phosphonic acid	13598-36-2	1.00%	0.00010%	204						
			Polyacrylate	Proprietary	30.00%	0.02048%	40814		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Polylactide resin	Proprietary	60.00%	0.00148%	2940		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Propargyl alcohol	107-19-7	10.00%	0.00008%	152						
			Quaternary amine	Proprietary	1.00%	0.00054%	1068		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
			Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	68424-85-1	7.00%	0.00096%	1913						

			Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30.00%	0.00023%	454						
			Sodium chloride	7647-14-5	1.00%	0.00027%	534						
			Sodium perborate tetrahydrate	10486-00-7	100.00%	0.00505%	10065						
			Water	7732-18-5	100.00%	0.51409%	1024332						

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

v3.3

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.