

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

MAY 08 2018

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMLC065876A

- 1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. Off Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator
CHEVRON USA INCContact: LAURA BECERRA
E-Mail: LBECERRA@CHEVRON.COM8. Lease Name and Well No.
SD WE 24 FED P24 5H3. Address 1616 W. BENDER BLVD
HOBBS, NM 882403a. Phone No. (include area code)
Ph: 432-687-76659. API Well No.
30-025-43674-00-S1

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface SESE 200FSL 1235FEL 32.021488 N Lat, 103.623810 W Lon
Sec 24 T26S R32E Mer NMP
At top prod interval reported below NWNE 187FNL 2136FEL 32.049846 N Lat, 103.626706 W Lon
Sec 13 T26S R32E Mer NMP
At total depth NWNE 187FNL 2136FEL 32.049846 N Lat, 103.626706 W Lon

10. Field and Pool, or Exploratory
JENNINGS-UPPER BONE SPRING SHA11. Sec., T., R., M., or Block and Survey
or Area Sec 24 T26S R32E Mer NMP12. County or Parish
LEA13. State
NM14. Date Spudded
08/12/201715. Date T.D. Reached
10/08/201716. Date Completed
☐ D & A ☒ Ready to Prod.
12/07/201717. Elevations (DF, KB, RT, GL)*
3138 GL18. Total Depth: MD 19338
TVD 908819. Plug Back T.D.: MD 19280
TVD20. Depth Bridge Plug Set: MD
TVD21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
JB GR JB CBL GR CBL22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
8.750	5.500 HCP110	20.0	31	19328		2727		33	
12.250	9.625 L-80	40.0	34	4545		1487		33	
17.500	13.375 J-55	54.5	35	712		844		33	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	8832	8818	2.875	8832	8818			

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRING			9188 TO 19132			PRODUCING - SEE ATTACHED PI
B) BONE SPRING UPPER	9188	19132	9188 TO 19132			PRODUCING - SEE ATTACHED PI
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
9188 TO 19132	FRAC WITH TOTAL PROPPANT - 16,380,409 LBS **SEE DETAILED FRAC SUMMARY ATTACHED
9287 TO 13773	FRAC WITH TOTAL PROPPANT - 7,642,526 LBS **SEE DETAILED FRAC SUMMARY ATTACHED

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity
01/18/2018			→					
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
64/64	792 SI	1170.0	→	1417	2179	1863	1538	POW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
01/18/2018	02/05/2018	24	→						FLOW FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
64/64	792 SI	1170.0	→	1417	2179	1863	1538	POW	

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

ELECTRONIC SUBMISSION #405599 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

Reclamation due: 06/07/2018



28b. Production - Interval C

Date First Produced 01/18/2018	Test Date 02/05/2018	Hours Tested 24	Test Production →	Oil BBL →	Gas MCF →	Water BBL →	Oil Gravity Corr. API →	Gas Gravity →	Production Method FLOWS FROM WELL
Choke Size 64/64	Tbg. Press. Flwg. 792 SI	Csg. Press. 1170.0	24 Hr. Rate →	Oil BBL 1417	Gas MCF 2179	Water BBL 1863	Gas:Oil Ratio 1538	Well Status POW	

28c. Production - Interval D

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

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

30. Summary of Porous Zones (Include Aquifers):

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

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
CASTILE	2851	4676	ANHYDRITE	CASTILE	2851
DELAWARE	4677	4713	LIMESTONE	DELAWARE	4677
BELL CANYON	4714	5750	SANDSTONE	BELL CANYON	4714
CHERRY CANYON	5751	7350	SANDSTONE	CHERRY CANYON	5751
BRUSHY CANYON	7351	8949	SANDSTONE	BRUSHY CANYON	7351
BONE SPRING LIME	8950	9006	SHALE/LIMESTONE	BONE SPRING LIME	8950
AVALON	9007	19338	SHALE/LIMESTONE	AVALON	9007

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

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

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

Electronic Submission #405599 Verified by the BLM Well Information System.

For CHEVRON USA INC, sent to the Hobbs

Committed to AFMSS for processing by DUNCAN WHITLOCK on 02/28/2018 (18DW0069SE)

Name (please print) LAURA BECERRA

Title PERMITTING SPECIALIST

Signature _____ (Electronic Submission)

Date 02/23/2018

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.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

SD WE 24 FED P24 5H

30-025-43674

DRILLED NEW OIL WELL AS FOLLOWS:

08/12/2017: Spud well

SURFACE CASING

8/12/2017: Drill 17 1/2" surface hole 153' – 722'. Run 13 3/8", 54.5#, J-55 STC surface casing to 712'.

Cemented casing in place w/TAI 844 sx Class C. Density: 14.80, Yield: 1.33, Fluid Mix Ratio: 6.37. Returns to surface: 107 bbls of cement to surface.

Displace cement with 98 bbls of FW. Bump plug, hold 500 psi over. Plug bumped on calculated displacement. WOC for 8 hrs per BLM.

8/13/2017: Install test plug. Fill stack & choke manifold. Test full BOPE to 250 psi low/5000 psi high. (3500 high on annular).

8/14/2017: Test 13 3/8" surface casing to 1,780 psi for 30 minutes. Good test. Drill out float equip, cmt & rathole to 722'.

8/14/2017: Drill 12 1/4" intermediate hole 722'-4,555'

INTERMEDIATE CASING

8/16/2017: Run 9 5/8", 40#, L-80 LTC csg & set @ 4,545'.

8/17/17: Cemented casing in place 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/336 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. WOC to set.

Install pack off. Test to 5000 psi for 15 mins. Good test.

9/25/2017: Full BOPE test. TOC @ 4,459'. Test 9 5/8" csg to 2,765 psi for 30 minutes. Good test. Drill out float equip, cmt & rathole and 10' of formation to 4,565'.

9/26/2017 – 10/8/2017: Drill 8 3/4" production hole 4,555'-8,568' and 8 1/2" from 8,568' to 19,338' TD

PRODUCTION CASING

10/9/2017: Run 5 1/2", 20#, HCP-110 BTC casing to 19,328'.

Cemented in place 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: 9.52.

Displace cmt w/427 bbls of FW. Bump plug. Hold 500 psi over.

10 bbls of cement to surface, full returns throughout job. Plug bumped on proper displacement. WOC to set.

10/12/2017: Release rig @ 17:00 hrs

COMPLETED NEW DRILL AS FOLLOWS:

TOC @ 1,050', PBTD @ 19,280'

10/28/2017: MIRU. TIH w GR/JB/CBL @ 9,263'. Log well from 9,197' to surface.

10/31/2017: Test Production casing to 9800 psi 30 min. Good test.

11/1/2017: MIRU frac equipment

11/2/2017-12/7/2017: Perf and frac 51 stages, Upper Bone Spring, from 9,188' - 19,132'. Frac with total Proppant 16,380,409 lbs.

Perforation/Frac/Stimulation Details

Date	Top (FtKB)	Btm (FtKB)	Sand Pumped	Total Sand (Lbs)	Clean Fl./BBLS	Slur Vol/BBLS
12/7/2017	9,188	9,369	Sand 100 & 30/50	321,253	9,374	9,722
12/7/2017	9,384	9,567	Sand 100 & 30/50	321,951	9,500	9,848
12/6/2017	9,580	9,763	Sand 100 & 30/50	321,967	9,418	9,767
12/6/2017	9,776	9,959	Sand 100 & 30/50	319,355	9,446	9,792
12/5/2017	9,972	10,155	Sand 100 & 30/50	323,839	9,427	9,778
12/5/2017	10,166	10,322	Sand 100 & 30/50	322,002	9,371	9,720
12/4/2017	10,364	10,547	Sand 100 & 30/50	321,957	10,066	10,415
12/3/2017	10,560	10,743	Sand 100 & 30/50	321,483	9,799	10,147
12/3/2017	10,756	10,936	Sand 100 & 30/50	321,590	9,584	9,932
12/2/2017	10,952	11,135	Sand 100 & 30/50	321,634	9,462	9,810
12/2/2017	11,148	11,331	Sand 100 & 30/50	320,916	9,698	10,046
12/1/2017	11,344	11,527	Sand 100 & 30/50	320,461	9,480	9,828
12/1/2017	11,540	11,719	Sand 100 & 30/50	321,715	9,756	10,105
11/30/2017	11,736	11,919	Sand 100 & 30/50	320,868	9,654	10,002
11/29/2017	11,932	12,115	Sand 100 & 30/50	326,351	10,689	11,042
11/29/2017	12,128	12,311	Sand 100 & 30/50	319,443	9,426	9,772
11/28/2017	12,324	12,507	Sand 100 & 30/50	320,192	9,761	10,109
11/27/2017	12,523	12,703	Sand 100 & 30/50	320,761	10,953	11,302
11/27/2017	12,716	12,899	Sand 100 & 30/50	322,214	10,005	10,354
11/26/2017	12,912	13,090	Sand 100 & 30/50	320,030	9,442	9,789
11/26/2017	13,108	13,291	Sand 100 & 30/50	320,812	10,078	10,426
11/25/2017	13,304	13,487	Sand 100 & 30/50	320,001	9,330	9,677
11/24/2017	13,500	13,683	Sand 100 & 30/50	320,113	9,346	9,693
11/24/2017	13,696	13,878	Sand 100 & 30/50	321,100	10,446	10,794
11/23/2017	13,892	14,075	Sand 100 & 30/50	320,984	9,607	9,955
11/22/2017	14,088	14,271	Sand 100 & 30/50	321,336	9,931	10,279
11/21/2017	14,284	14,467	Sand 100 & 30/50	321,804	10,043	10,392
11/21/2017	14,480	14,663	Sand 100 & 30/50	322,499	11,593	11,942
11/20/2017	14,676	14,859	Sand 100 & 30/50	322,943	9,644	9,993
11/20/2017	14,872	15,055	Sand 100 & 30/50	322,820	10,145	10,494
11/19/2017	15,068	15,251	Sand 100 & 30/50	325,759	10,277	10,630
11/19/2017	15,264	15,446	Sand 100 & 30/50	320,843	10,097	10,444
11/18/2017	15,460	15,643	Sand 100 & 30/50	323,484	10,499	10,849
11/17/2017	15,656	15,839	Sand 100 & 30/50	321,225	10,702	11,050
11/16/2017	15,852	16,035	Sand 100 & 30/50	321,571	10,725	11,073
11/15/2017	16,048	16,231	Sand 100 & 30/50	321,517	10,357	10,705
11/14/2017	16,244	16,427	Sand 100 & 30/50	320,686	10,237	10,584
11/11/2017	16,440	16,623	Sand 100 & 30/50	311,227	10,197	10,534
11/11/2017	16,636	16,819	Sand 100 & 30/50	321,749	10,637	10,985
11/11/2017	16,832	17,015	Sand 100 & 30/50	320,654	9,687	10,035

11/9/2017	17,028	17,207	Sand 100 & 30/50	319,638	10,521	10,868
11/9/2017	17,224	17,407	Sand 100 & 30/50	321,397	9,956	10,304
11/8/2017	17,420	17,601	Sand 100 & 30/50	322,677	9,987	10,335
11/8/2017	17,614	17,797	Sand 100 & 30/50	319,115	9,891	10,236
11/7/2017	17,810	17,995	Sand 100 & 30/50	318,457	10,121	10,466
11/6/2017	18,008	18,191	Sand 100 & 3rd Sand type	318,051	9,735	10,079
11/6/2017	18,204	18,387	Sand 100 & PW 40/70	322,802	9,987	10,342
11/5/2017	18,400	18,579	Sand 100 & PW 40/70	320,391	9,929	10,281
11/4/2017	18,596	18,779	Sand 100 & PW 40/70	321,764	10,496	10,849
11/4/2017	18,792	18,975	Sand 100 & PW 40/70	321,829	8,948	9,301
11/3/2017	18,988	19,132	Sand 100 & PW 40/70	321,179	9,481	9,833

12/9/17-12/17/17: Casing Cleanout, RD and move to next well

1/2/2018: Test BOPE and RU

1/4/2018: Ran 2 7/8" L-80 tubing and set @ 8,832'. Packer @ 8,818'

1/6/2018: Release rig

1/18/2018: Place well on production

2/5/2018: On 24 hour OPT flowing:

Oil – 1417

Gas – 2179

Water – 1863

GOR – 1538

Tubing PSI – 792

Casing PSI – 1170

Choke – 64/64

TOC – 1050'

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 30-025-43674		² Pool Code 97838		³ Pool Name JENNINGS; UPPER BONE SPRING SHALE	
⁴ Property Code 317518		⁵ Property Name SD WE 24 FED P24			⁶ Well Number 511
⁷ OGRID No. 4323		⁸ Operator Name CHEVRON U.S.A. INC.			⁹ Elevation 3138'

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	1235'	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
B	13	26 SOUTH	32 EAST, N.M.P.M.		187'	NORTH	2136'	EAST	LEA

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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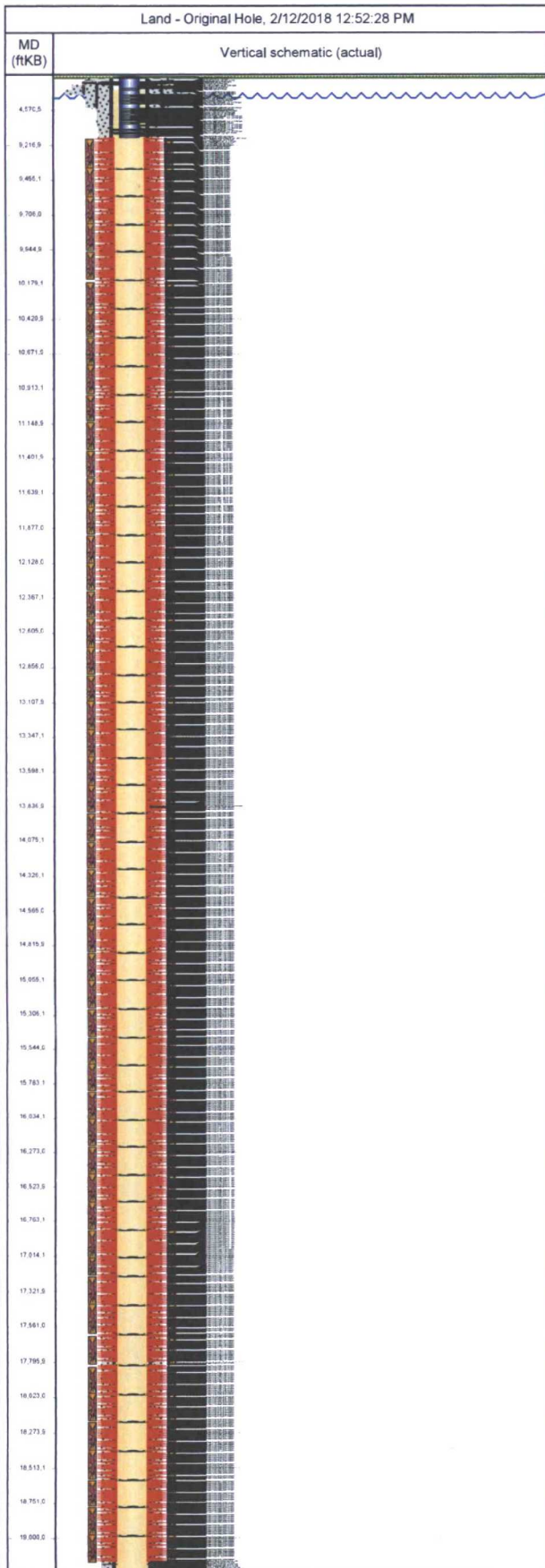
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ AS-DRILLED BOTTOM HOLE LOCATION <table border="1"> <tr> <th>X=</th> <th>719,080</th> <th>NAD 27</th> <th>X=</th> <th>719,080</th> <th>NAD 27</th> </tr> <tr> <th>Y=</th> <th>382,531</th> <th></th> <th>Y=</th> <th>382,369</th> <th></th> </tr> <tr> <th>LAT.</th> <th>32.049721</th> <th></th> <th>LAT.</th> <th>32.049276</th> <th></th> </tr> <tr> <th>LONG.</th> <th>103.626237</th> <th></th> <th>LONG.</th> <th>103.626241</th> <th></th> </tr> </table> <table border="1"> <tr> <th>X=</th> <th>760,267</th> <th>NAD83</th> <th>X=</th> <th>760,267</th> <th>NAD83</th> </tr> <tr> <th>Y=</th> <th>382,588</th> <th></th> <th>Y=</th> <th>382,427</th> <th></th> </tr> <tr> <th>LAT.</th> <th>32.049846</th> <th></th> <th>LAT.</th> <th>32.049401</th> <th></th> </tr> <tr> <th>LONG.</th> <th>103.626706</th> <th></th> <th>LONG.</th> <th>103.626710</th> <th></th> </tr> </table> <table border="1"> <tr> <th>X=</th> <th>720,045</th> <th>NAD 27</th> <th>X=</th> <th>719,129</th> <th>NAD 27</th> </tr> <tr> <th>Y=</th> <th>372,221</th> <th></th> <th>Y=</th> <th>372,401</th> <th></th> </tr> <tr> <th>LAT.</th> <th>32.021363</th> <th></th> <th>LAT.</th> <th>32.021874</th> <th></th> </tr> <tr> <th>LONG.</th> <th>103.623342</th> <th></th> <th>LONG.</th> <th>103.626295</th> <th></th> </tr> </table> <table border="1"> <tr> <th>X=</th> <th>761,232</th> <th>NAD83</th> <th>X=</th> <th>760,316</th> <th>NAD83</th> </tr> <tr> <th>Y=</th> <th>372,278</th> <th></th> <th>Y=</th> <th>372,458</th> <th></th> </tr> <tr> <th>LAT.</th> <th>32.021488</th> <th></th> <th>LAT.</th> <th>32.022000</th> <th></th> </tr> <tr> <th>LONG.</th> <th>103.623810</th> <th></th> <th>LONG.</th> <th>103.626762</th> <th></th> </tr> </table> ELEVATION +3138' NAVD 86	X=	719,080	NAD 27	X=	719,080	NAD 27	Y=	382,531		Y=	382,369		LAT.	32.049721		LAT.	32.049276		LONG.	103.626237		LONG.	103.626241		X=	760,267	NAD83	X=	760,267	NAD83	Y=	382,588		Y=	382,427		LAT.	32.049846		LAT.	32.049401		LONG.	103.626706		LONG.	103.626710		X=	720,045	NAD 27	X=	719,129	NAD 27	Y=	372,221		Y=	372,401		LAT.	32.021363		LAT.	32.021874		LONG.	103.623342		LONG.	103.626295		X=	761,232	NAD83	X=	760,316	NAD83	Y=	372,278		Y=	372,458		LAT.	32.021488		LAT.	32.022000		LONG.	103.623810		LONG.	103.626762			¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>[Signature]</i> Date: 1/16/18 Laura Becerra Printed Name LBecerra@Chevron.com E-mail Address
	X=	719,080	NAD 27	X=	719,080	NAD 27																																																																																												
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LAT.	32.021488		LAT.	32.022000																																																																																														
LONG.	103.623810		LONG.	103.626762																																																																																														
CORNER COORDINATES TABLE (NAD 27) A - Y=382711.66, X=718552.69 B - Y=382728.88, X=719883.96 C - Y=372006.29, X=718612.32 D - Y=372020.08, X=719946.66 E - Y=373359.36, X=719939.26 F - Y=373372.93, X=721272.94 G - Y=372033.87, X=721281.01	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: <i>[Signature]</i> Certificate Number: 23006																																																																																																	



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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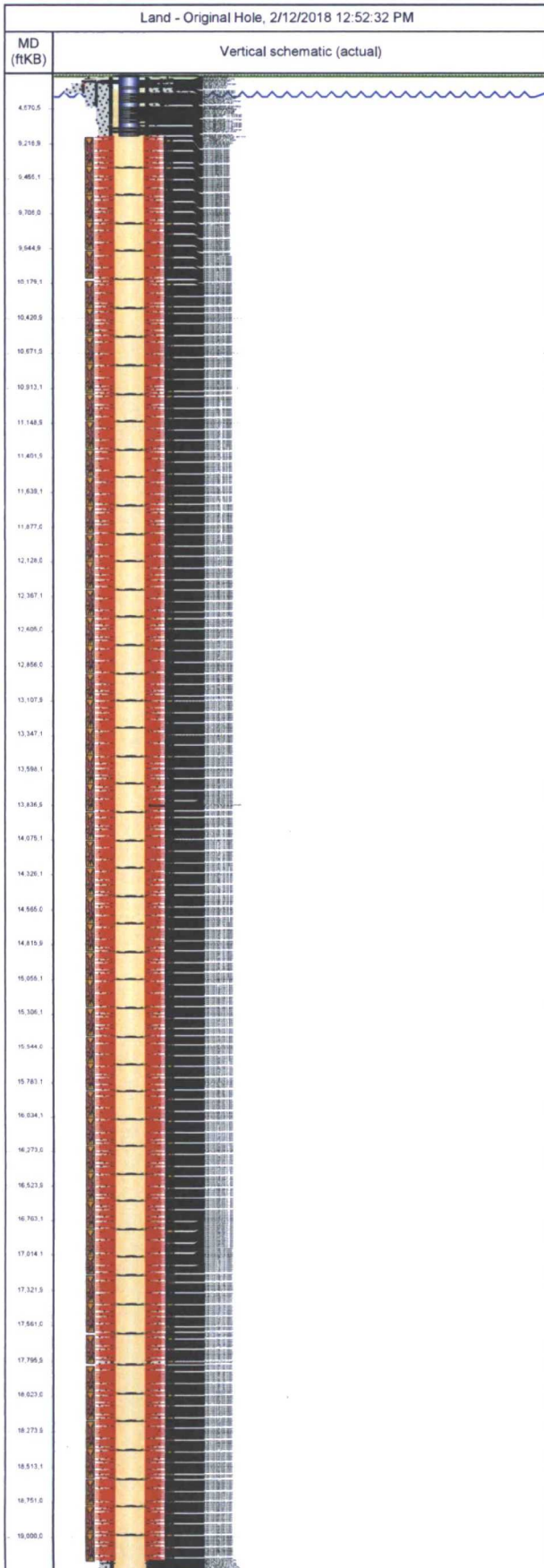


Job Details						
Job Category			Start Date		Rig/Unit End Date	
Completion			10/31/2017		12/30/2017	
Completion			12/30/2017		1/12/2018	
Casing Strings						
Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top Thread	Set Depth (MD) (ftKB)	
Conductor					120	
Surface	13 3/8	54.50	J-55	ST&C	712	
Intermediate Casing 1	9 5/8	40.00	L-80	LT&C	4,545	
Production Casing	5 1/2	20.00	HCP110	TXPBTC	19,328	
Tubing Strings						
Tubing - Production set at 8,832.4ftKB on 1/6/2018 16:00						
Tubing Description			Run Date	String Length (ft)	Set Depth (MD) (ftKB)	
Tubing - Production			1/6/2018	8,801.46	8,832.4	
Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Btm (ftKB)
Tubing Hanger	1	2 7/8			0.50	31.5
Tubing	1	2 7/8	6.50	L-80	31.72	63.2
Tubing	1	2 7/8	6.50	L-80	2.06	65.2
Tubing	66	2 7/8	6.50	L-80	2,088.31	2,153.6
Gas Lift Mandrel #13	1	2 7/8	6.50	L-80	4.10	2,157.7
Tubing	21	2 7/8	6.50	L-80	659.31	2,817.0
Gas Lift Mandrel #12	1	2 7/8	6.50	L-80	4.10	2,821.1
Tubing	19	2 7/8	6.50	L-80	599.51	3,420.6
Gas Lift Mandrel #11	1	2 7/8	6.50	L-80	4.10	3,424.7
Tubing	18	2 7/8	6.50	L-80	570.05	3,994.7
Gas Lift Mandrel #10	1	2 7/8	6.50	L-80	4.10	3,998.8
Tubing	18	2 7/8	6.50	L-80	567.53	4,566.4
Gas Lift Mandrel #09	1	2 7/8	6.50	L-80	4.10	4,570.5
Tubing	17	2 7/8	6.50	L-80	536.93	5,107.4
Gas Lift Mandrel #08	1	2 7/8	6.50	L-80	4.10	5,111.5
Tubing	18	2 7/8	6.50	L-80	568.74	5,680.2
Gas Lift Mandrel #07	1	2 7/8	6.50	L-80	4.10	5,684.3
Tubing	17	2 7/8	6.50	L-80	537.24	6,221.6
Gas Lift Mandrel #06	1	2 7/8	6.50	L-80	4.10	6,225.7
Tubing	17	2 7/8	6.50	L-80	536.27	6,761.9
Gas Lift Mandrel #05	1	2 7/8	6.50	L-80	4.10	6,766.0
Tubing	18	2 7/8	6.50	L-80	568.47	7,334.5
Gas Lift Mandrel #04	1	2 7/8	6.50	L-80	4.10	7,338.6
Tubing	17	2 7/8	6.50	L-80	537.90	7,876.5
Gas Lift Mandrel #03	1	2 7/8	6.50	L-80	4.10	7,880.6
Tubing	14	2 7/8	6.50	L-80	441.97	8,322.6
Gas Lift Mandrel #02	1	2 7/8	6.50	L-80	4.10	8,326.7
Tubing	14	2 7/8	6.50	L-80	442.51	8,769.2
Gas Lift Mandrel #01 SMOR	1	3 1/4			7.10	8,776.3
Tubing	1	2 7/8	6.50	L-80	31.53	8,807.8
On-Off Tool	1	4 1/2			1.50	8,809.3
450-193 Baker Hornet Packer	1	4 1/2			7.65	8,817.0
6' Pup Jt	1	2 7/8	4.70	L-80	6.18	8,823.1
2.312" XN Profile NPL w/ 2.210 NG	1	3.667	6.50		1.15	8,824.3
6' Pup Jt	1	2 7/8	4.70	L-80	6.20	8,830.5
2 3/8" pump out plug w/ 7 pins	1	3.667			1.93	8,832.4
Perforations						
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone	
12/7/2017	9,188.0	9,189.0	2.0	2	Avalon, Original Hole	
12/7/2017	9,202.0	9,203.0	2.0	2	Avalon, Original Hole	
12/7/2017	9,216.0	9,217.0	2.0	2	Avalon, Original Hole	
12/7/2017	9,230.0	9,231.0	2.0	2	Avalon, Original Hole	
12/7/2017	9,242.0	9,243.0	2.0	2	Avalon, Original Hole	
12/7/2017	9,258.0	9,259.0	2.0	2	Avalon, Original Hole	



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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Perforations					
Date	Top (ftKB)	Blm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/7/2017	9,272.0	9,273.0	2.0	2	Avalon, Original Hole
12/7/2017	9,284.0	9,285.0	3.0	3	Avalon, Original Hole
12/7/2017	9,300.0	9,301.0	3.0	3	Avalon, Original Hole
12/7/2017	9,314.0	9,315.0	3.0	3	Avalon, Original Hole
12/7/2017	9,326.0	9,327.0	3.0	3	Avalon, Original Hole
12/7/2017	9,342.0	9,343.0	3.0	3	Avalon, Original Hole
12/7/2017	9,356.0	9,357.0	4.0	4	Avalon, Original Hole
12/7/2017	9,368.0	9,369.0	6.0	6	Avalon, Original Hole
12/7/2017	9,384.0	9,385.0	2.0	2	Avalon, Original Hole
12/7/2017	9,398.0	9,399.0	2.0	2	Avalon, Original Hole
12/7/2017	9,412.0	9,413.0	2.0	2	Avalon, Original Hole
12/7/2017	9,426.0	9,427.0	2.0	2	Avalon, Original Hole
12/7/2017	9,440.0	9,441.0	2.0	2	Avalon, Original Hole
12/7/2017	9,454.0	9,455.0	2.0	2	Avalon, Original Hole
12/7/2017	9,468.0	9,469.0	2.0	2	Avalon, Original Hole
12/7/2017	9,482.0	9,483.0	3.0	3	Avalon, Original Hole
12/7/2017	9,496.0	9,497.0	3.0	3	Avalon, Original Hole
12/7/2017	9,510.0	9,511.0	3.0	3	Avalon, Original Hole
12/7/2017	9,524.0	9,525.0	3.0	3	Avalon, Original Hole
12/7/2017	9,538.0	9,539.0	3.0	3	Avalon, Original Hole
12/7/2017	9,552.0	9,553.0	4.0	4	Avalon, Original Hole
12/7/2017	9,566.0	9,567.0	6.0	6	Avalon, Original Hole
12/6/2017	9,580.0	9,581.0	2.0	2	Avalon, Original Hole
12/6/2017	9,594.0	9,595.0	2.0	2	Avalon, Original Hole
12/6/2017	9,608.0	9,609.0	2.0	2	Avalon, Original Hole
12/6/2017	9,622.0	9,623.0	2.0	2	Avalon, Original Hole
12/6/2017	9,636.0	9,637.0	2.0	2	Avalon, Original Hole
12/6/2017	9,650.0	9,651.0	2.0	2	Avalon, Original Hole
12/6/2017	9,664.0	9,665.0	2.0	2	Avalon, Original Hole
12/6/2017	9,678.0	9,679.0	3.0	3	Avalon, Original Hole
12/6/2017	9,692.0	9,693.0	3.0	3	Avalon, Original Hole
12/6/2017	9,706.0	9,707.0	3.0	3	Avalon, Original Hole
12/6/2017	9,720.0	9,721.0	3.0	3	Avalon, Original Hole
12/6/2017	9,734.0	9,735.0	3.0	3	Avalon, Original Hole
12/6/2017	9,748.0	9,749.0	4.0	4	Avalon, Original Hole
12/6/2017	9,762.0	9,763.0	6.0	6	Avalon, Original Hole
12/6/2017	9,776.0	9,777.0	2.0	2	Avalon, Original Hole
12/6/2017	9,790.0	9,791.0	2.0	2	Avalon, Original Hole
12/6/2017	9,804.0	9,805.0	2.0	2	Avalon, Original Hole
12/6/2017	9,818.0	9,819.0	2.0	2	Avalon, Original Hole
12/6/2017	9,832.0	9,833.0	2.0	2	Avalon, Original Hole
12/6/2017	9,846.0	9,847.0	2.0	2	Avalon, Original Hole
12/6/2017	9,860.0	9,861.0	2.0	2	Avalon, Original Hole
12/6/2017	9,874.0	9,875.0	3.0	3	Avalon, Original Hole
12/6/2017	9,888.0	9,889.0	3.0	3	Avalon, Original Hole
12/6/2017	9,902.0	9,903.0	3.0	3	Avalon, Original Hole
12/6/2017	9,916.0	9,917.0	3.0	3	Avalon, Original Hole
12/6/2017	9,930.0	9,931.0	3.0	3	Avalon, Original Hole
12/6/2017	9,944.0	9,945.0	4.0	4	Avalon, Original Hole
12/6/2017	9,958.0	9,959.0	6.0	6	Avalon, Original Hole
12/5/2017	9,972.0	9,973.0	2.0	2	Avalon, Original Hole
12/5/2017	9,986.0	9,987.0	2.0	2	Avalon, Original Hole
12/5/2017	10,000.0	10,001.0	2.0	2	Avalon, Original Hole
12/5/2017	10,014.0	10,015.0	2.0	2	Avalon, Original Hole
12/5/2017	10,028.0	10,029.0	2.0	2	Avalon, Original Hole
12/5/2017	10,042.0	10,043.0	2.0	2	Avalon, Original Hole
12/5/2017	10,056.0	10,057.0	2.0	2	Avalon, Original Hole
12/5/2017	10,070.0	10,071.0	3.0	3	Avalon, Original Hole



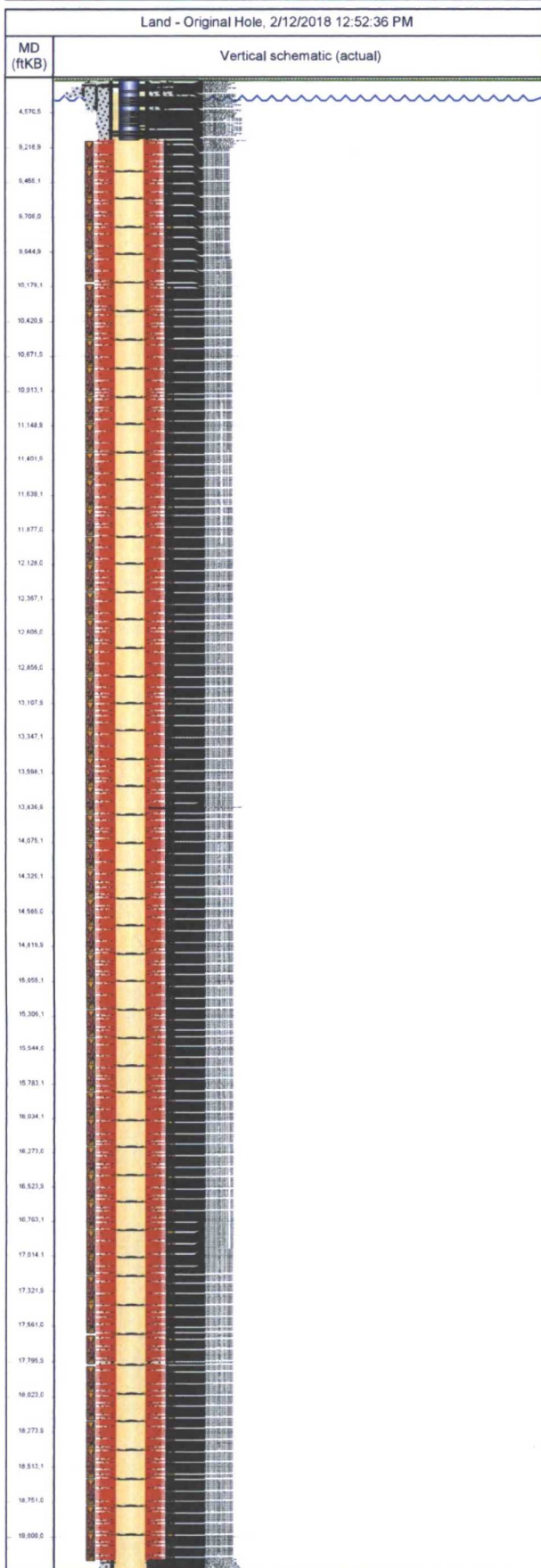
Wellbore Schematic

Well Name
SD WE 24 FED P24 5H

Lease
SD WE 24 FED P24

Field Name
JENNINGS

Business Unit
Mid-Continent

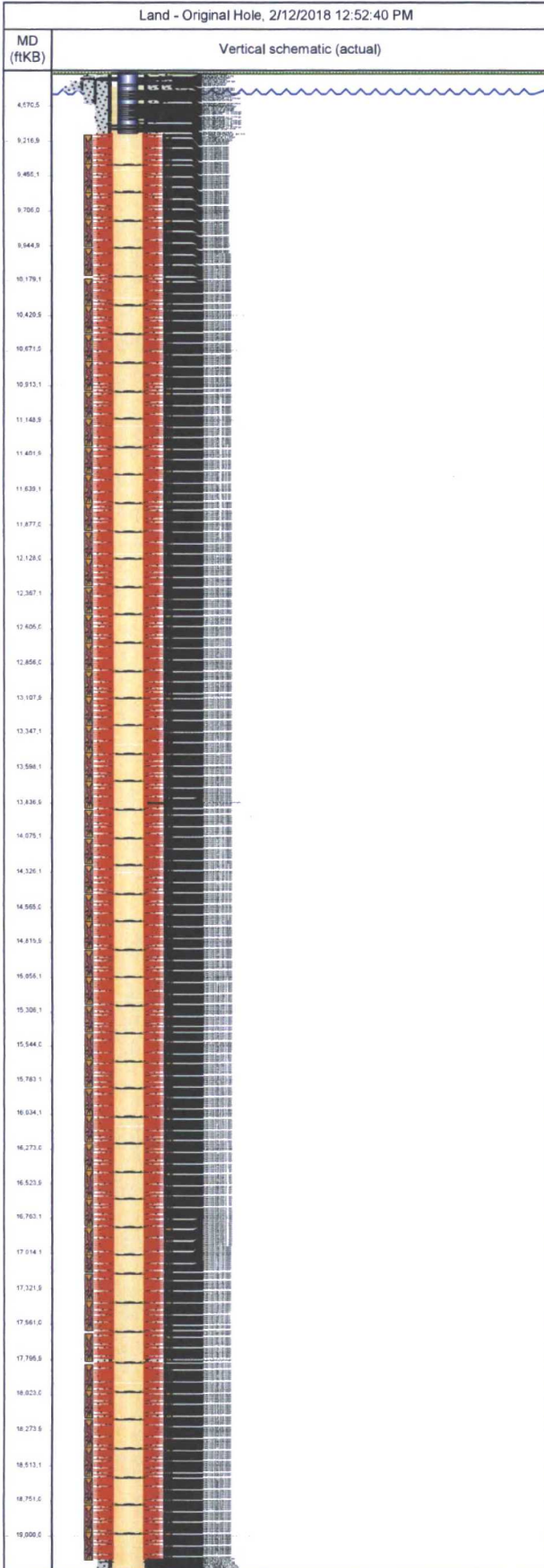


Perforations					
Date	Top (ftKB)	Blm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/5/2017	10,084.0	10,085.0	3.0	3	Avalon, Original Hole
12/5/2017	10,098.0	10,099.0	3.0	3	Avalon, Original Hole
12/5/2017	10,112.0	10,113.0	3.0	3	Avalon, Original Hole
12/5/2017	10,126.0	10,127.0	3.0	3	Avalon, Original Hole
12/5/2017	10,140.0	10,141.0	4.0	4	Avalon, Original Hole
12/5/2017	10,154.0	10,155.0	6.0	6	Avalon, Original Hole
12/5/2017	10,166.0	10,167.0	2.0	2	Avalon, Original Hole
12/5/2017	10,178.0	10,179.0	2.0	2	Avalon, Original Hole
12/5/2017	10,190.0	10,191.0	2.0	2	Avalon, Original Hole
12/5/2017	10,202.0	10,203.0	2.0	2	Avalon, Original Hole
12/5/2017	10,213.0	10,214.0	2.0	2	Avalon, Original Hole
12/5/2017	10,225.0	10,226.0	2.0	2	Avalon, Original Hole
12/5/2017	10,237.0	10,238.0	2.0	2	Avalon, Original Hole
12/5/2017	10,249.0	10,250.0	3.0	3	Avalon, Original Hole
12/5/2017	10,261.0	10,262.0	3.0	3	Avalon, Original Hole
12/5/2017	10,273.0	10,274.0	3.0	3	Avalon, Original Hole
12/5/2017	10,285.0	10,286.0	3.0	3	Avalon, Original Hole
12/5/2017	10,297.0	10,298.0	3.0	3	Avalon, Original Hole
12/5/2017	10,309.0	10,310.0	4.0	4	Avalon, Original Hole
12/5/2017	10,321.0	10,322.0	6.0	6	Avalon, Original Hole
12/4/2017	10,364.0	10,365.0	2.0	2	Avalon, Original Hole
12/4/2017	10,378.0	10,379.0	2.0	2	Avalon, Original Hole
12/4/2017	10,392.0	10,393.0	2.0	2	Avalon, Original Hole
12/4/2017	10,406.0	10,407.0	2.0	2	Avalon, Original Hole
12/4/2017	10,420.0	10,421.0	2.0	2	Avalon, Original Hole
12/4/2017	10,434.0	10,435.0	2.0	2	Avalon, Original Hole
12/4/2017	10,448.0	10,449.0	2.0	2	Avalon, Original Hole
12/4/2017	10,462.0	10,463.0	3.0	3	Avalon, Original Hole
12/4/2017	10,476.0	10,477.0	3.0	3	Avalon, Original Hole
12/4/2017	10,490.0	10,491.0	3.0	3	Avalon, Original Hole
12/4/2017	10,504.0	10,505.0	3.0	3	Avalon, Original Hole
12/4/2017	10,518.0	10,519.0	3.0	3	Avalon, Original Hole
12/4/2017	10,532.0	10,533.0	4.0	4	Avalon, Original Hole
12/4/2017	10,546.0	10,547.0	5.0	5	Avalon, Original Hole
12/3/2017	10,560.0	10,561.0	2.0	2	Avalon, Original Hole
12/3/2017	10,574.0	10,575.0	2.0	2	Avalon, Original Hole
12/3/2017	10,588.0	10,589.0	2.0	2	Avalon, Original Hole
12/3/2017	10,602.0	10,603.0	2.0	2	Avalon, Original Hole
12/3/2017	10,616.0	10,617.0	2.0	2	Avalon, Original Hole
12/3/2017	10,630.0	10,631.0	2.0	2	Avalon, Original Hole
12/3/2017	10,644.0	10,645.0	2.0	2	Avalon, Original Hole
12/3/2017	10,658.0	10,659.0	3.0	3	Avalon, Original Hole
12/3/2017	10,672.0	10,673.0	3.0	3	Avalon, Original Hole
12/3/2017	10,686.0	10,687.0	3.0	3	Avalon, Original Hole
12/3/2017	10,700.0	10,701.0	3.0	3	Avalon, Original Hole
12/3/2017	10,714.0	10,715.0	3.0	3	Avalon, Original Hole
12/3/2017	10,728.0	10,729.0	4.0	4	Avalon, Original Hole
12/3/2017	10,742.0	10,743.0	5.0	5	Avalon, Original Hole
12/3/2017	10,756.0	10,757.0	2.0	2	Avalon, Original Hole
12/3/2017	10,770.0	10,771.0	2.0	2	Avalon, Original Hole
12/3/2017	10,784.0	10,785.0	2.0	2	Avalon, Original Hole
12/3/2017	10,798.0	10,799.0	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	10,840.0	10,841.0	2.0	2	Avalon, Original Hole
12/3/2017	10,854.0	10,855.0	3.0	3	Avalon, Original Hole
12/3/2017	10,870.0	10,871.0	3.0	3	Avalon, Original Hole
12/3/2017	10,882.0	10,883.0	3.0	3	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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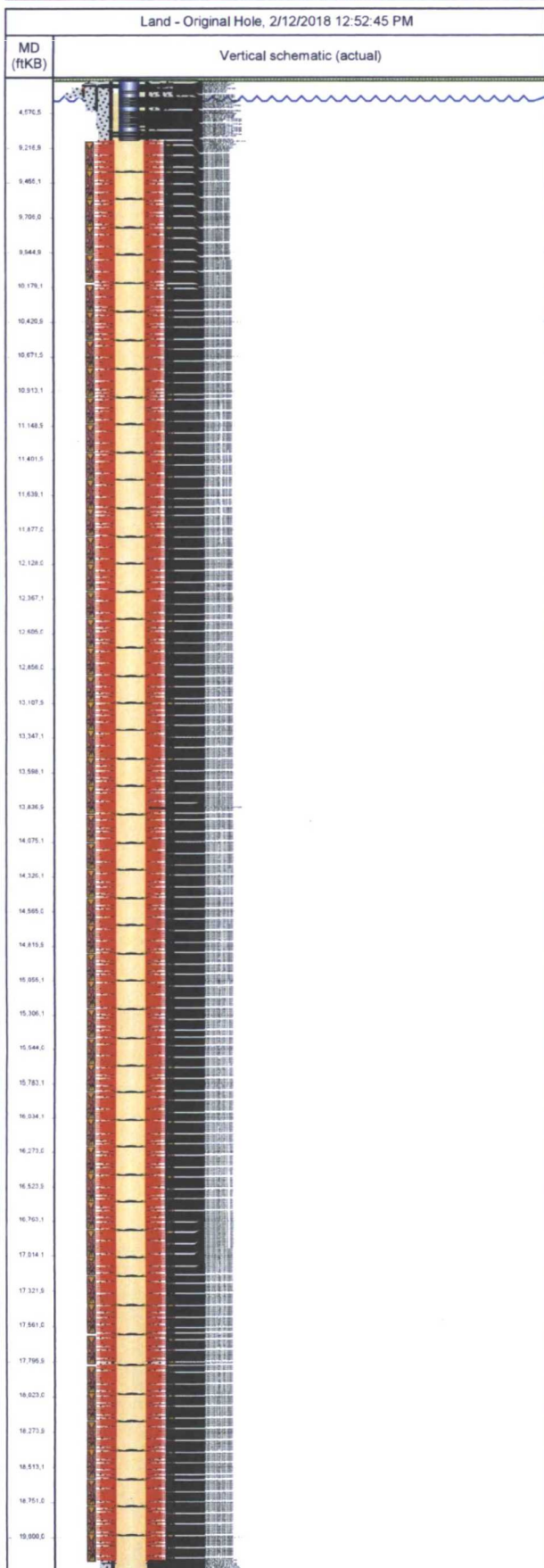


Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/3/2017	10,896.0	10,897.0	3.0	3	Avalon, Original Hole
12/3/2017	10,912.0	10,913.0	3.0	3	Avalon, Original Hole
12/3/2017	10,924.0	10,925.0	4.0	4	Avalon, Original Hole
12/3/2017	10,935.0	10,936.0	5.0	5	Avalon, Original Hole
12/2/2017	10,952.0	10,953.0	2.0	2	Avalon, Original Hole
12/2/2017	10,966.0	10,967.0	2.0	2	Avalon, Original Hole
12/2/2017	10,980.0	10,981.0	2.0	2	Avalon, Original Hole
12/2/2017	10,996.0	10,997.0	2.0	2	Avalon, Original Hole
12/2/2017	11,008.0	11,009.0	2.0	2	Avalon, Original Hole
12/2/2017	11,022.0	11,023.0	2.0	2	Avalon, Original Hole
12/2/2017	11,034.0	11,035.0	2.0	2	Avalon, Original Hole
12/2/2017	11,050.0	11,051.0	3.0	3	Avalon, Original Hole
12/2/2017	11,064.0	11,065.0	3.0	3	Avalon, Original Hole
12/2/2017	11,078.0	11,079.0	3.0	3	Avalon, Original Hole
12/2/2017	11,092.0	11,093.0	3.0	3	Avalon, Original Hole
12/2/2017	11,106.0	11,107.0	3.0	3	Avalon, Original Hole
12/2/2017	11,120.0	11,121.0	4.0	4	Avalon, Original Hole
12/2/2017	11,134.0	11,135.0	5.0	5	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	11,232.0	11,233.0	2.0	2	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	3.0	3	Avalon, Original Hole
12/2/2017	11,316.0	11,317.0	4.0	4	Avalon, Original Hole
12/2/2017	11,330.0	11,331.0	5.0	5	Avalon, Original Hole
12/1/2017	11,344.0	11,345.0	2.0	2	Avalon, Original Hole
12/1/2017	11,358.0	11,359.0	2.0	2	Avalon, Original Hole
12/1/2017	11,372.0	11,373.0	2.0	2	Avalon, Original Hole
12/1/2017	11,386.0	11,387.0	2.0	2	Avalon, Original Hole
12/1/2017	11,402.0	11,403.0	2.0	2	Avalon, Original Hole
12/1/2017	11,414.0	11,415.0	2.0	2	Avalon, Original Hole
12/1/2017	11,428.0	11,429.0	2.0	2	Avalon, Original Hole
12/1/2017	11,442.0	11,443.0	3.0	3	Avalon, Original Hole
12/1/2017	11,456.0	11,457.0	3.0	3	Avalon, Original Hole
12/1/2017	11,470.0	11,471.0	3.0	3	Avalon, Original Hole
12/1/2017	11,484.0	11,485.0	3.0	3	Avalon, Original Hole
12/1/2017	11,498.0	11,499.0	3.0	3	Avalon, Original Hole
12/1/2017	11,512.0	11,513.0	4.0	4	Avalon, Original Hole
12/1/2017	11,526.0	11,527.0	5.0	5	Avalon, Original Hole
12/1/2017	11,540.0	11,541.0	2.0	2	Avalon, Original Hole
12/1/2017	11,554.0	11,555.0	2.0	2	Avalon, Original Hole
12/1/2017	11,568.0	11,569.0	2.0	2	Avalon, Original Hole
12/1/2017	11,582.0	11,583.0	2.0	2	Avalon, Original Hole
12/1/2017	11,596.0	11,597.0	2.0	2	Avalon, Original Hole
12/1/2017	11,610.0	11,611.0	2.0	2	Avalon, Original Hole
12/1/2017	11,624.0	11,625.0	2.0	2	Avalon, Original Hole
12/1/2017	11,638.0	11,639.0	3.0	3	Avalon, Original Hole
12/1/2017	11,652.0	11,653.0	3.0	3	Avalon, Original Hole
12/1/2017	11,665.0	11,666.0	3.0	3	Avalon, Original Hole
12/1/2017	11,680.0	11,681.0	3.0	3	Avalon, Original Hole
12/1/2017	11,694.0	11,695.0	3.0	3	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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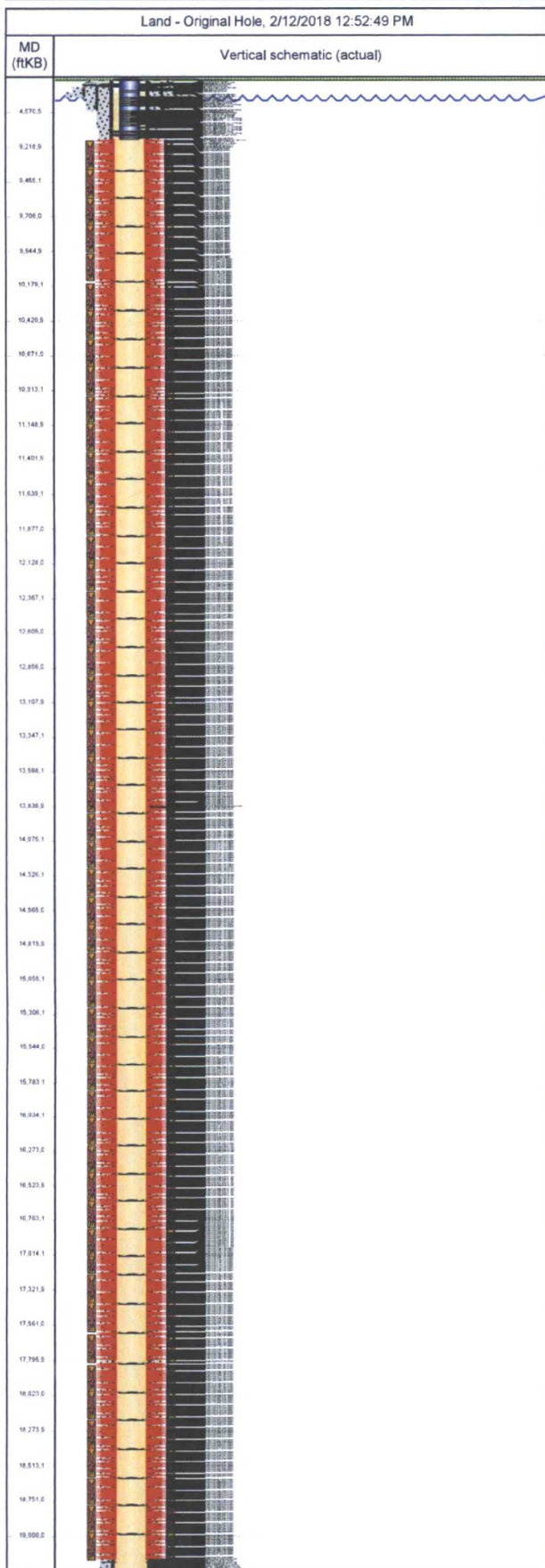


Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
12/1/2017	11,708.0	11,709.0	4.0	4	Avalon, Original Hole
12/1/2017	11,718.0	11,719.0	5.0	5	Avalon, Original Hole
11/30/2017	11,736.0	11,737.0	2.0	2	Avalon, Original Hole
11/30/2017	11,750.0	11,751.0	2.0	2	Avalon, Original Hole
11/30/2017	11,764.0	11,765.0	2.0	2	Avalon, Original Hole
11/30/2017	11,778.0	11,779.0	2.0	2	Avalon, Original Hole
11/30/2017	11,792.0	11,793.0	2.0	2	Avalon, Original Hole
11/30/2017	11,806.0	11,807.0	2.0	2	Avalon, Original Hole
11/30/2017	11,820.0	11,821.0	2.0	2	Avalon, Original Hole
11/30/2017	11,834.0	11,835.0	3.0	3	Avalon, Original Hole
11/30/2017	11,848.0	11,849.0	3.0	3	Avalon, Original Hole
11/30/2017	11,862.0	11,863.0	3.0	3	Avalon, Original Hole
11/30/2017	11,876.0	11,877.0	3.0	3	Avalon, Original Hole
11/30/2017	11,890.0	11,891.0	3.0	3	Avalon, Original Hole
11/30/2017	11,904.0	11,905.0	4.0	4	Avalon, Original Hole
11/30/2017	11,918.0	11,919.0	5.0	5	Avalon, Original Hole
11/29/2017	11,932.0	11,933.0	2.0	2	Avalon, Original Hole
11/29/2017	11,946.0	11,947.0	2.0	2	Avalon, Original Hole
11/29/2017	11,960.0	11,961.0	2.0	2	Avalon, Original Hole
11/29/2017	11,974.0	11,975.0	2.0	2	Avalon, Original Hole
11/29/2017	11,988.0	11,989.0	2.0	2	Avalon, Original Hole
11/29/2017	12,002.0	12,003.0	2.0	2	Avalon, Original Hole
11/29/2017	12,016.0	12,017.0	2.0	2	Avalon, Original Hole
11/29/2017	12,030.0	12,031.0	3.0	3	Avalon, Original Hole
11/29/2017	12,044.0	12,045.0	3.0	3	Avalon, Original Hole
11/29/2017	12,058.0	12,059.0	3.0	3	Avalon, Original Hole
11/29/2017	12,072.0	12,073.0	3.0	3	Avalon, Original Hole
11/29/2017	12,086.0	12,087.0	3.0	3	Avalon, Original Hole
11/29/2017	12,100.0	12,101.0	4.0	4	Avalon, Original Hole
11/29/2017	12,114.0	12,115.0	5.0	5	Avalon, Original Hole
11/29/2017	12,128.0	12,129.0	2.0	2	Avalon, Original Hole
11/29/2017	12,142.0	12,143.0	2.0	2	Avalon, Original Hole
11/29/2017	12,156.0	12,157.0	2.0	2	Avalon, Original Hole
11/29/2017	12,170.0	12,171.0	2.0	2	Avalon, Original Hole
11/29/2017	12,184.0	12,185.0	2.0	2	Avalon, Original Hole
11/29/2017	12,198.0	12,199.0	2.0	2	Avalon, Original Hole
11/29/2017	12,212.0	12,213.0	2.0	2	Avalon, Original Hole
11/29/2017	12,226.0	12,227.0	3.0	3	Avalon, Original Hole
11/29/2017	12,240.0	12,241.0	3.0	3	Avalon, Original Hole
11/29/2017	12,254.0	12,255.0	3.0	3	Avalon, Original Hole
11/29/2017	12,270.0	12,271.0	3.0	3	Avalon, Original Hole
11/29/2017	12,282.0	12,283.0	3.0	3	Avalon, Original Hole
11/29/2017	12,296.0	12,297.0	4.0	4	Avalon, Original Hole
11/29/2017	12,310.0	12,311.0	5.0	5	Avalon, Original Hole
11/28/2017	12,324.0	12,325.0	2.0	2	Avalon, Original Hole
11/28/2017	12,338.0	12,339.0	2.0	2	Avalon, Original Hole
11/28/2017	12,350.0	12,351.0	2.0	2	Avalon, Original Hole
11/28/2017	12,366.0	12,367.0	2.0	2	Avalon, Original Hole
11/28/2017	12,380.0	12,381.0	2.0	2	Avalon, Original Hole
11/28/2017	12,392.0	12,393.0	2.0	2	Avalon, Original Hole
11/28/2017	12,408.0	12,409.0	2.0	2	Avalon, Original Hole
11/28/2017	12,422.0	12,423.0	3.0	3	Avalon, Original Hole
11/28/2017	12,438.0	12,439.0	3.0	3	Avalon, Original Hole
11/28/2017	12,450.0	12,451.0	3.0	3	Avalon, Original Hole
11/28/2017	12,464.0	12,465.0	3.0	3	Avalon, Original Hole
11/28/2017	12,479.0	12,480.0	3.0	3	Avalon, Original Hole
11/28/2017	12,492.0	12,493.0	4.0	4	Avalon, Original Hole
11/28/2017	12,506.0	12,507.0	5.0	5	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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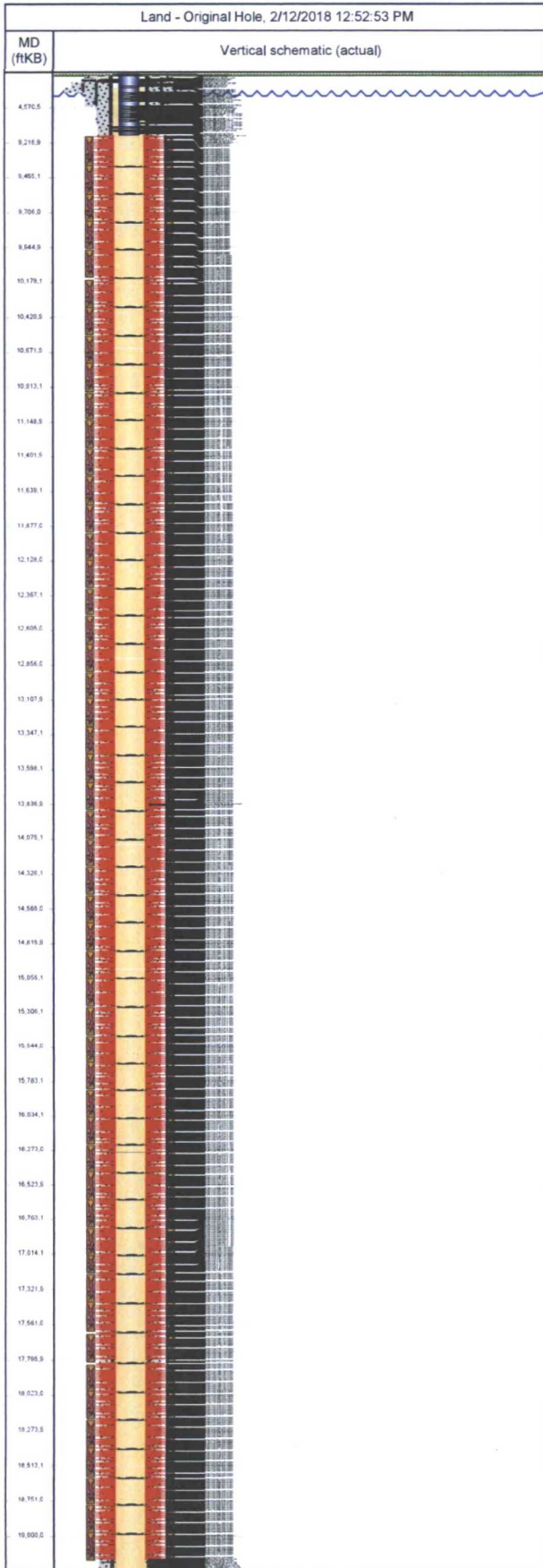


Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/27/2017	12,523.0	12,524.0	2.0	2	Avalon, Original Hole
11/27/2017	12,534.0	12,535.0	2.0	2	Avalon, Original Hole
11/27/2017	12,548.0	12,549.0	2.0	2	Avalon, Original Hole
11/27/2017	12,560.0	12,561.0	2.0	2	Avalon, Original Hole
11/27/2017	12,576.0	12,577.0	2.0	2	Avalon, Original Hole
11/27/2017	12,590.0	12,591.0	2.0	2	Avalon, Original Hole
11/27/2017	12,604.0	12,605.0	2.0	2	Avalon, Original Hole
11/27/2017	12,618.0	12,619.0	3.0	3	Avalon, Original Hole
11/27/2017	12,632.0	12,633.0	3.0	3	Avalon, Original Hole
11/27/2017	12,646.0	12,647.0	3.0	3	Avalon, Original Hole
11/27/2017	12,660.0	12,661.0	3.0	3	Avalon, Original Hole
11/27/2017	12,674.0	12,675.0	3.0	3	Avalon, Original Hole
11/27/2017	12,688.0	12,689.0	4.0	4	Avalon, Original Hole
11/27/2017	12,702.0	12,703.0	5.0	5	Avalon, Original Hole
11/27/2017	12,716.0	12,717.0	2.0	2	Avalon, Original Hole
11/27/2017	12,730.0	12,731.0	2.0	2	Avalon, Original Hole
11/27/2017	12,744.0	12,745.0	2.0	2	Avalon, Original Hole
11/27/2017	12,758.0	12,759.0	2.0	2	Avalon, Original Hole
11/27/2017	12,772.0	12,773.0	2.0	2	Avalon, Original Hole
11/27/2017	12,786.0	12,787.0	2.0	2	Avalon, Original Hole
11/27/2017	12,800.0	12,801.0	2.0	2	Avalon, Original Hole
11/27/2017	12,814.0	12,815.0	3.0	3	Avalon, Original Hole
11/27/2017	12,828.0	12,829.0	3.0	3	Avalon, Original Hole
11/27/2017	12,842.0	12,843.0	3.0	3	Avalon, Original Hole
11/27/2017	12,856.0	12,857.0	3.0	3	Avalon, Original Hole
11/27/2017	12,870.0	12,871.0	3.0	3	Avalon, Original Hole
11/27/2017	12,884.0	12,885.0	4.0	4	Avalon, Original Hole
11/27/2017	12,898.0	12,899.0	5.0	5	Avalon, Original Hole
11/26/2017	12,912.0	12,913.0	2.0	2	Avalon, Original Hole
11/26/2017	12,926.0	12,927.0	2.0	2	Avalon, Original Hole
11/26/2017	12,940.0	12,941.0	2.0	2	Avalon, Original Hole
11/26/2017	12,954.0	12,955.0	2.0	2	Avalon, Original Hole
11/26/2017	12,968.0	12,969.0	2.0	2	Avalon, Original Hole
11/26/2017	12,982.0	12,983.0	2.0	2	Avalon, Original Hole
11/26/2017	12,996.0	12,997.0	2.0	2	Avalon, Original Hole
11/26/2017	13,010.0	13,011.0	3.0	3	Avalon, Original Hole
11/26/2017	13,024.0	13,025.0	3.0	3	Avalon, Original Hole
11/26/2017	13,038.0	13,039.0	3.0	3	Avalon, Original Hole
11/26/2017	13,052.0	13,053.0	3.0	3	Avalon, Original Hole
11/26/2017	13,080.0	13,081.0	4.0	4	Avalon, Original Hole
11/26/2017	13,089.0	13,090.0	5.0	5	Avalon, Original Hole
11/26/2017	13,108.0	13,109.0	2.0	2	Avalon, Original Hole
11/26/2017	13,122.0	13,123.0	2.0	2	Avalon, Original Hole
11/26/2017	13,136.0	13,137.0	2.0	2	Avalon, Original Hole
11/26/2017	13,150.0	13,151.0	2.0	2	Avalon, Original Hole
11/26/2017	13,164.0	13,165.0	2.0	2	Avalon, Original Hole
11/26/2017	13,178.0	13,179.0	2.0	2	Avalon, Original Hole
11/26/2017	13,192.0	13,193.0	2.0	2	Avalon, Original Hole
11/26/2017	13,206.0	13,207.0	3.0	3	Avalon, Original Hole
11/26/2017	13,220.0	13,221.0	3.0	3	Avalon, Original Hole
11/26/2017	13,234.0	13,235.0	3.0	3	Avalon, Original Hole
11/26/2017	13,248.0	13,249.0	3.0	3	Avalon, Original Hole
11/26/2017	13,262.0	13,263.0	3.0	3	Avalon, Original Hole
11/26/2017	13,276.0	13,277.0	4.0	4	Avalon, Original Hole
11/26/2017	13,290.0	13,291.0	5.0	5	Avalon, Original Hole
11/25/2017	13,304.0	13,305.0	2.0	2	Avalon, Original Hole
11/25/2017	13,318.0	13,319.0	2.0	2	Avalon, Original Hole
11/25/2017	13,332.0	13,333.0	2.0	2	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/25/2017	13,346.0	13,347.0	2.0	2	Avalon, Original Hole
11/25/2017	13,360.0	13,361.0	2.0	2	Avalon, Original Hole
11/25/2017	13,374.0	13,375.0	2.0	2	Avalon, Original Hole
11/25/2017	13,388.0	13,389.0	2.0	2	Avalon, Original Hole
11/25/2017	13,402.0	13,403.0	3.0	3	Avalon, Original Hole
11/25/2017	13,416.0	13,417.0	3.0	3	Avalon, Original Hole
11/25/2017	13,430.0	13,431.0	3.0	3	Avalon, Original Hole
11/25/2017	13,444.0	13,445.0	3.0	3	Avalon, Original Hole
11/25/2017	13,458.0	13,459.0	3.0	3	Avalon, Original Hole
11/25/2017	13,472.0	13,473.0	4.0	4	Avalon, Original Hole
11/25/2017	13,486.0	13,487.0	5.0	5	Avalon, Original Hole
11/24/2017	13,500.0	13,501.0	2.0	2	Avalon, Original Hole
11/24/2017	13,514.0	13,515.0	2.0	2	Avalon, Original Hole
11/24/2017	13,528.0	13,529.0	2.0	2	Avalon, Original Hole
11/24/2017	13,542.0	13,543.0	2.0	2	Avalon, Original Hole
11/24/2017	13,556.0	13,557.0	2.0	2	Avalon, Original Hole
11/24/2017	13,570.0	13,571.0	2.0	2	Avalon, Original Hole
11/24/2017	13,584.0	13,585.0	2.0	2	Avalon, Original Hole
11/24/2017	13,598.0	13,599.0	3.0	3	Avalon, Original Hole
11/24/2017	13,612.0	13,613.0	3.0	3	Avalon, Original Hole
11/24/2017	13,626.0	13,627.0	3.0	3	Avalon, Original Hole
11/24/2017	13,640.0	13,641.0	3.0	3	Avalon, Original Hole
11/24/2017	13,654.0	13,655.0	3.0	3	Avalon, Original Hole
11/24/2017	13,668.0	13,669.0	4.0	4	Avalon, Original Hole
11/24/2017	13,682.0	13,683.0	5.0	5	Avalon, Original Hole
11/24/2017	13,696.0	13,697.0	2.0	2	Avalon, Original Hole
11/24/2017	13,710.0	13,711.0	2.0	2	Avalon, Original Hole
11/24/2017	13,726.0	13,727.0	2.0	2	Avalon, Original Hole
11/24/2017	13,738.0	13,739.0	2.0	2	Avalon, Original Hole
11/24/2017	13,752.0	13,753.0	2.0	2	Avalon, Original Hole
11/24/2017	13,766.0	13,767.0	2.0	2	Avalon, Original Hole
11/24/2017	13,780.0	13,781.0	2.0	2	Avalon, Original Hole
11/24/2017	13,794.0	13,795.0	3.0	3	Avalon, Original Hole
11/24/2017	13,808.0	13,809.0	3.0	3	Avalon, Original Hole
11/24/2017	13,822.0	13,823.0	3.0	3	Avalon, Original Hole
11/24/2017	13,836.0	13,837.0	3.0	3	Avalon, Original Hole
11/24/2017	13,849.0	13,850.0	3.0	3	Avalon, Original Hole
11/24/2017	13,864.0	13,865.0	4.0	4	Avalon, Original Hole
11/24/2017	13,877.0	13,878.0	5.0	5	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	13,920.0	13,921.0	2.0	2	Avalon, Original Hole
11/23/2017	13,936.0	13,937.0	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	2.0	2	Avalon, Original Hole
11/23/2017	13,976.0	13,977.0	2.0	2	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	14,020.0	14,021.0	3.0	3	Avalon, Original Hole
11/23/2017	14,032.0	14,033.0	3.0	3	Avalon, Original Hole
11/23/2017	14,046.0	14,047.0	3.0	3	Avalon, Original Hole
11/23/2017	14,060.0	14,061.0	4.0	4	Avalon, Original Hole
11/23/2017	14,074.0	14,075.0	5.0	5	Avalon, Original Hole
11/22/2017	14,088.0	14,089.0	2.0	2	Avalon, Original Hole
11/22/2017	14,100.0	14,101.0	2.0	2	Avalon, Original Hole
11/22/2017	14,116.0	14,117.0	2.0	2	Avalon, Original Hole
11/22/2017	14,130.0	14,131.0	2.0	2	Avalon, Original Hole
11/22/2017	14,144.0	14,145.0	2.0	2	Avalon, Original Hole



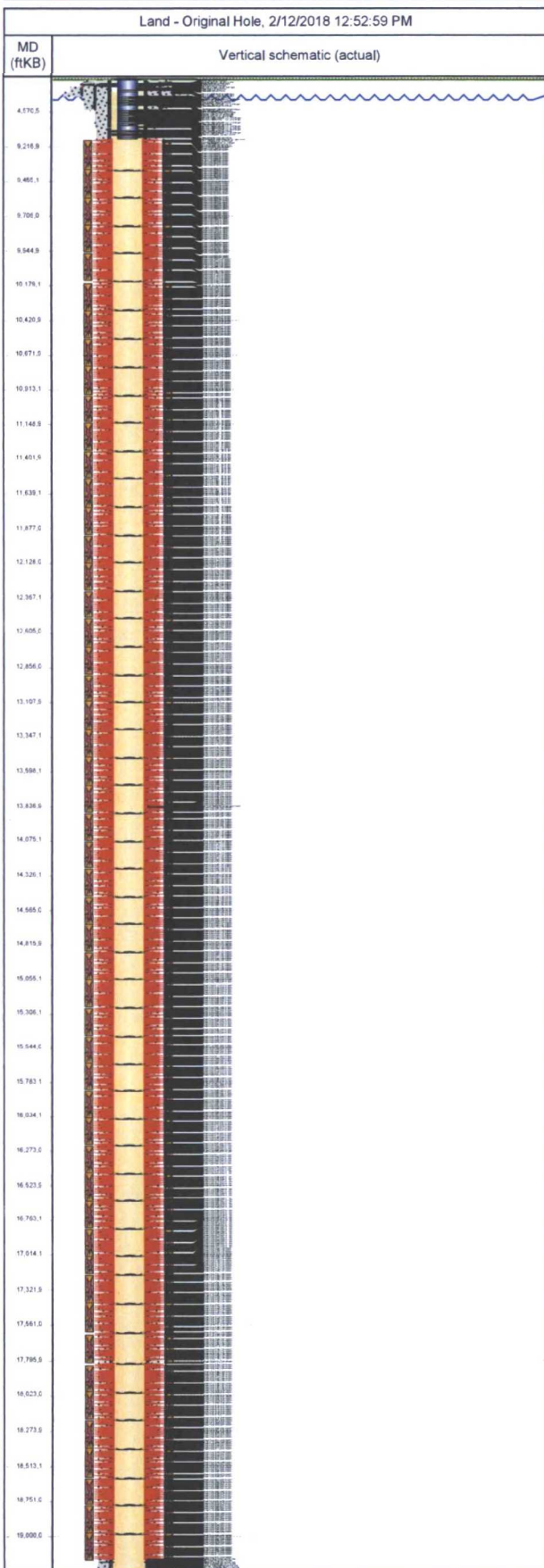
Wellbore Schematic

Well Name
SD WE 24 FED P24 5H

Lease
SD WE 24 FED P24

Field Name
JENNINGS

Business Unit
Mid-Continent



Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/22/2017	14,158.0	14,159.0	2.0	2	Avalon, Original Hole
11/22/2017	14,172.0	14,173.0	2.0	2	Avalon, Original Hole
11/22/2017	14,186.0	14,187.0	3.0	3	Avalon, Original Hole
11/22/2017	14,200.0	14,201.0	3.0	3	Avalon, Original Hole
11/22/2017	14,214.0	14,215.0	3.0	3	Avalon, Original Hole
11/22/2017	14,228.0	14,229.0	3.0	3	Avalon, Original Hole
11/22/2017	14,242.0	14,243.0	3.0	3	Avalon, Original Hole
11/22/2017	14,256.0	14,257.0	4.0	4	Avalon, Original Hole
11/22/2017	14,270.0	14,271.0	5.0	5	Avalon, Original Hole
11/21/2017	14,284.0	14,285.0	2.0	2	Avalon, Original Hole
11/21/2017	14,298.0	14,299.0	2.0	2	Avalon, Original Hole
11/21/2017	14,312.0	14,313.0	2.0	2	Avalon, Original Hole
11/21/2017	14,326.0	14,327.0	2.0	2	Avalon, Original Hole
11/21/2017	14,340.0	14,341.0	2.0	2	Avalon, Original Hole
11/21/2017	14,354.0	14,355.0	2.0	2	Avalon, Original Hole
11/21/2017	14,368.0	14,369.0	2.0	2	Avalon, Original Hole
11/21/2017	14,382.0	14,383.0	3.0	3	Avalon, Original Hole
11/21/2017	14,396.0	14,397.0	3.0	3	Avalon, Original Hole
11/21/2017	14,410.0	14,411.0	3.0	3	Avalon, Original Hole
11/21/2017	14,424.0	14,425.0	3.0	3	Avalon, Original Hole
11/21/2017	14,438.0	14,439.0	3.0	3	Avalon, Original Hole
11/21/2017	14,452.0	14,453.0	4.0	4	Avalon, Original Hole
11/21/2017	14,466.0	14,467.0	5.0	5	Avalon, Original Hole
11/21/2017	14,480.0	14,481.0	2.0	2	Avalon, Original Hole
11/21/2017	14,494.0	14,495.0	2.0	2	Avalon, Original Hole
11/21/2017	14,508.0	14,509.0	2.0	2	Avalon, Original Hole
11/21/2017	14,522.0	14,523.0	2.0	2	Avalon, Original Hole
11/21/2017	14,536.0	14,537.0	2.0	2	Avalon, Original Hole
11/21/2017	14,550.0	14,551.0	2.0	2	Avalon, Original Hole
11/21/2017	14,564.0	14,565.0	2.0	2	Avalon, Original Hole
11/21/2017	14,578.0	14,579.0	3.0	3	Avalon, Original Hole
11/21/2017	14,592.0	14,593.0	3.0	3	Avalon, Original Hole
11/21/2017	14,606.0	14,607.0	3.0	3	Avalon, Original Hole
11/21/2017	14,620.0	14,621.0	3.0	3	Avalon, Original Hole
11/21/2017	14,634.0	14,635.0	3.0	3	Avalon, Original Hole
11/21/2017	14,648.0	14,649.0	4.0	4	Avalon, Original Hole
11/21/2017	14,662.0	14,663.0	5.0	5	Avalon, Original Hole
11/20/2017	14,676.0	14,677.0	2.0	2	Avalon, Original Hole
11/20/2017	14,690.0	14,691.0	2.0	2	Avalon, Original Hole
11/20/2017	14,704.0	14,705.0	2.0	2	Avalon, Original Hole
11/20/2017	14,718.0	14,719.0	2.0	2	Avalon, Original Hole
11/20/2017	14,732.0	14,733.0	2.0	2	Avalon, Original Hole
11/20/2017	14,746.0	14,747.0	2.0	2	Avalon, Original Hole
11/20/2017	14,760.0	14,761.0	2.0	2	Avalon, Original Hole
11/20/2017	14,774.0	14,775.0	3.0	3	Avalon, Original Hole
11/20/2017	14,788.0	14,789.0	3.0	3	Avalon, Original Hole
11/20/2017	14,802.0	14,803.0	3.0	3	Avalon, Original Hole
11/20/2017	14,816.0	14,817.0	3.0	3	Avalon, Original Hole
11/20/2017	14,830.0	14,831.0	3.0	3	Avalon, Original Hole
11/20/2017	14,844.0	14,845.0	4.0	4	Avalon, Original Hole
11/20/2017	14,858.0	14,859.0	6.0	6	Avalon, Original Hole
11/20/2017	14,872.0	14,873.0	2.0	2	Avalon, Original Hole
11/20/2017	14,886.0	14,887.0	2.0	2	Avalon, Original Hole
11/20/2017	14,900.0	14,901.0	2.0	2	Avalon, Original Hole
11/20/2017	14,914.0	14,915.0	2.0	2	Avalon, Original Hole
11/20/2017	14,928.0	14,929.0	2.0	2	Avalon, Original Hole
11/20/2017	14,942.0	14,943.0	2.0	2	Avalon, Original Hole
11/20/2017	14,956.0	14,957.0	2.0	2	Avalon, Original Hole



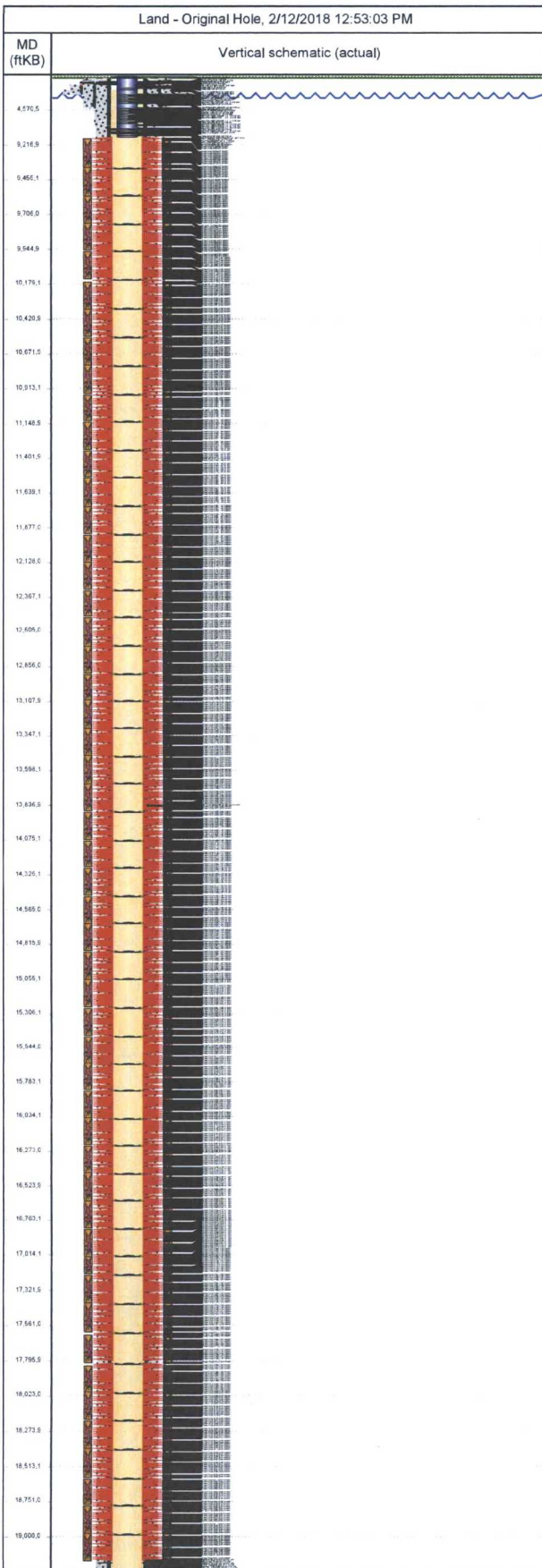
Wellbore Schematic

Well Name
SD WE 24 FED P24 5H

Lease
SD WE 24 FED P24

Field Name
JENNINGS

Business Unit
Mid-Continent



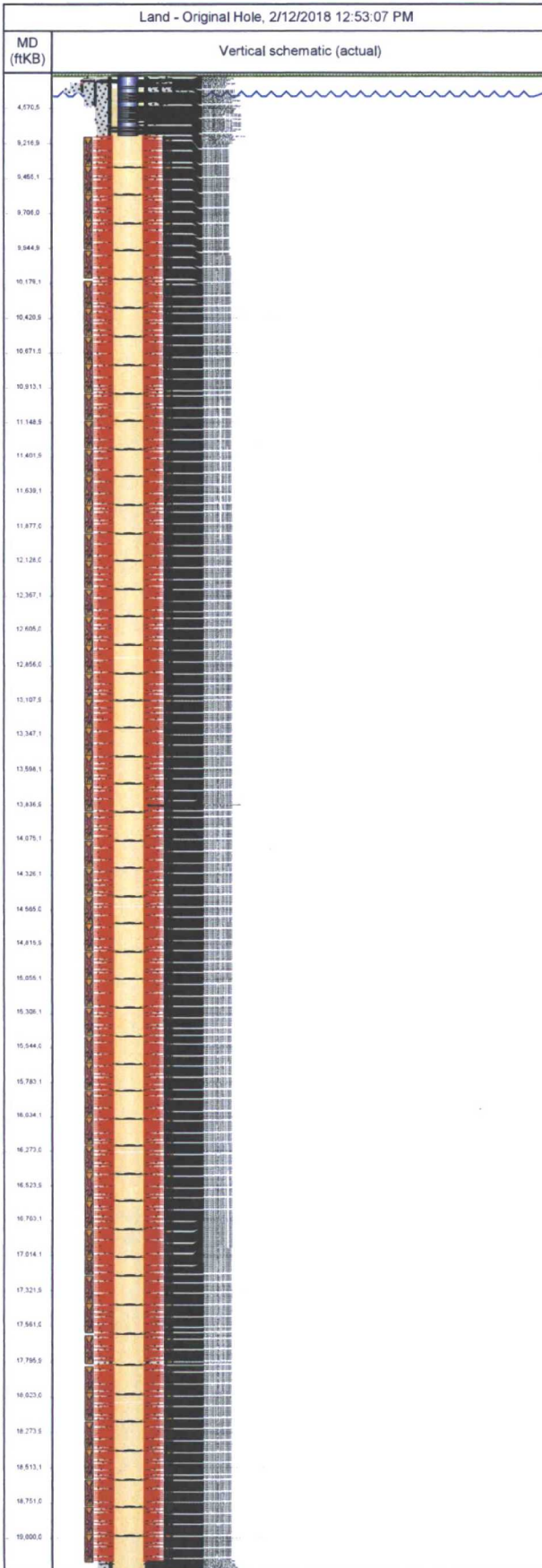
Perforations

Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/20/2017	14,970.0	14,971.0	3.0	3	Avalon, Original Hole
11/20/2017	14,984.0	14,985.0	3.0	3	Avalon, Original Hole
11/20/2017	14,998.0	14,999.0	3.0	3	Avalon, Original Hole
11/20/2017	15,010.0	15,011.0	3.0	3	Avalon, Original Hole
11/20/2017	15,026.0	15,027.0	3.0	3	Avalon, Original Hole
11/20/2017	15,040.0	15,041.0	4.0	4	Avalon, Original Hole
11/20/2017	15,054.0	15,055.0	6.0	6	Avalon, Original Hole
11/19/2017	15,068.0	15,069.0	2.0	2	Avalon, Original Hole
11/19/2017	15,082.0	15,083.0	2.0	2	Avalon, Original Hole
11/19/2017	15,096.0	15,097.0	2.0	2	Avalon, Original Hole
11/19/2017	15,110.0	15,111.0	2.0	2	Avalon, Original Hole
11/19/2017	15,124.0	15,125.0	2.0	2	Avalon, Original Hole
11/19/2017	15,138.0	15,139.0	2.0	2	Avalon, Original Hole
11/19/2017	15,152.0	15,153.0	2.0	2	Avalon, Original Hole
11/19/2017	15,166.0	15,167.0	3.0	3	Avalon, Original Hole
11/19/2017	15,180.0	15,181.0	3.0	3	Avalon, Original Hole
11/19/2017	15,194.0	15,195.0	3.0	3	Avalon, Original Hole
11/19/2017	15,208.0	15,209.0	3.0	3	Avalon, Original Hole
11/19/2017	15,222.0	15,223.0	3.0	3	Avalon, Original Hole
11/19/2017	15,236.0	15,237.0	4.0	4	Avalon, Original Hole
11/19/2017	15,250.0	15,251.0	6.0	6	Avalon, Original Hole
11/19/2017	15,264.0	15,265.0	2.0	2	Avalon, Original Hole
11/19/2017	15,278.0	15,279.0	2.0	2	Avalon, Original Hole
11/19/2017	15,290.0	15,291.0	2.0	2	Avalon, Original Hole
11/19/2017	15,306.0	15,307.0	2.0	2	Avalon, Original Hole
11/19/2017	15,320.0	15,321.0	2.0	2	Avalon, Original Hole
11/19/2017	15,333.0	15,334.0	2.0	2	Avalon, Original Hole
11/19/2017	15,348.0	15,349.0	2.0	2	Avalon, Original Hole
11/19/2017	15,362.0	15,363.0	3.0	3	Avalon, Original Hole
11/19/2017	15,374.0	15,375.0	3.0	3	Avalon, Original Hole
11/19/2017	15,390.0	15,391.0	3.0	3	Avalon, Original Hole
11/19/2017	15,404.0	15,405.0	3.0	3	Avalon, Original Hole
11/19/2017	15,420.0	15,421.0	3.0	3	Avalon, Original Hole
11/19/2017	15,432.0	15,433.0	4.0	4	Avalon, Original Hole
11/19/2017	15,445.0	15,446.0	6.0	6	Avalon, Original Hole
11/18/2017	15,460.0	15,461.0	2.0	2	Avalon, Original Hole
11/18/2017	15,474.0	15,475.0	2.0	2	Avalon, Original Hole
11/18/2017	15,488.0	15,489.0	2.0	2	Avalon, Original Hole
11/18/2017	15,502.0	15,503.0	2.0	2	Avalon, Original Hole
11/18/2017	15,516.0	15,517.0	2.0	2	Avalon, Original Hole
11/18/2017	15,530.0	15,531.0	2.0	2	Avalon, Original Hole
11/18/2017	15,544.0	15,545.0	2.0	2	Avalon, Original Hole
11/18/2017	15,558.0	15,559.0	3.0	3	Avalon, Original Hole
11/18/2017	15,572.0	15,573.0	3.0	3	Avalon, Original Hole
11/18/2017	15,586.0	15,587.0	3.0	3	Avalon, Original Hole
11/18/2017	15,600.0	15,601.0	3.0	3	Avalon, Original Hole
11/18/2017	15,614.0	15,615.0	3.0	3	Avalon, Original Hole
11/18/2017	15,628.0	15,629.0	4.0	4	Avalon, Original Hole
11/18/2017	15,642.0	15,643.0	6.0	6	Avalon, Original Hole
11/17/2017	15,656.0	15,657.0	2.0	2	Avalon, Original Hole
11/17/2017	15,670.0	15,671.0	2.0	2	Avalon, Original Hole
11/17/2017	15,684.0	15,685.0	2.0	2	Avalon, Original Hole
11/17/2017	15,698.0	15,699.0	2.0	2	Avalon, Original Hole
11/17/2017	15,712.0	15,713.0	2.0	2	Avalon, Original Hole
11/17/2017	15,726.0	15,727.0	2.0	2	Avalon, Original Hole
11/17/2017	15,740.0	15,741.0	2.0	2	Avalon, Original Hole
11/17/2017	15,754.0	15,755.0	3.0	3	Avalon, Original Hole
11/17/2017	15,768.0	15,769.0	3.0	3	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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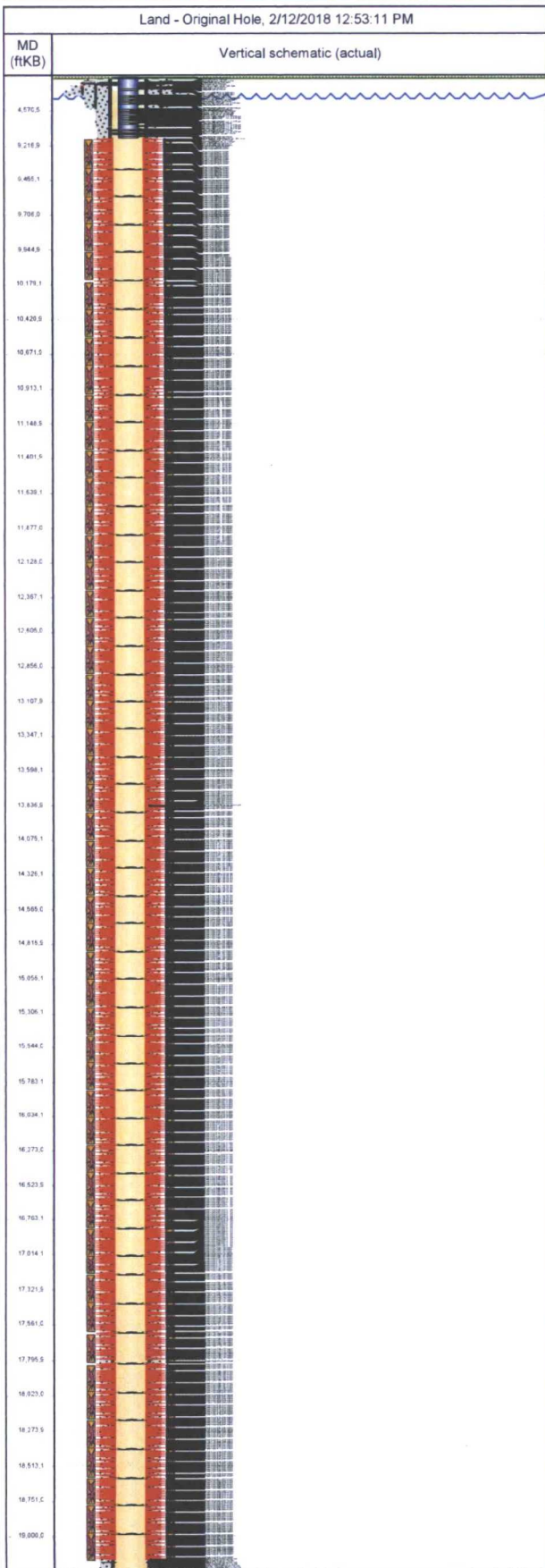


Perforations					
Date	Top (ftKB)	Bot (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/17/2017	15,782.0	15,783.0	3.0	3	Avalon, Original Hole
11/17/2017	15,796.0	15,797.0	3.0	3	Avalon, Original Hole
11/17/2017	15,810.0	15,811.0	3.0	3	Avalon, Original Hole
11/17/2017	15,824.0	15,825.0	4.0	4	Avalon, Original Hole
11/17/2017	15,838.0	15,839.0	6.0	6	Avalon, Original Hole
11/16/2017	15,852.0	15,853.0	2.0	2	Avalon, Original Hole
11/16/2017	15,866.0	15,867.0	2.0	2	Avalon, Original Hole
11/16/2017	15,880.0	15,881.0	2.0	2	Avalon, Original Hole
11/16/2017	15,894.0	15,895.0	2.0	2	Avalon, Original Hole
11/16/2017	15,908.0	15,909.0	2.0	2	Avalon, Original Hole
11/16/2017	15,922.0	15,923.0	2.0	2	Avalon, Original Hole
11/16/2017	15,936.0	15,937.0	2.0	2	Avalon, Original Hole
11/16/2017	15,950.0	15,951.0	3.0	3	Avalon, Original Hole
11/16/2017	15,964.0	15,965.0	3.0	3	Avalon, Original Hole
11/16/2017	15,978.0	15,979.0	3.0	3	Avalon, Original Hole
11/16/2017	15,992.0	15,993.0	3.0	3	Avalon, Original Hole
11/16/2017	16,006.0	16,007.0	3.0	3	Avalon, Original Hole
11/16/2017	16,020.0	16,021.0	4.0	4	Avalon, Original Hole
11/16/2017	16,034.0	16,035.0	6.0	6	Avalon, Original Hole
11/15/2017	16,048.0	16,049.0	2.0	2	Avalon, Original Hole
11/15/2017	16,062.0	16,063.0	2.0	2	Avalon, Original Hole
11/15/2017	16,076.0	16,077.0	2.0	2	Avalon, Original Hole
11/15/2017	16,090.0	16,091.0	2.0	2	Avalon, Original Hole
11/15/2017	16,104.0	16,105.0	2.0	2	Avalon, Original Hole
11/15/2017	16,118.0	16,119.0	2.0	2	Avalon, Original Hole
11/15/2017	16,132.0	16,133.0	2.0	2	Avalon, Original Hole
11/15/2017	16,146.0	16,147.0	3.0	3	Avalon, Original Hole
11/15/2017	16,160.0	16,161.0	3.0	3	Avalon, Original Hole
11/15/2017	16,174.0	16,175.0	3.0	3	Avalon, Original Hole
11/15/2017	16,188.0	16,189.0	3.0	3	Avalon, Original Hole
11/15/2017	16,202.0	16,203.0	3.0	3	Avalon, Original Hole
11/15/2017	16,216.0	16,217.0	4.0	4	Avalon, Original Hole
11/15/2017	16,230.0	16,231.0	6.0	6	Avalon, Original Hole
11/14/2017	16,244.0	16,245.0	2.0	2	Avalon, Original Hole
11/14/2017	16,258.0	16,259.0	2.0	2	Avalon, Original Hole
11/14/2017	16,272.0	16,273.0	2.0	2	Avalon, Original Hole
11/14/2017	16,286.0	16,287.0	2.0	2	Avalon, Original Hole
11/14/2017	16,300.0	16,301.0	2.0	2	Avalon, Original Hole
11/14/2017	16,314.0	16,315.0	2.0	2	Avalon, Original Hole
11/14/2017	16,328.0	16,329.0	2.0	2	Avalon, Original Hole
11/14/2017	16,342.0	16,343.0	3.0	3	Avalon, Original Hole
11/14/2017	16,356.0	16,357.0	3.0	3	Avalon, Original Hole
11/14/2017	16,370.0	16,371.0	3.0	3	Avalon, Original Hole
11/14/2017	16,384.0	16,385.0	3.0	3	Avalon, Original Hole
11/14/2017	16,398.0	16,399.0	3.0	3	Avalon, Original Hole
11/14/2017	16,412.0	16,413.0	4.0	4	Avalon, Original Hole
11/14/2017	16,426.0	16,427.0	6.0	6	Avalon, Original Hole
11/11/2017	16,440.0	16,441.0	2.0	2	Avalon, Original Hole
11/11/2017	16,454.0	16,455.0	2.0	2	Avalon, Original Hole
11/11/2017	16,468.0	16,469.0	2.0	2	Avalon, Original Hole
11/11/2017	16,482.0	16,483.0	2.0	2	Avalon, Original Hole
11/11/2017	16,496.0	16,497.0	2.0	2	Avalon, Original Hole
11/11/2017	16,510.0	16,511.0	2.0	2	Avalon, Original Hole
11/11/2017	16,524.0	16,525.0	2.0	2	Avalon, Original Hole
11/11/2017	16,538.0	16,539.0	3.0	3	Avalon, Original Hole
11/11/2017	16,552.0	16,553.0	3.0	3	Avalon, Original Hole
11/11/2017	16,566.0	16,567.0	3.0	3	Avalon, Original Hole
11/11/2017	16,580.0	16,581.0	3.0	3	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/11/2017	16,594.0	16,595.0	3.0	3	Avalon, Original Hole
11/11/2017	16,608.0	16,609.0	4.0	4	Avalon, Original Hole
11/11/2017	16,622.0	16,623.0	6.0	6	Avalon, Original Hole
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	2.0	2	Avalon, Original Hole
11/11/2017	16,706.0	16,707.0	2.0	2	Avalon, Original Hole
11/11/2017	16,720.0	16,721.0	2.0	2	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	3.0	3	Avalon, Original Hole
11/11/2017	16,776.0	16,777.0	3.0	3	Avalon, Original Hole
11/11/2017	16,790.0	16,791.0	3.0	3	Avalon, Original Hole
11/11/2017	16,804.0	16,805.0	4.0	4	Avalon, Original Hole
11/11/2017	16,818.0	16,819.0	6.0	6	Avalon, Original Hole
11/11/2017	16,832.0	16,833.0	2.0	2	Avalon, Original Hole
11/11/2017	16,846.0	16,847.0	2.0	2	Avalon, Original Hole
11/11/2017	16,860.0	16,861.0	2.0	2	Avalon, Original Hole
11/11/2017	16,874.0	16,875.0	2.0	2	Avalon, Original Hole
11/11/2017	16,888.0	16,889.0	2.0	2	Avalon, Original Hole
11/11/2017	16,902.0	16,903.0	2.0	2	Avalon, Original Hole
11/11/2017	16,916.0	16,917.0	2.0	2	Avalon, Original Hole
11/11/2017	16,930.0	16,931.0	3.0	3	Avalon, Original Hole
11/11/2017	16,944.0	16,945.0	3.0	3	Avalon, Original Hole
11/11/2017	16,958.0	16,959.0	3.0	3	Avalon, Original Hole
11/11/2017	16,972.0	16,973.0	3.0	3	Avalon, Original Hole
11/11/2017	16,986.0	16,987.0	3.0	3	Avalon, Original Hole
11/11/2017	17,000.0	17,001.0	4.0	4	Avalon, Original Hole
11/11/2017	17,014.0	17,015.0	6.0	6	Avalon, Original Hole
11/9/2017	17,028.0	17,029.0	2.0	2	Avalon, Original Hole
11/9/2017	17,028.0	17,029.0	2.0	2	Avalon, Original Hole
11/9/2017	17,042.0	17,043.0	2.0	2	Avalon, Original Hole
11/9/2017	17,042.0	17,043.0	2.0	2	Avalon, Original Hole
11/9/2017	17,056.0	17,057.0	2.0	2	Avalon, Original Hole
11/9/2017	17,056.0	17,057.0	2.0	2	Avalon, Original Hole
11/9/2017	17,070.0	17,071.0	2.0	2	Avalon, Original Hole
11/9/2017	17,126.0	17,127.0	3.0	3	Avalon, Original Hole
11/9/2017	17,126.0	17,127.0	3.0	3	Avalon, Original Hole
11/9/2017	17,140.0	17,141.0	3.0	3	Avalon, Original Hole
11/9/2017	17,140.0	17,141.0	3.0	3	Avalon, Original Hole
11/9/2017	17,154.0	17,155.0	3.0	3	Avalon, Original Hole
11/9/2017	17,196.0	17,197.0	4.0	4	Avalon, Original Hole
11/9/2017	17,206.0	17,207.0	6.0	6	Avalon, Original Hole
11/9/2017	17,224.0	17,225.0	2.0	2	Avalon, Original Hole
11/9/2017	17,238.0	17,239.0	2.0	2	Avalon, Original Hole
11/9/2017	17,252.0	17,253.0	2.0	2	Avalon, Original Hole
11/9/2017	17,266.0	17,267.0	2.0	2	Avalon, Original Hole
11/9/2017	17,280.0	17,281.0	2.0	2	Avalon, Original Hole
11/9/2017	17,294.0	17,295.0	2.0	2	Avalon, Original Hole
11/9/2017	17,308.0	17,309.0	2.0	2	Avalon, Original Hole
11/9/2017	17,322.0	17,323.0	3.0	3	Avalon, Original Hole
11/9/2017	17,336.0	17,337.0	3.0	3	Avalon, Original Hole
11/9/2017	17,350.0	17,351.0	3.0	3	Avalon, Original Hole
11/9/2017	17,364.0	17,365.0	3.0	3	Avalon, Original Hole
11/9/2017	17,378.0	17,379.0	3.0	3	Avalon, Original Hole
11/9/2017	17,392.0	17,393.0	4.0	4	Avalon, Original Hole



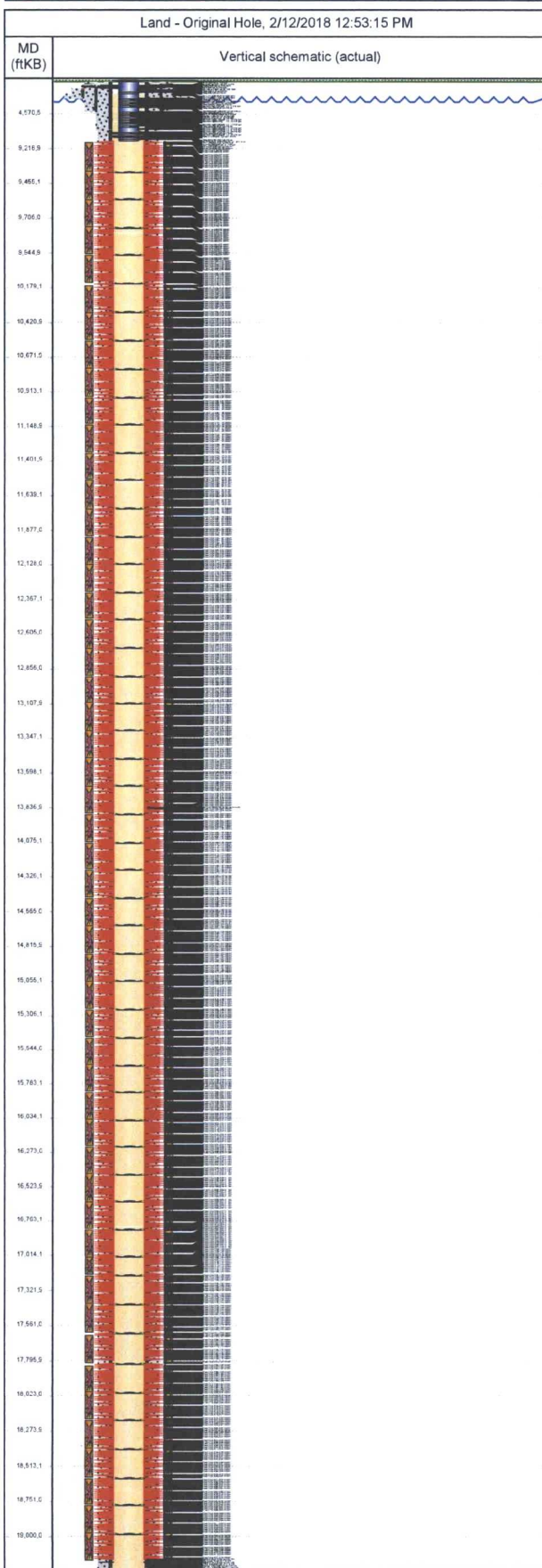
Wellbore Schematic

Well Name
SD WE 24 FED P24 5H

Lease
SD WE 24 FED P24

Field Name
JENNINGS

Business Unit
Mid-Continent

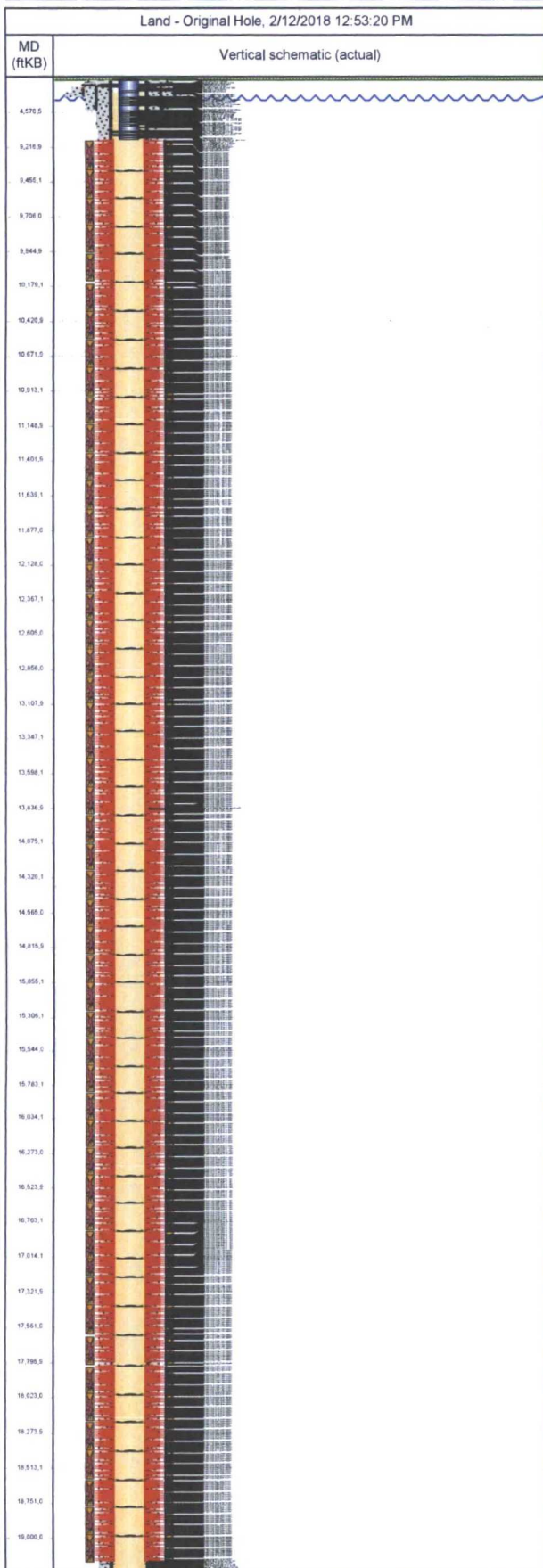


Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/9/2017	17,406.0	17,407.0	6.0	6	Avalon, Original Hole
11/8/2017	17,420.0	17,421.0	2.0	2	Avalon, Original Hole
11/8/2017	17,434.0	17,435.0	2.0	2	Avalon, Original Hole
11/8/2017	17,448.0	17,449.0	2.0	2	Avalon, Original Hole
11/8/2017	17,462.0	17,463.0	2.0	2	Avalon, Original Hole
11/8/2017	17,476.0	17,477.0	2.0	2	Avalon, Original Hole
11/8/2017	17,490.0	17,491.0	2.0	2	Avalon, Original Hole
11/8/2017	17,504.0	17,505.0	2.0	2	Avalon, Original Hole
11/8/2017	17,519.0	17,520.0	3.0	3	Avalon, Original Hole
11/8/2017	17,532.0	17,533.0	3.0	3	Avalon, Original Hole
11/8/2017	17,546.0	17,547.0	3.0	3	Avalon, Original Hole
11/8/2017	17,560.0	17,561.0	3.0	3	Avalon, Original Hole
11/8/2017	17,574.0	17,575.0	3.0	3	Avalon, Original Hole
11/8/2017	17,588.0	17,589.0	4.0	4	Avalon, Original Hole
11/8/2017	17,600.0	17,601.0	6.0	6	Avalon, Original Hole
11/8/2017	17,614.0	17,615.0	2.0	2	Avalon, Original Hole
11/8/2017	17,628.0	17,629.0	2.0	2	Avalon, Original Hole
11/8/2017	17,640.0	17,641.0	2.0	2	Avalon, Original Hole
11/8/2017	17,656.0	17,657.0	2.0	2	Avalon, Original Hole
11/8/2017	17,670.0	17,671.0	2.0	2	Avalon, Original Hole
11/8/2017	17,684.0	17,685.0	2.0	2	Avalon, Original Hole
11/8/2017	17,698.0	17,699.0	2.0	2	Avalon, Original Hole
11/8/2017	17,712.0	17,713.0	3.0	3	Avalon, Original Hole
11/8/2017	17,726.0	17,727.0	3.0	3	Avalon, Original Hole
11/8/2017	17,740.0	17,741.0	3.0	3	Avalon, Original Hole
11/8/2017	17,754.0	17,755.0	3.0	3	Avalon, Original Hole
11/8/2017	17,768.0	17,769.0	3.0	3	Avalon, Original Hole
11/8/2017	17,782.0	17,783.0	4.0	4	Avalon, Original Hole
11/8/2017	17,796.0	17,797.0	6.0	6	Avalon, Original Hole
11/7/2017	17,810.0	17,811.0	2.0	2	Avalon, Original Hole
11/7/2017	17,826.0	17,827.0	2.0	2	Avalon, Original Hole
11/7/2017	17,840.0	17,841.0	2.0	2	Avalon, Original Hole
11/7/2017	17,854.0	17,855.0	2.0	2	Avalon, Original Hole
11/7/2017	17,868.0	17,869.0	2.0	2	Avalon, Original Hole
11/7/2017	17,882.0	17,883.0	2.0	2	Avalon, Original Hole
11/7/2017	17,892.0	17,893.0	2.0	2	Avalon, Original Hole
11/7/2017	17,910.0	17,911.0	3.0	3	Avalon, Original Hole
11/7/2017	17,924.0	17,925.0	3.0	3	Avalon, Original Hole
11/7/2017	17,938.0	17,939.0	3.0	3	Avalon, Original Hole
11/7/2017	17,952.0	17,953.0	3.0	3	Avalon, Original Hole
11/7/2017	17,966.0	17,967.0	3.0	3	Avalon, Original Hole
11/7/2017	17,980.0	17,981.0	4.0	4	Avalon, Original Hole
11/7/2017	17,994.0	17,995.0	6.0	6	Avalon, Original Hole
11/6/2017	18,008.0	18,009.0	2.0	2	Avalon, Original Hole
11/6/2017	18,022.0	18,023.0	2.0	2	Avalon, Original Hole
11/6/2017	18,036.0	18,037.0	2.0	2	Avalon, Original Hole
11/6/2017	18,050.0	18,051.0	2.0	2	Avalon, Original Hole
11/6/2017	18,064.0	18,065.0	2.0	2	Avalon, Original Hole
11/6/2017	18,078.0	18,079.0	2.0	2	Avalon, Original Hole
11/6/2017	18,092.0	18,093.0	2.0	2	Avalon, Original Hole
11/6/2017	18,106.0	18,107.0	3.0	3	Avalon, Original Hole
11/6/2017	18,120.0	18,121.0	3.0	3	Avalon, Original Hole
11/6/2017	18,134.0	18,135.0	3.0	3	Avalon, Original Hole
11/6/2017	18,148.0	18,149.0	3.0	3	Avalon, Original Hole
11/6/2017	18,162.0	18,163.0	3.0	3	Avalon, Original Hole
11/6/2017	18,176.0	18,177.0	4.0	4	Avalon, Original Hole
11/6/2017	18,190.0	18,191.0	5.0	5	Avalon, Original Hole
11/6/2017	18,204.0	18,205.0	2.0	2	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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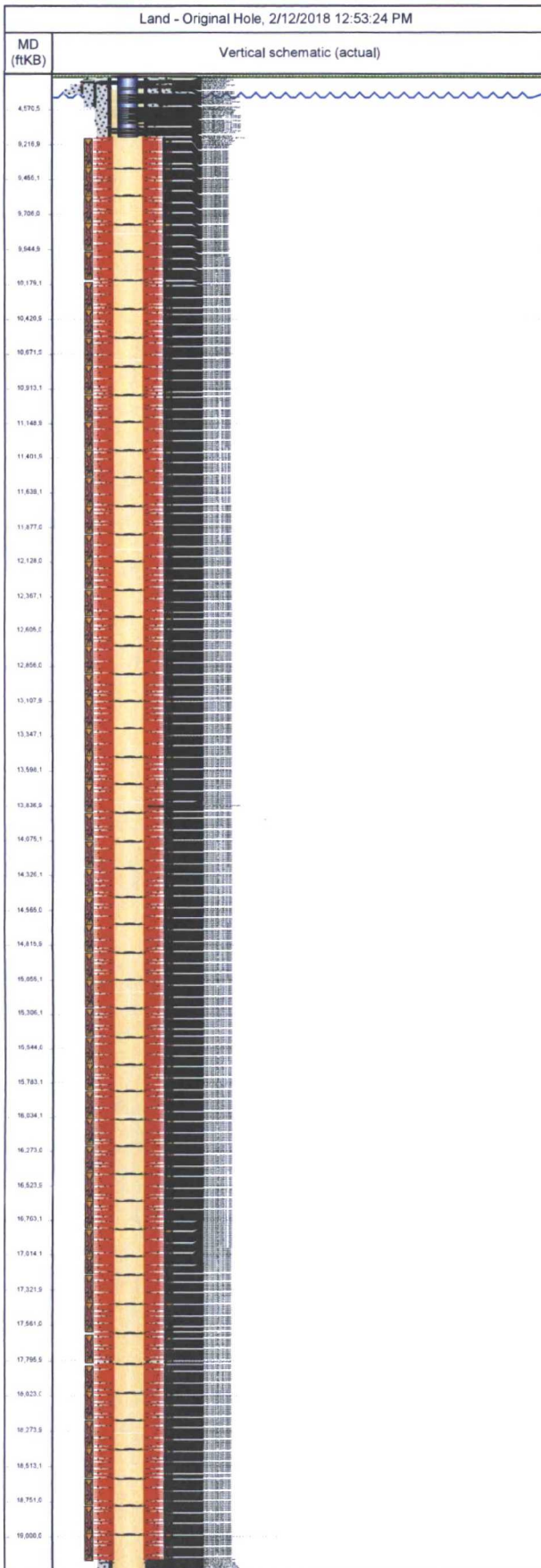


Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/6/2017	18,218.0	18,219.0	2.0	2	Avalon, Original Hole
11/6/2017	18,232.0	18,233.0	2.0	2	Avalon, Original Hole
11/6/2017	18,246.0	18,247.0	2.0	2	Avalon, Original Hole
11/6/2017	18,260.0	18,261.0	2.0	2	Avalon, Original Hole
11/6/2017	18,274.0	18,275.0	2.0	2	Avalon, Original Hole
11/6/2017	18,288.0	18,289.0	2.0	2	Avalon, Original Hole
11/6/2017	18,302.0	18,303.0	3.0	3	Avalon, Original Hole
11/6/2017	18,316.0	18,317.0	3.0	3	Avalon, Original Hole
11/6/2017	18,330.0	18,331.0	3.0	3	Avalon, Original Hole
11/6/2017	18,344.0	18,345.0	3.0	3	Avalon, Original Hole
11/6/2017	18,358.0	18,359.0	3.0	3	Avalon, Original Hole
11/6/2017	18,372.0	18,373.0	4.0	4	Avalon, Original Hole
11/6/2017	18,386.0	18,387.0	5.0	5	Avalon, Original Hole
11/5/2017	18,400.0	18,401.0	2.0	2	Avalon, Original Hole
11/5/2017	18,414.0	18,415.0	2.0	2	Avalon, Original Hole
11/5/2017	18,428.0	18,429.0	2.0	2	Avalon, Original Hole
11/5/2017	18,442.0	18,443.0	2.0	2	Avalon, Original Hole
11/5/2017	18,456.0	18,457.0	2.0	2	Avalon, Original Hole
11/5/2017	18,470.0	18,471.0	2.0	2	Avalon, Original Hole
11/5/2017	18,484.0	18,485.0	2.0	2	Avalon, Original Hole
11/5/2017	18,498.0	18,499.0	3.0	3	Avalon, Original Hole
11/5/2017	18,512.0	18,513.0	3.0	3	Avalon, Original Hole
11/5/2017	18,526.0	18,527.0	3.0	3	Avalon, Original Hole
11/5/2017	18,540.0	18,541.0	3.0	3	Avalon, Original Hole
11/5/2017	18,554.0	18,555.0	3.0	3	Avalon, Original Hole
11/5/2017	18,568.0	18,569.0	4.0	4	Avalon, Original Hole
11/5/2017	18,578.0	18,579.0	5.0	5	Avalon, Original Hole
11/4/2017	18,596.0	18,597.0	2.0	2	Avalon, Original Hole
11/4/2017	18,610.0	18,611.0	2.0	2	Avalon, Original Hole
11/4/2017	18,624.0	18,625.0	2.0	2	Avalon, Original Hole
11/4/2017	18,638.0	18,639.0	2.0	2	Avalon, Original Hole
11/4/2017	18,652.0	18,653.0	2.0	2	Avalon, Original Hole
11/4/2017	18,666.0	18,667.0	2.0	2	Avalon, Original Hole
11/4/2017	18,680.0	18,681.0	2.0	2	Avalon, Original Hole
11/4/2017	18,694.0	18,695.0	3.0	3	Avalon, Original Hole
11/4/2017	18,708.0	18,709.0	3.0	3	Avalon, Original Hole
11/4/2017	18,722.0	18,723.0	3.0	3	Avalon, Original Hole
11/4/2017	18,736.0	18,737.0	3.0	3	Avalon, Original Hole
11/4/2017	18,750.0	18,751.0	3.0	3	Avalon, Original Hole
11/4/2017	18,764.0	18,765.0	4.0	4	Avalon, Original Hole
11/4/2017	18,778.0	18,779.0	6.0	6	Avalon, Original Hole
11/4/2017	18,792.0	18,793.0	2.0	2	Avalon, Original Hole
11/4/2017	18,806.0	18,807.0	2.0	2	Avalon, Original Hole
11/4/2017	18,820.0	18,821.0	2.0	2	Avalon, Original Hole
11/4/2017	18,833.0	18,834.0	2.0	2	Avalon, Original Hole
11/4/2017	18,848.0	18,849.0	2.0	2	Avalon, Original Hole
11/4/2017	18,862.0	18,863.0	2.0	2	Avalon, Original Hole
11/4/2017	18,872.0	18,873.0	2.0	2	Avalon, Original Hole
11/4/2017	18,890.0	18,891.0	3.0	3	Avalon, Original Hole
11/4/2017	18,904.0	18,905.0	3.0	3	Avalon, Original Hole
11/4/2017	18,914.0	18,915.0	3.0	3	Avalon, Original Hole
11/4/2017	18,932.0	18,933.0	3.0	3	Avalon, Original Hole
11/4/2017	18,946.0	18,947.0	3.0	3	Avalon, Original Hole
11/4/2017	18,965.0	18,966.0	4.0	4	Avalon, Original Hole
11/4/2017	18,974.0	18,975.0	6.0	6	Avalon, Original Hole
11/2/2017	18,988.0	18,989.0	2.0	2	Avalon, Original Hole
11/2/2017	19,000.0	19,001.0	2.0	2	Avalon, Original Hole
11/2/2017	19,012.0	19,013.0	2.0	2	Avalon, Original Hole



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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Perforations					
Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Entered Shot Total	Linked Zone
11/2/2017	19,024.0	19,025.0	2.0	2	Avalon, Original Hole
11/2/2017	19,036.0	19,037.0	2.0	2	Avalon, Original Hole
11/2/2017	19,048.0	19,049.0	2.0	2	Avalon, Original Hole
11/2/2017	19,060.0	19,061.0	3.0	3	Avalon, Original Hole
11/2/2017	19,072.0	19,073.0	3.0	3	Avalon, Original Hole
11/2/2017	19,084.0	19,085.0	3.0	3	Avalon, Original Hole
11/2/2017	19,095.0	19,096.0	3.0	3	Avalon, Original Hole
11/2/2017	19,107.0	19,108.0	3.0	3	Avalon, Original Hole
11/2/2017	19,119.0	19,120.0	4.0	4	Avalon, Original Hole
11/2/2017	19,131.0	19,132.0	6.0	6	Avalon, Original Hole

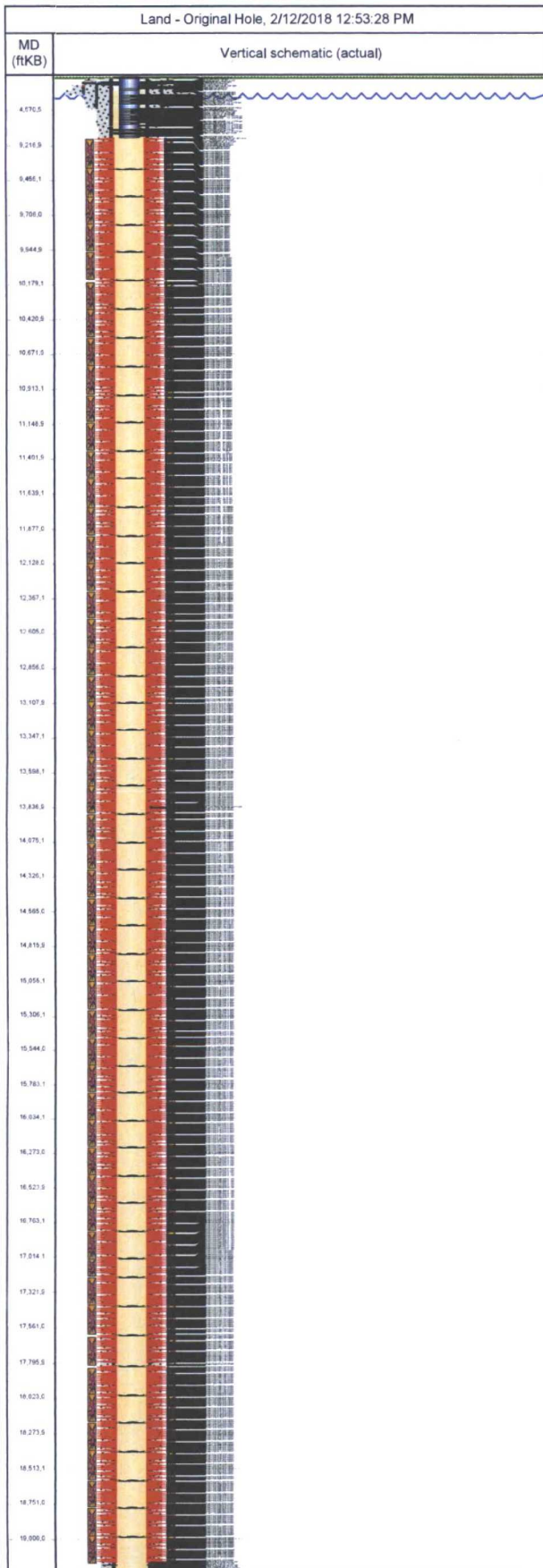
Other Strings			
Run Date	Pull Date	Set Depth (ftKB)	Com

Other In Hole					
Des	Top (ftKB)	Btm (ftKB)	Run Date	Pull Date	Com
Packer (retrievable)	8,725.0	8,749.5	12/17/2017		CT set packer after drill out. 2 7/8" Profile Nipple 2.312 X
Composite Frac Plug (drop ball)	9,379.0	9,381.0	12/7/2017	12/10/2017	Stage 51
Composite Frac Plug (drop ball)	9,575.0	9,577.0	12/7/2017	12/10/2017	Stage 50
Composite Frac Plug (drop ball)	9,771.0	9,773.0	12/6/2017	12/10/2017	Stage 49
Composite Frac Plug (drop ball)	9,967.0	9,969.0	12/6/2017	12/11/2017	Stage 48
Composite Frac Plug (drop ball)	10,163.0	10,165.0	12/5/2017	12/11/2017	Stage 47
Composite Frac Plug (drop ball)	10,322.0	10,324.0	12/5/2017	12/11/2017	Stage 46
Composite Frac Plug (drop ball)	10,555.0	10,556.0	12/4/2017	12/11/2017	Stage 45
Composite Frac Plug (drop ball)	10,751.0	10,752.0	12/3/2017	12/11/2017	Stage 44
Composite Frac Plug (drop ball)	10,944.0	10,945.0	12/3/2017	12/11/2017	Stage 43
Composite Frac Plug (drop ball)	11,143.0	11,144.0	12/2/2017	12/11/2017	Stage 42
Composite Frac Plug (drop ball)	11,339.0	11,340.0	12/2/2017	12/11/2017	Stage 41
Composite Frac Plug (drop ball)	11,535.0	11,536.0	12/1/2017	12/11/2017	Stage 40
Composite Frac Plug (drop ball)	11,728.0	11,729.0	12/1/2017	12/11/2017	Stage 39
Composite Frac Plug (drop ball)	11,927.0	11,928.0	11/30/2017	12/11/2017	Stage 38
Composite Frac Plug (drop ball)	12,123.0	12,124.0	11/29/2017	12/11/2017	Stage 37
Composite Frac Plug (drop ball)	12,319.0	12,320.0	11/29/2017	12/11/2017	Stage 36
Composite Frac Plug (drop ball)	12,515.0	12,516.0	11/28/2017	12/11/2017	Stage 35
Composite Frac Plug (drop ball)	12,711.0	12,712.0	11/27/2017	12/11/2017	Stage 34
Composite Frac Plug (drop ball)	12,907.0	12,908.0	11/27/2017	12/11/2017	Stage 33
Composite Frac Plug (drop ball)	13,097.0	13,098.0	11/26/2017	12/11/2017	Stage 32
Composite Frac Plug (drop ball)	13,299.0	13,300.0	11/26/2017	12/11/2017	Stage 31



Wellbore Schematic

Well Name SD WE 24 FED P24 5H	Lease SD WE 24 FED P24	Field Name JENNINGS	Business Unit Mid-Continent
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Other In Hole					
Des	Top (ftKB)	Btm (ftKB)	Run Date	Pull Date	Com
Composite Frac Plug (drop ball)	13,495.0	13,496.0	11/25/2017	12/11/2017	Stage 30
Composite Frac Plug (drop ball)	13,691.0	13,692.0	11/24/2017	12/11/2017	Stage 29
Composite Frac Plug (drop ball)	13,885.0	13,886.0	11/24/2017	12/11/2017	Stage 28
Composite Frac Plug (drop ball)	14,083.0	14,084.0	11/23/2017	12/11/2017	Stage 27
Composite Frac Plug (drop ball)	14,279.0	14,280.0	11/22/2017	12/12/2017	Stage 26
Composite Frac Plug (drop ball)	14,475.0	14,476.0	11/21/2017	12/12/2017	Stage 25
Composite Frac Plug (drop ball)	14,671.0	14,672.0	11/21/2017	12/12/2017	Stage 24
Composite Frac Plug (drop ball)	14,867.0	14,869.0	11/20/2017	12/12/2017	Stage 23
Composite Frac Plug (drop ball)	15,063.0	15,065.0	11/20/2017	12/12/2017	Stage 22
Composite Frac Plug (drop ball)	15,259.0	15,261.0	11/19/2017	12/12/2017	Stage 21
Composite Frac Plug (drop ball)	15,453.0	15,455.0	11/19/2017	12/12/2017	Stage 20
Composite Frac Plug (drop ball)	15,651.0	15,653.0	11/18/2017	12/12/2017	Stage 19
Composite Frac Plug (drop ball)	15,847.0	15,849.0	11/17/2017	12/12/2017	Stage 18
Composite Frac Plug (drop ball)	16,043.0	16,045.0	11/16/2017	12/12/2017	Stage 17
Composite Frac Plug (drop ball)	16,239.0	16,241.0	11/15/2017	12/12/2017	Stage 16
Composite Frac Plug (drop ball)	16,435.0	16,437.0	11/14/2017	12/12/2017	Stage 15
Composite Frac Plug (drop ball)	16,631.0	16,633.0	11/11/2017	12/15/2017	Stage 14
Composite Frac Plug (drop ball)	16,827.0	16,829.0	11/11/2017	12/15/2017	Stage 13
Composite Frac Plug (drop ball)	17,023.0	17,025.0	11/11/2017	12/15/2017	Stage 12
Composite Frac Plug (drop ball)	17,213.0	17,215.0	11/9/2017	12/15/2017	Stage 11
Composite Frac Plug (drop ball)	17,415.0	17,417.0	11/9/2017	12/15/2017	Stage 10
Composite Frac Plug (drop ball)	17,609.0	17,611.0	11/8/2017	12/15/2017	Stage 9
Composite Frac Plug (drop ball)	17,805.0	17,807.0	11/8/2017	12/15/2017	Stage 8
Composite Frac Plug (drop ball)	18,003.0	18,005.0	11/7/2017	12/16/2017	Stage 7
Composite Frac Plug (drop ball)	18,199.0	18,201.0	11/6/2017	12/16/2017	Stage 6
Composite Frac Plug (drop ball)	18,395.0	18,397.0	11/6/2017	12/16/2017	Stage 5
Composite Frac Plug (drop ball)	18,586.0	18,587.0	11/5/2017	12/16/2017	Stage 4
Composite Frac Plug (drop ball)	18,787.0	18,789.0	11/4/2017	12/16/2017	Stage 3
Composite Frac Plug (drop ball)	18,983.0	18,985.0	11/4/2017	12/16/2017	Stage 2



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'
Page 1 of 9



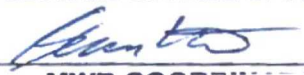
REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
Facility	SD WE 24 Fed P24		

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	10/19/2017 at 3:30:26 PM
Convergence at slot	0.38° East	Database/Source file	WA_Midland/SD_WE_24_Federal_P24_No._5H_awp_167.5_-_19283_Proj_19338_.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	0.00	720045.00	372221.00	32°01'16.904"N	103°37'24.031"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	3171.00ft
Horizontal Reference Pt	Slot	Rig: Nabors X-30 (KB) to Mean Sea Level	3171.00ft
Vertical Reference Pt	Rig: Nabors X-30 (KB)	Rig: Nabors X-30 (KB) to Ground Level at Slot (SD WE 24 FED P24 5H)	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.


TRANLAM



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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 [ft/100ft]	Comments
0.00†	0.000	311.000	0.00	0.00	0.00	0.00	720045.00	372221.00	32°01'16.904"N	103°37'24.031"W	0.00	
33.00	0.000	311.000	33.00	0.00	0.00	0.00	720045.00	372221.00	32°01'16.904"N	103°37'24.031"W	0.00	
167.50	0.900	311.000	167.49	0.70	0.69	-0.80	720044.20	372221.69	32°01'16.911"N	103°37'24.040"W	0.67	
258.50	0.700	329.000	258.49	1.65	1.64	-1.62	720043.38	372222.64	32°01'16.921"N	103°37'24.050"W	0.35	
445.50	0.200	272.000	445.48	2.64	2.63	-2.54	720042.46	372223.63	32°01'16.931"N	103°37'24.060"W	0.33	
684.50	0.600	223.000	684.47	1.75	1.73	-3.81	720041.19	372222.73	32°01'16.922"N	103°37'24.075"W	0.21	
797.00	0.680	227.230	796.97	0.87	0.84	-4.70	720040.30	372221.84	32°01'16.913"N	103°37'24.085"W	0.08	
976.00	1.080	236.160	975.95	-0.77	-0.82	-6.88	720038.12	372220.18	32°01'16.897"N	103°37'24.111"W	0.24	
1153.00	3.530	263.110	1152.79	-2.32	-2.40	-13.68	720031.32	372218.60	32°01'16.882"N	103°37'24.190"W	1.48	
1330.00	4.300	263.060	1329.38	-3.70	-3.85	-25.67	720019.33	372217.15	32°01'16.868"N	103°37'24.329"W	0.44	
1508.00	5.350	260.920	1506.75	-5.72	-5.97	-40.49	720004.51	372215.03	32°01'16.848"N	103°37'24.502"W	0.60	
1685.00	6.030	260.460	1682.87	-8.46	-8.81	-57.81	719987.19	372212.19	32°01'16.821"N	103°37'24.703"W	0.39	
1862.00	7.250	260.330	1858.68	-11.75	-12.23	-77.99	719967.01	372208.77	32°01'16.788"N	103°37'24.938"W	0.69	
2041.00	8.290	261.360	2036.04	-15.44	-16.07	-101.88	719943.12	372204.93	32°01'16.752"N	103°37'25.215"W	0.59	
2218.00	9.700	259.510	2210.85	-19.91	-20.70	-129.16	719915.84	372200.30	32°01'16.708"N	103°37'25.533"W	0.81	
2395.00	10.780	259.410	2385.03	-25.48	-26.46	-160.09	719884.91	372194.55	32°01'16.653"N	103°37'25.892"W	0.61	
2572.00	10.940	262.450	2558.86	-30.53	-31.70	-193.02	719851.99	372189.30	32°01'16.603"N	103°37'26.275"W	0.34	
2750.00	10.410	265.380	2733.78	-33.84	-35.22	-225.79	719819.22	372185.78	32°01'16.571"N	103°37'26.656"W	0.43	
2927.00	9.280	263.770	2908.18	-36.49	-38.06	-255.92	719789.09	372182.95	32°01'16.544"N	103°37'27.006"W	0.66	
3104.00	8.860	262.150	3082.96	-39.73	-41.47	-283.61	719761.40	372179.53	32°01'16.513"N	103°37'27.328"W	0.28	
3281.00	8.570	264.760	3257.92	-42.64	-44.53	-310.24	719734.77	372176.47	32°01'16.484"N	103°37'27.638"W	0.28	
3458.00	8.070	268.340	3433.06	-44.05	-46.10	-335.80	719709.22	372174.90	32°01'16.470"N	103°37'27.935"W	0.41	
3635.00	9.130	270.190	3608.06	-44.20	-46.41	-362.26	719682.76	372174.59	32°01'16.469"N	103°37'28.242"W	0.62	
3813.00	11.840	264.680	3783.08	-45.65	-48.06	-394.57	719650.45	372172.94	32°01'16.455"N	103°37'28.617"W	1.62	
3990.00	12.680	264.400	3956.04	-49.00	-51.64	-431.98	719613.03	372169.37	32°01'16.422"N	103°37'29.052"W	0.48	
4167.00	9.880	260.580	4129.61	-53.17	-56.02	-466.30	719578.71	372164.98	32°01'16.380"N	103°37'29.451"W	1.64	
4344.00	9.090	253.730	4304.19	-59.40	-62.42	-494.71	719550.31	372158.58	32°01'16.319"N	103°37'29.781"W	0.78	
4432.00	9.300	250.190	4391.06	-63.67	-66.78	-508.07	719536.95	372154.22	32°01'16.277"N	103°37'29.937"W	0.69	12 1/4 BH MWD 797' - 4432'
4611.00	9.540	249.360	4567.65	-73.64	-76.91	-535.56	719509.46	372144.09	32°01'16.178"N	103°37'30.257"W	0.15	
4788.00	8.800	249.070	4742.39	-83.48	-86.92	-561.93	719483.09	372134.09	32°01'16.081"N	103°37'30.564"W	0.42	



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'

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**BAKER
HUGHES**
a GE company



REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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
4966.00	9.700	249.570	4918.07	-93.42	-97.01	-588.70	719456.32	372123.99	32°01'15.983"N	103°37'30.876"W	0.51	
5143.00	10.260	264.020	5092.42	-100.08	-103.86	-618.36	719426.66	372117.14	32°01'15.917"N	103°37'31.221"W	1.45	
5320.00	9.750	267.800	5266.73	-102.11	-106.08	-649.01	719396.01	372114.92	32°01'15.897"N	103°37'31.577"W	0.47	
5498.00	9.440	267.220	5442.24	-103.22	-107.37	-678.65	719366.37	372113.64	32°01'15.886"N	103°37'31.921"W	0.18	
5675.00	8.760	268.170	5617.01	-104.65	-108.97	-706.60	719338.43	372112.03	32°01'15.872"N	103°37'32.246"W	0.40	
5852.00	8.830	269.190	5791.93	-105.58	-110.06	-733.63	719311.40	372110.94	32°01'15.863"N	103°37'32.560"W	0.26	
6029.00	8.680	269.800	5966.87	-105.65	-110.30	-760.57	719284.46	372110.70	32°01'15.862"N	103°37'32.873"W	0.10	
6206.00	8.430	268.700	6141.90	-105.83	-110.64	-786.90	719258.13	372110.36	32°01'15.861"N	103°37'33.179"W	0.17	
6383.00	8.190	268.050	6317.04	-106.40	-111.37	-812.47	719232.56	372109.64	32°01'15.855"N	103°37'33.476"W	0.15	
6560.00	8.190	267.030	6492.23	-107.33	-112.45	-837.66	719207.37	372108.56	32°01'15.846"N	103°37'33.768"W	0.08	
6737.00	7.420	261.830	6667.59	-109.46	-114.73	-861.56	719183.47	372106.28	32°01'15.825"N	103°37'34.046"W	0.59	
6914.00	6.460	266.460	6843.30	-111.57	-116.97	-882.82	719162.22	372104.04	32°01'15.804"N	103°37'34.293"W	0.63	
7091.00	4.690	273.410	7019.45	-111.65	-117.15	-899.98	719145.05	372103.85	32°01'15.804"N	103°37'34.493"W	1.07	
7268.00	2.250	271.180	7196.12	-111.08	-116.65	-910.68	719134.36	372104.36	32°01'15.809"N	103°37'34.617"W	1.38	
7445.00	0.930	241.180	7373.05	-111.67	-117.27	-915.41	719129.62	372103.74	32°01'15.803"N	103°37'34.672"W	0.86	
7622.00	1.250	254.600	7550.02	-112.86	-118.47	-918.53	719126.50	372102.53	32°01'15.792"N	103°37'34.708"W	0.23	
7800.00	1.130	242.020	7727.98	-114.18	-119.81	-921.95	719123.08	372101.19	32°01'15.779"N	103°37'34.748"W	0.16	
7977.00	0.220	194.500	7904.96	-115.32	-120.96	-923.58	719121.46	372100.04	32°01'15.767"N	103°37'34.767"W	0.56	
8154.00	0.520	137.600	8081.96	-116.24	-121.88	-923.12	719121.91	372099.12	32°01'15.758"N	103°37'34.762"W	0.25	
8331.00	0.620	145.760	8258.95	-117.63	-123.27	-922.04	719122.99	372097.74	32°01'15.744"N	103°37'34.749"W	0.07	
8515.00	0.330	168.580	8442.94	-118.98	-124.61	-921.38	719123.66	372096.39	32°01'15.731"N	103°37'34.742"W	0.19	8 3/4 BH MWD 4611' - 8515'
8580.00	0.770	182.380	8507.94	-119.60	-125.23	-921.36	719123.68	372095.77	32°01'15.725"N	103°37'34.742"W	0.70	
8669.00	8.330	1.910	8596.65	-113.74	-119.37	-921.17	719123.87	372101.63	32°01'15.783"N	103°37'34.739"W	10.22	
8757.00	19.170	2.500	8682.01	-92.88	-98.50	-920.32	719124.71	372122.50	32°01'15.989"N	103°37'34.727"W	12.32	
8846.00	30.010	2.620	8762.81	-55.95	-61.56	-918.68	719126.37	372159.44	32°01'16.355"N	103°37'34.705"W	12.18	
8934.00	38.130	359.160	8835.65	-6.72	-12.33	-918.05	719126.98	372208.67	32°01'16.842"N	103°37'34.695"W	9.48	
9023.00	44.280	1.870	8902.59	51.86	46.26	-917.44	719127.59	372267.26	32°01'17.422"N	103°37'34.683"W	7.19	
9111.00	56.230	359.880	8958.75	119.38	113.79	-916.51	719128.52	372334.78	32°01'18.090"N	103°37'34.667"W	13.69	
9200.00	62.900	1.140	9003.81	196.07	190.48	-915.80	719129.23	372411.47	32°01'18.849"N	103°37'34.653"W	7.59	
9289.00	70.410	1.210	9039.06	277.69	272.11	-914.13	719130.91	372493.10	32°01'19.656"N	103°37'34.627"W	8.44	



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_ awp 167.5' - 19283' Proj: 19338'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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
9377.00	80.810	1.540	9060.90	362.78	357.21	-912.08	719132.96	372578.20	32°01'20.498"N	103°37'34.597"W	11.82	
9469.00	89.320	0.940	9068.80	454.31	448.76	-910.10	719134.94	372669.75	32°01'21.404"N	103°37'34.567"W	9.27	
9557.00	90.180	1.930	9069.19	542.27	536.73	-907.89	719137.14	372757.71	32°01'22.275"N	103°37'34.535"W	1.49	
9646.00	90.000	1.900	9069.05	631.20	625.68	-904.92	719140.11	372846.66	32°01'23.155"N	103°37'34.494"W	0.21	
9734.00	90.310	2.430	9068.81	719.11	713.62	-901.60	719143.44	372934.59	32°01'24.025"N	103°37'34.448"W	0.70	
9822.00	90.370	2.490	9068.29	807.01	801.54	-897.82	719147.21	373022.51	32°01'24.894"N	103°37'34.398"W	0.10	
9911.00	89.820	359.940	9068.14	895.97	890.51	-895.93	719149.10	373111.48	32°01'25.775"N	103°37'34.369"W	2.93	
9999.00	91.450	0.830	9067.16	983.95	978.50	-895.34	719149.69	373199.46	32°01'26.645"N	103°37'34.355"W	2.11	
10087.00	91.510	359.450	9064.89	1071.91	1066.47	-895.13	719149.91	373287.43	32°01'27.516"N	103°37'34.346"W	1.57	
10176.00	91.940	1.050	9062.21	1160.87	1155.42	-894.74	719150.30	373376.38	32°01'28.396"N	103°37'34.335"W	1.86	
10264.00	92.100	0.610	9059.11	1248.79	1243.36	-893.46	719151.57	373464.31	32°01'29.266"N	103°37'34.314"W	0.53	
10353.00	89.320	358.830	9058.01	1337.77	1332.34	-893.90	719151.13	373553.29	32°01'30.147"N	103°37'34.312"W	3.71	
10442.00	89.010	358.710	9059.30	1426.75	1421.31	-895.81	719149.22	373642.25	32°01'31.027"N	103°37'34.327"W	0.37	
10530.00	89.170	358.400	9060.70	1514.73	1509.27	-898.03	719147.01	373730.21	32°01'31.898"N	103°37'34.346"W	0.40	
10618.00	89.540	358.660	9061.69	1602.70	1597.23	-900.29	719144.75	373818.17	32°01'32.768"N	103°37'34.366"W	0.51	
10707.00	88.180	357.810	9063.46	1691.66	1686.17	-903.03	719142.01	373907.11	32°01'33.649"N	103°37'34.391"W	1.80	
10795.00	87.560	357.460	9066.73	1779.54	1774.03	-906.66	719138.38	373994.97	32°01'34.518"N	103°37'34.426"W	0.81	
10883.00	89.200	356.700	9069.22	1867.41	1861.88	-911.14	719133.90	374082.81	32°01'35.388"N	103°37'34.472"W	2.05	
10972.00	89.510	356.850	9070.22	1956.29	1950.74	-916.14	719128.89	374171.66	32°01'36.268"N	103°37'34.523"W	0.39	
11061.00	92.620	357.720	9068.57	2045.19	2039.61	-920.36	719124.68	374260.53	32°01'37.147"N	103°37'34.565"W	3.63	
11149.00	93.020	357.980	9064.24	2133.04	2127.44	-923.65	719121.38	374348.36	32°01'38.017"N	103°37'34.597"W	0.54	
11240.00	92.650	359.860	9059.74	2223.92	2218.31	-925.37	719119.67	374439.22	32°01'38.916"N	103°37'34.610"W	2.10	
11331.00	94.260	359.930	9054.25	2314.75	2309.14	-925.53	719119.50	374530.05	32°01'39.815"N	103°37'34.605"W	1.77	
11422.00	92.250	0.720	9049.09	2405.59	2399.99	-925.02	719120.02	374620.90	32°01'40.714"N	103°37'34.592"W	2.37	
11513.00	89.540	0.870	9047.67	2496.55	2490.96	-923.76	719121.28	374711.86	32°01'41.614"N	103°37'34.571"W	2.98	
11603.00	89.510	0.210	9048.41	2586.54	2580.95	-922.91	719122.13	374801.85	32°01'42.504"N	103°37'34.554"W	0.73	
11694.00	89.690	0.620	9049.05	2677.53	2671.94	-922.25	719122.79	374892.84	32°01'43.405"N	103°37'34.539"W	0.49	
11785.00	91.690	0.740	9047.95	2768.50	2762.93	-921.17	719123.87	374983.82	32°01'44.305"N	103°37'34.520"W	2.20	
11877.00	90.120	1.470	9046.50	2860.46	2854.89	-919.39	719125.64	375075.79	32°01'45.215"N	103°37'34.492"W	1.88	
11967.00	89.850	0.620	9046.52	2950.43	2844.88	-917.75	719127.28	375165.77	32°01'46.105"N	103°37'34.466"W	0.99	



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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
12056.00	90.030	0.100	9046.62	3039.42	3033.88	-917.19	719127.84	375254.76	32°01'46.986"N	103°37'34.453"W	0.62	
12144.00	88.520	0.390	9047.73	3127.41	3121.87	-916.82	719128.22	375342.75	32°01'47.857"N	103°37'34.442"W	1.75	
12233.00	88.430	0.310	9050.10	3216.37	3210.83	-916.27	719128.76	375431.71	32°01'48.737"N	103°37'34.429"W	0.14	
12322.00	87.970	0.360	9052.89	3305.32	3299.79	-915.75	719129.28	375520.66	32°01'49.617"N	103°37'34.416"W	0.52	
12411.00	87.720	0.550	9056.24	3394.25	3388.72	-915.05	719129.99	375609.59	32°01'50.497"N	103°37'34.401"W	0.35	
12499.00	88.180	359.790	9059.39	3482.19	3476.66	-914.79	719130.25	375697.53	32°01'51.367"N	103°37'34.391"W	1.01	
12588.00	90.960	359.530	9060.06	3571.18	3565.65	-915.32	719129.72	375786.52	32°01'52.248"N	103°37'34.391"W	3.14	
12676.00	89.320	359.560	9059.84	3659.17	3653.65	-916.01	719129.02	375874.51	32°01'53.119"N	103°37'34.392"W	1.86	
12765.00	88.640	359.390	9061.43	3748.16	3742.63	-916.83	719128.20	375963.49	32°01'53.999"N	103°37'34.395"W	0.79	
12853.00	88.090	358.850	9063.94	3836.12	3830.58	-918.18	719126.85	376051.44	32°01'54.870"N	103°37'34.404"W	0.88	
12941.00	87.590	358.990	9067.25	3924.05	3918.50	-919.84	719125.20	376139.35	32°01'55.740"N	103°37'34.416"W	0.59	
13030.00	86.140	358.450	9072.12	4012.90	4007.34	-921.82	719123.21	376228.19	32°01'56.619"N	103°37'34.433"W	1.74	
13118.00	87.220	358.710	9077.22	4100.74	4095.17	-924.00	719121.03	376316.01	32°01'57.488"N	103°37'34.451"W	1.26	
13207.00	88.180	359.430	9080.79	4189.66	4184.08	-925.44	719119.59	376404.93	32°01'58.368"N	103°37'34.461"W	1.35	
13295.00	88.150	359.080	9083.61	4277.61	4272.03	-926.59	719118.45	376492.87	32°01'59.239"N	103°37'34.468"W	0.40	
13384.00	87.410	358.190	9087.05	4366.53	4360.94	-928.70	719116.33	376581.77	32°02'00.119"N	103°37'34.486"W	1.30	
13473.00	89.110	358.310	9089.76	4455.46	4449.85	-931.42	719113.61	376670.68	32°02'00.999"N	103°37'34.511"W	1.91	
13561.00	93.080	0.030	9088.07	4543.42	4537.80	-932.70	719112.34	376758.63	32°02'01.869"N	103°37'34.519"W	4.92	
13650.00	90.860	1.280	9085.01	4632.34	4626.74	-931.68	719113.36	376847.56	32°02'02.749"N	103°37'34.500"W	2.86	
13738.00	90.000	0.010	9084.35	4720.32	4714.73	-930.69	719114.35	376935.55	32°02'03.620"N	103°37'34.482"W	1.74	
13827.00	90.220	359.230	9084.18	4809.32	4803.72	-931.28	719113.76	377024.54	32°02'04.500"N	103°37'34.482"W	0.91	
13915.00	89.080	358.000	9084.72	4897.30	4891.69	-933.41	719111.63	377112.51	32°02'05.371"N	103°37'34.500"W	1.91	
14004.00	90.550	0.750	9085.01	4986.29	4980.68	-934.38	719110.66	377201.49	32°02'06.252"N	103°37'34.505"W	3.50	
14092.00	89.350	0.610	9085.09	5074.28	5068.67	-933.33	719111.70	377289.48	32°02'07.122"N	103°37'34.486"W	1.37	
14181.00	90.030	1.500	9085.57	5163.25	5157.65	-931.69	719113.34	377378.46	32°02'08.003"N	103°37'34.460"W	1.26	
14270.00	88.430	0.950	9086.76	5252.20	5246.62	-929.79	719115.24	377467.42	32°02'08.883"N	103°37'34.431"W	1.90	
14358.00	89.230	1.040	9088.56	5340.16	5334.59	-928.26	719116.77	377555.39	32°02'09.753"N	103°37'34.407"W	0.91	
14447.00	88.000	1.030	9090.71	5429.10	5423.55	-926.66	719118.38	377644.34	32°02'10.634"N	103°37'34.381"W	1.38	
14536.00	87.690	1.410	9094.06	5518.01	5512.46	-924.76	719120.27	377733.26	32°02'11.513"N	103°37'34.352"W	0.55	
14625.00	86.920	2.440	9098.24	5606.84	5601.31	-921.78	719123.26	377822.10	32°02'12.392"N	103°37'34.311"W	1.44	



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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
14714.00	86.950	1.350	9103.00	5695.64	5690.13	-918.84	719126.20	377910.92	32°02'13.271"N	103°37'34.270"W	1.22	
14802.00	91.140	1.020	9104.47	5783.58	5778.08	-917.02	719128.02	377998.87	32°02'14.141"N	103°37'34.242"W	4.78	
14891.00	92.890	0.990	9101.34	5872.49	5867.01	-915.46	719129.58	378087.79	32°02'15.021"N	103°37'34.217"W	1.97	
14980.00	89.750	359.180	9099.29	5961.45	5955.97	-915.33	719129.71	378176.75	32°02'15.902"N	103°37'34.209"W	4.07	
15068.00	88.580	358.480	9100.57	6049.43	6043.94	-917.12	719127.91	378264.72	32°02'16.772"N	103°37'34.223"W	1.55	
15157.00	88.520	357.850	9102.82	6138.37	6132.87	-919.97	719125.06	378353.64	32°02'17.652"N	103°37'34.250"W	0.71	
15245.00	88.060	357.150	9105.45	6226.27	6220.74	-923.81	719121.23	378441.51	32°02'18.522"N	103°37'34.288"W	0.95	
15334.00	87.720	357.260	9108.73	6315.13	6309.58	-928.15	719116.89	378530.34	32°02'19.402"N	103°37'34.331"W	0.40	
15422.00	89.600	357.890	9110.78	6403.04	6397.47	-931.87	719113.17	378618.23	32°02'20.271"N	103°37'34.368"W	2.25	
15510.00	89.910	357.950	9111.16	6491.00	6485.41	-935.08	719109.97	378706.17	32°02'21.142"N	103°37'34.398"W	0.36	
15599.00	92.190	1.090	9109.53	6579.97	6574.38	-935.81	719109.23	378795.13	32°02'22.022"N	103°37'34.400"W	4.36	
15687.00	92.800	1.980	9105.70	6667.84	6662.26	-933.45	719111.58	378883.01	32°02'22.892"N	103°37'34.366"W	1.23	
15776.00	92.190	2.280	9101.82	6756.67	6751.11	-930.15	719114.89	378971.86	32°02'23.771"N	103°37'34.321"W	0.76	
15864.00	92.280	2.010	9098.39	6844.52	6838.99	-926.86	719118.18	379059.73	32°02'24.640"N	103°37'34.276"W	0.32	
15953.00	92.160	1.640	9094.94	6933.39	6927.87	-924.03	719121.01	379148.61	32°02'25.520"N	103°37'34.236"W	0.44	
16042.00	89.720	359.780	9093.48	7022.35	7016.84	-922.92	719122.11	379237.58	32°02'26.400"N	103°37'34.217"W	3.45	
16130.00	89.510	359.160	9094.08	7110.35	7104.84	-923.74	719121.30	379325.57	32°02'27.271"N	103°37'34.219"W	0.74	
16219.00	90.490	359.260	9094.08	7199.34	7193.83	-924.96	719120.07	379414.56	32°02'28.151"N	103°37'34.227"W	1.11	
16307.00	90.190	358.970	9093.55	7287.34	7281.82	-926.32	719118.71	379502.54	32°02'29.022"N	103°37'34.236"W	0.47	
16396.00	92.930	359.820	9091.13	7376.30	7370.77	-927.26	719117.77	379591.49	32°02'29.903"N	103°37'34.240"W	3.22	
16484.00	89.570	358.670	9089.21	7464.26	7458.73	-928.42	719116.61	379679.45	32°02'30.773"N	103°37'34.247"W	4.04	
16573.00	89.880	358.350	9089.64	7553.24	7547.70	-930.74	719114.30	379768.41	32°02'31.654"N	103°37'34.267"W	0.50	
16661.00	89.630	359.110	9090.01	7641.23	7635.67	-932.69	719112.35	379856.39	32°02'32.524"N	103°37'34.283"W	0.91	
16750.00	91.110	359.260	9089.44	7730.22	7724.66	-933.95	719111.08	379945.37	32°02'33.405"N	103°37'34.291"W	1.67	
16838.00	91.480	359.070	9087.47	7818.19	7812.63	-935.24	719109.80	380033.33	32°02'34.275"N	103°37'34.299"W	0.45	
16927.00	89.510	358.340	9086.71	7907.17	7901.60	-937.25	719107.79	380122.30	32°02'35.156"N	103°37'34.316"W	2.34	
17015.00	88.090	358.360	9088.56	7995.13	7989.54	-939.78	719105.26	380210.24	32°02'36.026"N	103°37'34.339"W	1.61	
17104.00	89.380	358.250	9090.52	8084.08	8078.48	-942.41	719102.62	380299.17	32°02'36.907"N	103°37'34.362"W	1.45	
17192.00	86.050	356.770	9094.03	8171.94	8166.31	-946.23	719098.81	380387.00	32°02'37.776"N	103°37'34.400"W	4.14	
17280.00	87.410	356.080	9099.05	8259.65	8253.99	-951.71	719093.33	380474.68	32°02'38.644"N	103°37'34.457"W	1.73	



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'

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**BAKER
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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
17370.00	87.310	355.340	9103.19	8349.34	8343.64	-958.43	719086.60	380564.33	32°02'39.532"N	103°37'34.528"W	0.83	
17458.00	89.850	357.380	9105.37	8437.16	8431.43	-964.02	719081.02	380652.11	32°02'40.401"N	103°37'34.586"W	3.70	
17546.00	87.530	357.550	9107.39	8525.07	8519.31	-967.91	719077.13	380739.99	32°02'41.271"N	103°37'34.625"W	2.64	
17635.00	88.980	358.410	9110.10	8613.98	8608.21	-971.04	719073.99	380828.89	32°02'42.151"N	103°37'34.655"W	1.89	
17723.00	91.200	0.200	9109.96	8701.97	8696.20	-972.11	719072.93	380916.87	32°02'43.021"N	103°37'34.660"W	3.24	
17811.00	90.860	0.750	9108.38	8789.95	8784.18	-971.38	719073.65	381004.85	32°02'43.892"N	103°37'34.645"W	0.73	
17900.00	91.600	0.750	9106.47	8878.91	8873.15	-970.22	719074.82	381093.82	32°02'44.772"N	103°37'34.625"W	0.83	
17988.00	90.120	357.920	9105.14	8966.89	8961.12	-971.24	719073.80	381181.79	32°02'45.643"N	103°37'34.630"W	3.63	
18077.00	90.090	359.040	9104.98	9055.87	9050.09	-973.60	719071.44	381270.75	32°02'46.523"N	103°37'34.651"W	1.26	
18165.00	88.490	358.650	9106.07	9143.85	9138.08	-975.37	719069.66	381358.72	32°02'47.394"N	103°37'34.665"W	1.87	
18254.00	91.660	359.800	9105.96	9232.83	9227.04	-976.58	719068.46	381447.70	32°02'48.275"N	103°37'34.672"W	3.79	
18343.00	91.360	359.430	9103.61	9321.80	9316.01	-977.17	719067.86	381536.66	32°02'49.155"N	103°37'34.672"W	0.54	
18431.00	89.290	358.880	9103.11	9409.79	9403.99	-978.47	719066.56	381624.64	32°02'50.026"N	103°37'34.680"W	2.43	
18520.00	92.160	2.410	9101.98	9498.75	9492.96	-977.47	719067.57	381713.60	32°02'50.906"N	103°37'34.662"W	5.11	
18608.00	92.190	2.200	9098.64	9586.59	9580.82	-973.93	719071.10	381801.46	32°02'51.775"N	103°37'34.614"W	0.24	
18697.00	93.880	1.960	9093.93	9675.38	9669.63	-970.71	719074.33	381890.27	32°02'52.654"N	103°37'34.570"W	1.92	
18785.00	91.790	1.250	9089.58	9763.22	9757.49	-968.25	719076.79	381978.12	32°02'53.523"N	103°37'34.535"W	2.51	
18874.00	91.170	1.500	9087.28	9852.15	9846.43	-968.11	719078.92	382067.06	32°02'54.403"N	103°37'34.503"W	0.75	
18962.00	90.830	1.050	9085.75	9940.10	9934.40	-964.15	719080.88	382155.02	32°02'55.273"N	103°37'34.474"W	0.64	
19051.00	88.210	359.950	9086.49	10029.08	10023.38	-963.38	719081.66	382244.00	32°02'56.154"N	103°37'34.458"W	3.19	
19139.00	85.930	358.800	9090.99	10116.95	10111.25	-964.34	719080.70	382331.87	32°02'57.023"N	103°37'34.462"W	2.90	
19228.00	92.250	0.330	9092.40	10205.90	10200.19	-965.01	719080.03	382420.81	32°02'57.904"N	103°37'34.463"W	7.31	
19283.00	92.060	0.360	9090.33	10260.85	10255.15	-964.68	719080.36	382475.77	32°02'58.447"N	103°37'34.455"W	0.35	8 1/2 BH MWD 8580' - 19283'
19338.00	92.060	0.360	9088.36	10315.81	10310.11	-964.33	719080.70	382530.73	32°02'58.991"N	103°37'34.447"W	0.00	Projection to TD: 19338'



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'

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**BAKER
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
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 5H 5400' from LP rev 2	9025.00	5772.25	-933.11	719111.92	377993.03	32°02'14.085"N	103°37'34.430"W	rectangle
SD WE 24 FED P24 5H 2800' from LP rev 2	9058.00	3172.36	-917.14	719127.89	375393.24	32°01'48.356"N	103°37'34.442"W	rectangle
SD WE 24 FED P24 5H FTP	9074.00	0.00	0.00	720045.00	372221.00	32°01'16.904"N	103°37'24.031"W	point
SD WE 24 FED P24 5H PBHL rev 3	9081.00	10318.39	-961.04	719084.00	382539.00	32°02'59.073"N	103°37'34.408"W	point

WELLPATH COMPOSITION - Ref Wellbore: SD WE 24 FED P24 5H				Ref Wellpath: SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
33.00	684.50	ISCWSA MWD, Rev. 4 (Standard)	Imported Survey's 167.5' - 684.5'	SD WE 24 FED P24 5H	
684.50	4432.00	BHI NaviTrak (Standard)	12 1/4 BH MWD 797' - 4432'	SD WE 24 FED P24 5H	
4432.00	8515.00	BHI NaviTrak (Standard)	8 3/4 BH MWD 4611' - 8515'	SD WE 24 FED P24 5H	
8515.00	19283.00	BHI NaviTrak (Standard)	8 1/2 BH MWD 8580' - 19283'	SD WE 24 FED P24 5H	
19283.00	19338.00	Blind Drilling (std)	Projection to bit	SD WE 24 FED P24 5H	



Actual Wellpath Report

SD WE 24 Federal P24 No. 5H_awp 167.5' - 19283' Proj: 19338'

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**BAKER
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REFERENCE WELLPATH IDENTIFICATION

Operator	Chevron U.S.A. Inc.	Slot	SD WE 24 FED P24 5H
Area	Lea County, NM	Well	SD WE 24 Federal P24 No. 5H
Field	Jennings / Upper BN SPRN Shale (Lea County, NM)	Wellbore	SD WE 24 FED P24 5H
Facility	SD WE 24 Fed P24		

COMMENTS

Wellpath general comments

Well: SD WE 24 Federal P24 No. 5H
Field: Jennings/Upper BN SPRN, Shale
Rig: Nabors X30
Location: Lea Co., NM
API: 30-025-43674-00
Latitude: 32° 01' 16.904" N
Longitude: 103° 37' 24.031" W
DF Elevation: 3171 feet
Elev. GL: 3138 feet
Proposed Direction: 359.65°
PBHL: 19338 feet
Duration: 08/14/2017-10/08/2017
FSE's: D. Hardeman
SO#: 8708423
12 1/4 BH MWD 797' - 4432'
8 3/4 BH MWD 4611' - 8515'
8 1/2 BH MWD 8580' - 19283'
Projection to TD: 19338'

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	2017-12-07
State:	New Mexico
County:	Lea
API Number:	3002543674
Operator Name:	CHEVRON - PERMIAN BASIN-
Well Name and Number:	P24 5H
Longitude:	-103.42
Latitude:	32.02
Long/Lat Projection:	
Indian/Federal:	none
Production Type:	
True Vertical Depth (TVD):	0
Total Water Volume (gal)*:	21,193,324

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**
Fresh Water	Operator	Base Fluid	Water	7732-18-5	100.00%	90.76498%
BA-20 BUFFERING AGENT	Halliburton	Buffer	Listed Below	Listed Below		
Cla-Web(TM) II	Halliburton	Clay Stabilizer	Listed Below	Listed Below		
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor	Listed Below	Listed Below		
HCL >10%	Halliburton	Solvent	Listed Below	Listed Below		
MC B-8626	Halliburton	Biocide	Listed Below	Listed Below		
OPTIFLO-III DELAYED RELEASE BREAKER	Halliburton	Breaker	Listed Below	Listed Below		
OptiKleen-WF(TM)	Halliburton	Concentrate	Listed Below	Listed Below		
SAND-COMMON WHITE-100 MESH, SSA-2, BULK	Halliburton	Proppant	Listed Below	Listed Below		
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant	Listed Below	Listed Below		
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Listed Below	Listed Below		
EXCELERATE LX-1	Halliburton	Friction Reducer	Listed Below	Listed Below		
FDP-S1225-15	Halliburton	Surfactant	Listed Below	Listed Below		
FDP-S1248-16	Halliburton	Diverting Agent	Listed Below	Listed Below		
LD-7795	Halliburton	Scale Inhibitor	Listed Below	Listed Below		
MSDS and Non-MSDS Ingredients are listed below the green line						
Ingredients	Listed Above	Listed Above	Acetic acid	64-19-7	30.00%	0.00276%
			Alcohols, C12-13	66455-14-9	30.00%	0.02874%
			Alcohols, C12-16	68551-12-2	5.00%	0.00479%
			Amine	Proprietary	0.10%	0.00003%
			Amine salts	Proprietary	1.00%	0.00029%
			Ammonium acetate	631-61-8	100.00%	0.00921%
			Ammonium compound	Proprietary	30.00%	0.00791%
			Ammonium persulfate	7727-54-0	100.00%	0.00287%
			Chlorine compound	Proprietary	30.00%	0.00791%
			Crystalline silica, quartz	14808-60-7	100.00%	8.43028%
			Cured acrylic resin	Proprietary	30.00%	0.00086%
			Didecylmethylammonium chloride	7173-51-5	10.00%	0.00140%
			Ethanol	64-17-5	5.00%	0.00070%
			Ethoxylated alcohols	Proprietary	30.00%	0.00023%
			Fatty acids, tall oil	Proprietary	30.00%	0.00023%
			Glutaraldehyde	111-30-8	30.00%	0.00421%
			Guar gum	9000-30-0	100.00%	0.09876%

		Hydrochloric acid	7647-01-0	30.00%	0.14081%
		Hydrotreated light petroleum distillate	64742-47-8	30.00%	0.02108%
		Methanol	67-56-1	60.00%	0.00047%
		Olefins	Proprietary	5.00%	0.00009%
		Organophosphonic acid	Proprietary	30.00%	0.00315%
		Phosphonic acid	13598-36-2	1.00%	0.00010%
		Polyacrylate	Proprietary	30.00%	0.02108%
		Poly lactide resin	Proprietary	60.00%	0.00151%
		Propargyl alcohol	107-19-7	10.00%	0.00008%
		Quaternary amine	Proprietary	1.00%	0.00053%
		Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides	68424-85-1	7.00%	0.00098%
		Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1	30.00%	0.00023%
		Sodium chloride	7647-14-5	1.00%	0.00026%
		Sodium perborate tetrahydrate	10486-00-7	100.00%	0.00512%
		Water	7732-18-5	100.00%	0.50692%

* 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.

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate or supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please refer to the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(j) and Appendix D.

Ingredient Mass lbs	Comments	Company	First Name	Last Name	Email	Phone
176539811	Density = 8.330					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
0	NA					
5376						
55906						
9318						
52	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkw E., Houston, TX 77032, 281-871- 6226	Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
566		Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
17920						
15394		Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
5575						
15394		Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
16397073						
1673		Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
2731						
1366						
454		Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
454		Halliburton	Denise	Tuck	Denise.Tuck @Halliburton. com	281-871-6226
8193						
192086						

273870						
41007						
907						
184		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
6120		Halliburton	Denise	Tuck	Denise.Tuck@halliburton.com	281-871-6226
204						
41007		Halliburton	Denise	Tuck	Denise.Tuck@halliburton.com	281-871-6226
2940		Halliburton	Denise	Tuck	Denise.Tuck@halliburton.com	281-871-6226
152						
1028		Halliburton	Denise	Tuck	Denise.Tuck@Halliburton.com	281-871-6226
1912						
454						
514						
9955						
985971						

v3.3

and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the person who provided the information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the