

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
HOBBBSFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

DEC 9 2016

SUBMIT IN TRIPLICATE - Other instructions on reverse side

RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM118722
2. Name of Operator CHEVRON U.S.A. INC.		6. If Indian, Allottee or Tribe Name
3a. Address 6301 DEAUVILLE BLVD MIDLAND, TX 79706		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 432-687-7373		8. Well Name and No. SD WE 24 FED P23 004H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 24 T26S R32E Mer NMP 260FSL 1358FWL		9. API Well No. 30-025-43298
		10. Field and Pool, or Exploratory BONE SPRING
		11. County or Parish, and State LEA COUNTY, NM

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

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

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

08/17/2016: SPUD WELL. DRILL SURFACE HOLE FR 55-210, 760.

08/19/2016: RUN 13 3/8", 54.5#, J-55 STC SURFACE CSG SET @ 750'. FC @ 704'.

CMT W/844 SX CL C TAIL CMT.

TEST BOPE TO 250L/5000H. TIH & TAG @ 687'. PRESS TEST SURF CSG TO 1500PSI FOR 30 MINS. GOOD TEST.

DRILL 10' NEW FORMATION TO 770'.

DRILL INTERMEDIATE HOLE FR 770-946, 1770, 3058, 3718, 4294, 4615.

09/07/2016: RUN 9 5/8" INTERMEDIATE CSG, 40#, HCK-55, LTC, SET @ 4605'.

FC @ 4521'. CMT W/1001 SX LEAD CMT @ 11.9PPG, & 426 SX TAIL CMT @ 14.8PPG.

FULL RETURNS. FINAL CIRC PRESS PRIOR TO BUMPING PLUG 1177PSI@2.5BPM.

TOC does not meet COAs, submit sundry for remediation

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #356680 verified by the BLM Well Information System For CHEVRON U.S.A. INC., sent to the Hobbs Committed to AFMSS for processing by DEBORAH MCKINNEY on 11/02/2016 ()	
Name (Printed/Typed) DENISE PINKERTON	Title PERMITTING SPECIALIST
Signature (Electronic Submission)	Date 11/01/2016
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office _____
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	

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

KZ

Additional data for EC transaction #356680 that would not fit on the form

32. Additional remarks, continued

226 BBLS CMT TO SURF. PRESS TEST TO 5000PSI FOR 15 MINS. GOOD.
DRILL 10' NEW FORMATION TO 4625.

DRILL PRODUCTION HOLE FR 4625-5497, 6045, 7067, 7244, 7607, 7814, 8228, 8450, 8600, 8699, 8743, 8835, 8921, 8962, 9043, 9085, 9169, 9266, 9380, 9400, 9710, 9900, 10073, 10196, 10383, 10405, 10850, 10950, 11013, 11043, 11050, 11195, 11618, 11800, 12005, 12191, 12330, 12550, 12958, 13064, 13197, 13289, 13338, 13411, 13568, 13596, 13685, 13950, 14260, 14750, 15279, 15411, 15633, 15644, 15824, 16257, 16605, 16750, 17138, 17319, 17493, 17930, 18201, 18418, 18469, 18490, 18604, 18650, 18709. **TD REACHED ON 09/27/2016**

09/28/2016: RUN 5 1/2", 20#, HCP-110 TXP BTC PRODUCTION CSG SET @ 18,694'.
CMT W/621 SX CL H LEAD @ 2.72 YLD, 1993 SX CL H LEAD, @ 1.62 YLD, & 111 SX CL H TAIL @ 2.18 YLD.
TOTAL SX = 2725 SX CMT. TOC @ 17,738'.
LC @ 18602, RSI TOOL @ 18544, MARKR JT @ 8594'.

09/30/2016: RELEASE RIG @ 2:30.

Does not meet COAs



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)

Wellbore Name Original Hole		Parent Wellbore Original Hole		Min Kick Off Depth (ftKb) 8,600.0		Vertical Section Direction (°) 359.71					
Northing (Y) (ft)		Easting (X) (ft)		UTM Grid Zone							
Date 9/7/2016		Definitive? N		Description MWD		Planned? N					
MD Tie In (ftKb)		TVD Tie In (ftKb)		Inclination Tie In (°)		Azimuth Tie In (°)		NST Tie In (ft)		EWT Tie In (ft)	

Survey Data

MD (ft)	Incl (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
0	0.00	360.00	0.00	0.00	0.00	0.00	0.00	Magn MS		0.00	0.00	0.00	N
162	0.60	30.30	162.00	0.73	0.43	0.73	0.37	Magn MS		0.37	0.85	-	N
205	0.40	320.30	205.00	1.04	0.45	1.04	1.39	Magn MS		-0.47	1.13	674.42	N
237	0.40	318.30	236.99	1.21	0.30	1.21	0.04	Magn MS		0.00	1.25	-8.25	N
298	0.50	33.30	297.99	1.59	0.30	1.59	0.91	Magn MS		0.16	1.62	-	N
346	0.10	209.30	345.99	1.73	0.40	1.73	1.25	Magn MS		-0.83	1.78	366.67	N
385	0.40	317.30	384.99	1.80	0.29	1.80	1.13	Magn MS		0.77	1.83	276.92	N
445	0.30	100.30	444.99	1.93	0.30	1.93	1.11	Magn MS		-0.17	1.95	-	N
476	0.30	332.30	475.99	1.99	0.34	1.98	1.74	Magn MS		0.00	2.01	748.39	N
530	0.20	287.30	529.99	2.14	0.19	2.14	0.39	Magn MS		-0.19	2.15	-83.33	N
621	0.60	220.30	620.99	1.82	-0.27	1.82	0.61	Magn MS		0.44	1.84	-73.63	N
801	0.99	190.21	800.97	-0.43	-1.16	-0.42	0.31	Magn MS	Baker Hughes	0.22	1.23	-16.72	N
983	2.41	120.58	982.90	-3.92	1.86	-3.93	1.24	Magn MS	Baker Hughes	0.78	4.34	-38.26	N
1,165	5.13	102.89	1,164.50	-7.68	13.09	-7.75	1.61	Magn MS	Baker Hughes	1.49	15.18	-9.72	N
1,347	5.65	103.72	1,345.69	-11.62	29.72	-11.77	0.29	Magn MS	Baker Hughes	0.29	31.92	0.46	N
1,525	8.22	101.84	1,522.37	-16.31	50.69	-16.57	1.45	Magn MS	Baker Hughes	1.44	53.25	-1.06	N
1,701	8.66	104.18	1,696.47	-22.14	75.85	-22.53	0.32	Magn MS	Baker Hughes	0.25	79.02	1.33	N
1,878	8.55	108.61	1,871.48	-29.61	101.24	-30.12	0.38	Magn MS	Baker Hughes	-0.06	105.48	2.50	N
2,054	9.71	96.66	2,045.26	-35.50	128.39	-36.15	1.26	Magn MS	Baker Hughes	0.66	133.21	-6.79	N
2,231	10.07	100.86	2,219.63	-40.15	158.41	-40.95	0.46	Magn MS	Baker Hughes	0.20	163.42	2.37	N
2,408	10.20	103.62	2,393.87	-46.76	188.84	-47.71	0.28	Magn MS	Baker Hughes	0.07	194.54	1.56	N
2,586	11.04	94.86	2,568.83	-51.91	221.14	-53.03	1.02	Magn MS	Baker Hughes	0.47	227.15	-4.92	N
2,763	11.71	84.17	2,742.37	-51.52	255.90	-52.82	1.25	Magn MS	Baker Hughes	0.38	261.04	-6.04	N
2,940	11.47	86.00	2,915.77	-48.47	291.33	-49.94	0.25	Magn MS	Baker Hughes	-0.14	295.33	1.03	N
3,117	10.41	90.99	3,089.55	-47.52	324.87	-49.16	0.80	Magn MS	Baker Hughes	-0.60	328.33	2.82	N
3,295	10.40	97.23	3,264.63	-49.82	356.89	-51.62	0.63	Magn MS	Baker Hughes	-0.01	360.35	3.51	N
3,472	9.74	104.75	3,438.91	-55.64	387.22	-57.60	0.83	Magn MS	Baker Hughes	-0.37	391.20	4.25	N
3,649	8.76	117.17	3,613.62	-65.61	413.69	-67.70	1.25	Magn MS	Baker Hughes	-0.55	418.86	7.02	N
3,827	10.47	123.66	3,789.12	-80.76	439.22	-82.99	1.14	Magn MS	Baker Hughes	0.96	446.58	3.65	N
4,004	11.32	121.77	3,962.93	-98.82	467.37	-101.19	0.52	Magn MS	Baker Hughes	0.48	477.71	-1.07	N
4,180	13.05	99.76	4,135.05	-111.30	501.66	-113.83	2.80	Magn MS	Baker Hughes	0.98	513.86	-12.51	N
4,357	14.38	99.96	4,307.00	-118.48	543.01	-121.23	0.75	Magn MS	Baker Hughes	0.75	555.78	0.11	N
4,546	12.28	96.74	4,490.90	-124.90	586.09	-127.87	1.18	Magn MS	Baker Hughes	-1.11	599.25	-1.70	N
4,708	10.37	98.28	4,649.74	-129.03	617.63	-132.15	1.19	Magn MS	Baker Hughes	-1.18	630.96	0.95	N
4,885	9.77	98.69	4,824.01	-133.59	648.24	-136.87	0.34	Magn MS	Baker Hughes	-0.34	661.86	0.23	N
5,062	9.53	97.41	4,998.51	-137.75	677.61	-141.18	0.18	Magn MS	Baker Hughes	-0.14	691.47	-0.72	N
5,238	9.18	97.31	5,172.17	-141.41	705.99	-144.98	0.20	Magn MS	Baker Hughes	-0.20	720.01	-0.06	N
5,416	8.86	96.66	5,347.96	-144.81	733.68	-148.52	0.19	Magn MS	Baker Hughes	-0.18	747.84	-0.37	N
5,594	8.24	95.11	5,523.99	-147.54	760.00	-151.38	0.37	Magn MS	Baker Hughes	-0.35	774.19	-0.87	N
5,771	7.07	95.01	5,699.41	-149.62	783.49	-153.58	0.66	Magn MS	Baker Hughes	-0.66	797.65	-0.06	N
5,948	6.52	93.45	5,875.16	-151.17	804.37	-155.24	0.33	Magn MS	Baker Hughes	-0.31	818.45	-0.88	N
6,125	8.73	100.08	6,050.59	-154.13	827.63	-158.32	1.34	Magn MS	Baker Hughes	1.25	841.86	3.75	N
6,302	8.32	98.06	6,225.63	-158.28	853.54	-162.59	0.29	Magn MS	Baker Hughes	-0.23	868.09	-1.14	N
6,478	7.78	95.86	6,399.90	-161.28	877.99	-165.72	0.35	Magn MS	Baker Hughes	-0.31	892.68	-1.25	N
6,832	6.14	100.41	6,751.28	-167.14	920.45	-171.80	0.49	Magn MS	Baker Hughes	-0.46	935.51	1.29	N
7,009	5.33	100.03	6,927.39	-170.29	937.86	-175.03	0.46	Magn MS	Baker Hughes	-0.46	953.19	-0.21	N
7,186	4.92	94.57	7,103.69	-172.32	953.52	-177.15	0.36	Magn MS	Baker Hughes	-0.23	968.97	-3.08	N
7,362	2.29	90.78	7,279.32	-172.97	964.56	-177.85	1.50	Magn MS	Baker Hughes	-1.49	979.95	-2.15	N



Directional Survey

Well Name SALADO DRAW-WE 24 FEB-F23 004H	Field JENNINGS	Business Unit Mid-Continent
Location Survey Location	Survey Date Survey Date	Survey Depth Survey Depth

Survey Data

MD (ft)	Inc (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unusable data
7.541	1.97	87.06	7.458 20	-172.86	971.21	-177.78	0.19	Magn MS	Baker Hughes	-0.18	986.47	-2.08	N
7.613	1.66	83.46	7.530 16	-172.68	973.48	-177.61	0.46	Magn MS	Baker Hughes	-0.43	988.68	-5.00	N
7.789	0.16	87.19	7.706 14	-172.38	976.26	-177.32	0.85	Magn MS	Baker Hughes	-0.85	991.36	2.12	N
7.966	0.38	122.19	7.883 13	-172.68	977.00	-177.62	0.15	Magn MS	Baker Hughes	0.12	992.15	19.77	N
8.143	5.50	284.28	8.059 88	-170.90	989.27	-175.80	3.31	Magn MS	Baker Hughes	2.89	984.22	91.58	N
8.320	0.51	251.93	8.236 58	-169.05	960.30	-173.91	2.87	Magn MS	Baker Hughes	-2.82	975.06	-18.28	N
8.497	0.20	269.47	8.413 58	169.19	959.26	-174.05	0.21	Magn MS	Baker Hughes	-0.18	974.06	21.04	N
8.674	9.75	354.52	8.589 72	-154.14	957.53	-158.98	5.46	Magn MS	Baker Hughes	5.40	969.86	36.92	N
8.763	18.47	352.13	8.675 95	-132.63	954.88	-137.46	9.82	Magn MS	Baker Hughes	9.80	964.04	-2.69	N
8.851	28.39	345.18	8.756 61	-98.50	947.59	-103.30	11.69	Magn MS	Baker Hughes	11.27	952.70	-7.92	N
8.940	38.67	338.84	8.831 65	-53.24	932.58	-57.98	9.95	Magn MS	Baker Hughes	9.19	934.07	-7.13	N
9.029	43.85	344.19	8.899 59	1.23	914.54	-3.40	9.06	Magn MS	Baker Hughes	8.18	914.54	6.04	N
9.117	52.70	351.71	8.958 15	65.37	901.16	60.81	11.90	Magn MS	Baker Hughes	10.08	903.52	8.55	N
9.206	64.17	355.78	9.004 67	140.62	893.07	136.10	13.46	Magn MS	Baker Hughes	12.89	904.08	4.57	N
9.294	75.24	359.63	9.035 18	222.95	889.87	218.44	13.23	Magn MS	Baker Hughes	12.58	917.38	4.38	N
9.383	85.65	4.79	9.049 92	310.50	893.31	305.97	13.02	Magn MS	Baker Hughes	11.70	945.74		N
9.472	90.77	6.61	9.052 70	398.98	902.15	394.41	6.10	Magn MS	Baker Hughes	5.75	986.43	2.04	N
9.560	90.74	7.40	9.051 54	486.31	912.88	481.69	0.90	Magn MS	Baker Hughes	-0.03	1,034.33	0.90	N
9.649	90.86	4.34	9.050 30	574.83	921.98	570.15	3.44	Magn MS	Baker Hughes	0.13	1,086.50	-3.44	N
9.737	90.77	5.14	9.049 05	662.52	929.25	657.81	0.91	Magn MS	Baker Hughes	-0.10	1,141.24	0.91	N
9.826	92.16	5.07	9.046 77	751.13	937.17	746.38	1.56	Magn MS	Baker Hughes	1.56	1,201.03	-0.08	N
9.915	91.78	4.19	9.043 73	839.79	944.35	835.00	1.09	Magn MS	Baker Hughes	-0.45	1,263.74	-0.99	N
10.004	91.35	4.40	9.041 31	928.51	951.01	923.68	0.52	Magn MS	Baker Hughes	-0.46	1,329.11	0.24	N
10.092	89.38	359.60	9.040 75	1,016.42	954.08	1,011.58	5.90	Magn MS	Baker Hughes	-2.24	1,394.05	403.64	N
10.181	89.17	355.64	9.041 88	1,105.32	950.38	1,100.50	4.46	Magn MS	Baker Hughes	-0.24	1,457.72	-4.45	N
10.269	90.37	357.41	9.042 23	1,193.15	945.05	1,188.35	2.43	Magn MS	Baker Hughes	1.36	1,522.08	2.01	N
10.358	88.86	354.48	9.042 83	1,281.92	938.76	1,277.15	3.70	Magn MS	Baker Hughes	-1.70	1,588.89	-3.29	N
10.446	96.54	354.13	9.038 69	1,369.32	930.08	1,364.60	8.73	Magn MS	Baker Hughes	8.73	1,655.32	-0.34	N
10.535	94.56	0.21	9.030 07	1,457.75	925.76	1,453.05	7.10	Magn MS	Baker Hughes	-2.22	1,726.87	397.72	N
10.624	91.02	3.92	9.025 74	1,546.56	928.96	1,541.84	5.76	Magn MS	Baker Hughes	-3.98	1,804.11	4.17	N
10.713	90.65	3.10	9.024.49	1,637.38	934.53	1,632.63	1.04	Magn MS	Baker Hughes	-0.52	1,885.30	-0.90	N
10.802	94.35	1.06	9.020.60	1,728.22	937.83	1,723.45	4.74	Magn MS	Baker Hughes	4.18	1,966.28	-2.24	N
10.891	91.48	-1.42	9.016.00	1,819.07	939.80	1,814.29	3.21	Magn MS	Baker Hughes	-3.19	2,047.49	0.40	N
10.980	86.83	358.58	9.017.36	1,910.02	939.80	1,905.24	5.96	Magn MS	Baker Hughes	-5.08	2,128.71	392.48	N
11.070	87.97	355.45	9.021.49	2,000.79	935.07	1,996.03	3.66	Magn MS	Baker Hughes	1.25	2,208.51	-3.44	N
11.160	88.03	355.51	9.024.67	2,091.46	927.90	2,086.73	0.09	Magn MS	Baker Hughes	0.07	2,288.05	0.07	N
11.251	87.90	356.30	9.027.90	2,182.16	921.41	2,177.47	0.88	Magn MS	Baker Hughes	-0.14	2,368.72	0.87	N
11.352	90.43	358.56	9.029.23	2,273.05	917.33	2,268.38	3.73	Magn MS	Baker Hughes	-2.78	2,451.17	2.48	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 004H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB/Elevation	Mud Line Elevation (ft)

Survey Data

MD (ft)	Incl (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
11.443	90.46	356.45	9,028.52	2,363.96	913.37	2,359.30	2.32	Magn MS	Baker Hughes	0.03	2,534.27	-2.32	N
11.534	90.06	356.33	9,028.11	2,454.77	907.64	2,450.15	0.46	Magn MS	Baker Hughes	-0.44	2,617.20	-0.13	N
11.623	89.85	356.22	9,028.18	2,543.59	901.85	2,538.99	0.27	Magn MS	Baker Hughes	-0.24	2,698.74	-0.12	N
11.712	89.97	355.22	9,028.32	2,632.34	895.21	2,627.77	1.13	Magn MS	Baker Hughes	0.13	2,780.40	-1.12	N
11.800	92.28	355.73	9,028.59	2,720.04	888.27	2,715.51	2.69	Magn MS	Baker Hughes	2.63	2,861.41	0.58	N
11.889	91.97	357.56	9,023.29	2,808.82	883.07	2,804.32	2.08	Magn MS	Baker Hughes	-0.35	2,944.37	2.06	N
11.977	93.27	0.88	9,019.26	2,896.71	881.87	2,892.21	4.05	Magn MS	Baker Hughes	1.48	3,027.97	405.32	N
12.065	92.19	1.70	9,015.07	2,984.58	883.85	2,980.07	1.54	Magn MS	Baker Hughes	-1.23	3,112.70	0.93	N
12.154	90.37	2.08	9,013.09	3,073.51	886.78	3,068.98	2.09	Magn MS	Baker Hughes	-2.04	3,198.88	0.43	N
12.242	89.69	2.19	9,013.04	3,161.45	890.06	3,156.90	0.78	Magn MS	Baker Hughes	-0.77	3,284.35	0.13	N
12.331	89.72	1.94	9,013.50	3,250.39	893.27	3,245.83	0.28	Magn MS	Baker Hughes	0.03	3,370.90	-0.28	N
12.419	87.62	3.29	9,015.54	3,338.27	897.28	3,333.68	2.84	Magn MS	Baker Hughes	-2.39	3,456.75	1.53	N
12.508	85.14	4.14	9,021.16	3,426.89	903.04	3,422.28	2.95	Magn MS	Baker Hughes	-2.79	3,543.88	0.96	N
12.596	85.68	3.70	9,028.20	3,514.41	909.03	3,509.76	0.79	Magn MS	Baker Hughes	0.61	3,630.07	-0.50	N
12.685	84.95	2.52	9,035.47	3,602.98	913.84	3,598.30	1.58	Magn MS	Baker Hughes	-0.82	3,717.06	-1.33	N
12.773	85.59	1.45	9,042.73	3,690.62	916.88	3,685.93	1.41	Magn MS	Baker Hughes	0.73	3,802.81	-1.22	N
12.862	87.97	2.84	9,047.73	3,779.41	920.21	3,774.70	3.10	Magn MS	Baker Hughes	2.67	3,889.82	1.56	N
12.951	86.89	4.34	9,051.72	3,868.14	925.78	3,863.41	2.08	Magn MS	Baker Hughes	-1.21	3,977.38	1.69	N
13.039	86.28	3.80	9,056.96	3,955.76	932.01	3,951.00	0.93	Magn MS	Baker Hughes	-0.69	4,064.08	-0.61	N
13.128	86.95	3.23	9,062.21	4,044.44	937.46	4,039.64	0.99	Magn MS	Baker Hughes	0.75	4,151.67	-0.64	N
13.216	85.00	1.87	9,068.39	4,132.13	941.36	4,127.31	2.70	Magn MS	Baker Hughes	-2.22	4,238.00	-1.55	N
13.305	85.11	1.73	9,076.06	4,220.76	944.15	4,215.92	0.20	Magn MS	Baker Hughes	0.12	4,325.07	-0.16	N
13.394	85.20	0.50	9,083.58	4,309.42	945.87	4,304.58	1.38	Magn MS	Baker Hughes	0.10	4,412.00	-1.38	N
13.482	86.36	359.32	9,090.06	4,397.18	945.74	4,392.33	1.88	Magn MS	Baker Hughes	1.32	4,497.73	407.75	N
13.571	82.46	355.65	9,098.73	4,485.64	941.86	4,480.81	6.00	Magn MS	Baker Hughes	-4.38	4,583.45	-4.12	N
13.659	90.77	355.09	9,103.92	4,573.12	934.77	4,568.33	9.46	Magn MS	Baker Hughes	9.44	4,667.68	-0.64	N
13.748	90.95	356.49	9,102.58	4,661.87	928.24	4,657.11	1.59	Magn MS	Baker Hughes	0.20	4,753.38	1.57	N
13.836	90.92	357.72	9,101.15	4,749.74	923.80	4,745.00	1.40	Magn MS	Baker Hughes	-0.03	4,838.74	1.40	N
13.925	90.92	357.37	9,099.72	4,838.65	919.98	4,833.93	0.39	Magn MS	Baker Hughes	0.00	4,925.33	-0.39	N
14.014	90.99	359.34	9,098.23	4,927.59	917.43	4,922.89	2.21	Magn MS	Baker Hughes	0.08	5,012.27	2.21	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS		Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Survey Data													
MD (ftKB)	Inc (")	Azm (")	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
14.102	91.11	359.54	9.096.62	5.015.58	916.57	5.010.87	0.27	Magn MS	Baker Hughes	0.14	5.098.64	0.23	N
14.192	91.02	359.73	9.094.95	5.105.56	916.00	5.100.86	0.23	Magn MS	Baker Hughes	-0.10	5.187.08	0.21	N
14.280	90.92	358.58	9.093.46	5.193.53	914.70	5.188.84	1.31	Magn MS	Baker Hughes	-0.11	5.273.47	-1.31	N
14.369	92.56	358.88	9.090.76	5.282.47	912.73	5.277.78	1.87	Magn MS	Baker Hughes	1.84	5.360.74	0.34	N
14.457	91.05	358.57	9.087.98	5.370.40	910.77	5.365.72	1.75	Magn MS	Baker Hughes	-1.72	5.447.08	-0.35	N
14.546	91.02	358.10	9.086.38	5.459.35	908.18	5.454.68	0.53	Magn MS	Baker Hughes	-0.03	5.534.37	-0.53	N
14.634	90.15	358.96	9.085.48	5.547.31	905.93	5.542.66	1.39	Magn MS	Baker Hughes	-0.99	5.620.80	0.98	N
14.723	89.91	3.65	9.085.43	5.636.26	907.95	5.631.60	5.28	Magn MS	Baker Hughes	-0.27	5.708.93	399.22	N
14.811	90.68	358.41	9.084.98	5.724.22	909.54	5.719.54	6.02	Magn MS	Baker Hughes	0.88	5.796.03	403.14	N
14.899	89.78	359.91	9.084.62	5.812.20	908.25	5.807.53	1.99	Magn MS	Baker Hughes	-1.02	5.882.74	1.70	N
14.988	90.03	0.65	9.084.77	5.901.20	908.68	5.896.53	0.88	Magn MS	Baker Hughes	0.28	5.970.75	403.66	N
15.076	90.09	2.30	9.084.68	5.989.17	910.95	5.984.48	1.88	Magn MS	Baker Hughes	0.07	6.058.05	1.88	N
15.165	89.41	2.49	9.085.07	6.078.09	914.66	6.073.38	0.79	Magn MS	Baker Hughes	-0.76	6.146.53	0.21	N
15.253	89.41	0.33	9.085.97	6.166.05	916.83	6.161.33	2.45	Magn MS	Baker Hughes	0.00	6.233.84	-2.45	N
15.342	89.38	359.51	9.086.91	6.255.05	916.71	6.250.33	0.92	Magn MS	Baker Hughes	-0.03	6.321.87	403.57	N
15.430	90.40	355.58	9.087.08	6.342.95	912.94	6.338.25	4.61	Magn MS	Baker Hughes	1.16	6.408.31	-4.47	N
15.519	89.57	355.59	9.087.11	6.431.68	906.09	6.427.02	0.93	Magn MS	Baker Hughes	-0.93	6.495.19	0.01	N
15.607	78.94	354.79	9.095.90	6.518.81	898.76	6.514.18	12.11	Magn MS	Baker Hughes	-12.08	6.580.47	-0.91	N
15.695	80.50	356.80	9.111.61	6.605.16	892.42	6.600.55	2.86	Magn MS	Baker Hughes	1.77	6.665.17	2.28	N
15.784	90.09	3.18	9.118.91	6.693.71	892.43	6.689.10	12.92	Magn MS	Baker Hughes	10.78	6.752.94	397.33	N
15.873	92.43	3.73	9.116.95	6.782.52	897.80	6.777.89	2.70	Magn MS	Baker Hughes	2.63	6.841.68	0.62	N
15.961	92.40	0.96	9.113.24	6.870.36	901.39	6.865.71	3.15	Magn MS	Baker Hughes	-0.03	6.929.24	-3.15	N
16.050	92.13	357.63	9.109.72	6.959.27	900.30	6.954.62	3.75	Magn MS	Baker Hughes	-0.30	7.017.26	400.75	N
16.138	92.59	356.10	9.108.10	7.047.06	895.49	7.042.44	1.81	Magn MS	Baker Hughes	0.52	7.103.73	-1.74	N
16.226	92.65	358.58	9.102.08	7.134.86	891.41	7.130.26	2.82	Magn MS	Baker Hughes	0.07	7.190.33	2.82	N
16.315	92.68	358.93	9.097.94	7.223.75	889.48	7.219.15	0.39	Magn MS	Baker Hughes	0.03	7.278.30	0.39	N
16.403	92.25	358.80	9.094.15	7.311.65	887.74	7.307.06	0.51	Magn MS	Baker Hughes	-0.49	7.365.34	-0.15	N
16.492	92.46	359.43	9.090.50	7.400.56	886.36	7.395.98	0.75	Magn MS	Baker Hughes	0.24	7.453.45	0.71	N
16.580	91.69	358.65	9.087.31	7.488.49	884.89	7.483.92	1.25	Magn MS	Baker Hughes	-0.87	7.540.59	-0.89	N
16.668	90.12	356.63	9.085.92	7.576.40	881.27	7.571.84	2.91	Magn MS	Baker Hughes	-1.78	7.627.48	-2.30	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 004H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Survey Data

MD (ftKB)	Inc (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
16,758	90.00	357.07	9,085.83	7,666.26	876.32	7,661.73	0.51	Magn MS	Baker Hughes	-0.13	7,716.18	0.49	N
16,848	90.25	0.11	9,085.63	7,756.22	874.11	7,751.70	3.39	Magn MS	Baker Hughes	0.28	7,805.32	396.62	N
16,936	90.15	1.98	9,085.32	7,844.20	875.71	7,839.67	2.13	Magn MS	Baker Hughes	-0.11	7,892.93	2.13	N
17,025	89.48	1.35	9,085.61	7,933.16	878.30	7,928.62	1.03	Magn MS	Baker Hughes	-0.75	7,981.64	-0.71	N
17,113	89.57	357.65	9,086.34	8,021.14	877.53	8,016.60	4.21	Magn MS	Baker Hughes	0.10	8,069.00	404.89	N
17,202	89.57	355.53	9,087.01	8,109.98	872.24	8,105.46	2.38	Magn MS	Baker Hughes	0.00	8,156.75	-2.38	N
17,290	89.91	358.22	9,087.41	8,197.84	867.44	8,193.34	3.08	Magn MS	Baker Hughes	0.39	8,243.60	3.06	N
17,379	89.63	3.19	9,087.76	8,286.80	868.53	8,282.30	5.59	Magn MS	Baker Hughes	-0.31	8,332.19	398.91	N
17,468	89.97	4.93	9,088.08	8,375.58	874.84	8,371.04	1.99	Magn MS	Baker Hughes	0.38	8,421.14	1.96	N
17,556	89.82	4.55	9,088.24	8,463.27	882.11	8,458.70	0.46	Magn MS	Baker Hughes	-0.17	8,509.12	-0.43	N
17,645	89.78	0.82	9,088.55	8,552.16	886.28	8,547.56	4.19	Magn MS	Baker Hughes	-0.04	8,597.96	-4.19	N
17,733	89.66	357.91	9,088.98	8,640.14	885.30	8,635.55	3.31	Magn MS	Baker Hughes	-0.14	8,685.38	405.78	N
17,822	90.55	359.04	9,088.81	8,729.11	882.93	8,724.53	1.62	Magn MS	Baker Hughes	1.00	8,773.65	1.27	N
17,910	90.46	359.67	9,088.04	8,817.10	881.94	8,812.52	0.72	Magn MS	Baker Hughes	-0.10	8,861.10	0.72	N
17,999	89.85	1.45	9,087.80	8,906.09	882.81	8,901.51	2.11	Magn MS	Baker Hughes	-0.69	8,949.74	402.49	N
18,087	90.74	2.74	9,087.34	8,994.03	886.03	8,989.43	1.78	Magn MS	Baker Hughes	1.01	9,037.57	1.47	N
18,176	90.34	359.48	9,086.51	9,083.00	887.75	9,078.39	3.69	Magn MS	Baker Hughes	-0.45	9,128.28	400.83	N
18,265	89.60	0.21	9,086.55	9,171.99	887.51	9,167.39	1.17	Magn MS	Baker Hughes	-0.83	9,214.83	403.67	N
18,353	90.65	359.85	9,086.36	9,259.99	887.56	9,255.38	1.26	Magn MS	Baker Hughes	1.19	9,302.43	408.68	N
18,442	90.49	359.93	9,085.48	9,348.99	887.39	9,344.38	0.20	Magn MS	Baker Hughes	-0.18	9,391.01	0.09	N
18,530	89.41	356.35	9,085.55	9,436.93	884.53	9,432.33	4.25	Magn MS	Baker Hughes	-1.23	9,478.29	-4.07	N
18,619	89.60	358.61	9,086.32	9,525.83	880.62	9,521.25	2.55	Magn MS	Baker Hughes	0.21	9,566.45	2.54	N
18,709	89.60	358.61	9,086.95	9,615.80	878.44	9,611.23	0.00	Extrap	Baker Hughes	0.00	9,655.84	0.00	N



Casing Summary

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS	Business Unit Mid-Continent		
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation			Mud Line Elevation (ft)	Water Depth (ft)

Surface, Planned?N, 750ftKB

Set Depth (MD) (ftKB) 750		Set Tension (kips)		String Nominal OD (in) 13 3/8		String Min Drift (in)		Centralizers 7		Scratchers		
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread		Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1		13 3/8	12 615	54.50	J-55	ST&C		36	39	2.90		1,130.0
1	Casing Pup Joint	13 3/8	12 615	54.50	J-55	ST&C		39	43	4.13		1,130.0
16	Casing Joint	13 3/8	12 615	54.50	J-55	ST&C		43	704	661.19		1,130.0
1	Float Collar	13 3/8	12 615	54.50	J-55	ST&C		704	705	1.38		
1	Casing Joint	13 3/8	12 615	54.50	J-55	ST&C		705	748	42.89		1,130.0
1	Float Shoe	13 3/8	12 615	54.50	J-55	ST&C		748	750	1.78		

Intermediate Casing 1, Planned?N, 4,605ftKB

Set Depth (MD) ₁ (ftKB) 4,605		Set Tension (kips)		String Nominal OD (in) 9 5/8		String Min Drift (in) 8.688		Centralizers 30		Scratchers	
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
0	Casing Joint	9 5/8	8.835	40.00	HCK-55	LT&C	34	34	0.00	3,950.0	4,230.0
0	Landing Joint	9 5/8	8.835	40.00	HCK-55	LT&C	34	34	0.00	3,950.0	4,230.0
1	Hanger	9 5/8	8.835	40.00	HCK-55	LT&C	34	37	2.44	3,950.0	4,230.0
1	Casing Pup Joint	9 5/8	8.835	40.00	HCK-55	LT&C	37	41	4.20	3,950.0	4,230.0
10	Casing Joint	9 5/8	8.835	40.00	HCK-55	LT&C	41	4,521	4,480.03	3,950.0	4,230.0
8											
1	Float Collar	9 5/8	8.835			LT&C	4,521	4,523	1.49		
2	Casing Joint	9 5/8	8.835	40.00	HCK-55	LT&C	4,523	4,603	80.86	3,950.0	4,230.0
1	Float Shoe	9 5/8	8.835			LT&C	4,603	4,605	1.82		

Production Casing, Planned?N, 18,694ftKB

Set Depth (MD) (ftKB) 18,694		Set Tension (kips)		String Nominal OD (in) 5 1/2		String Min Drift (in)		Centralizers 171		Scratchers	
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Landing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	-7	34	40.66		
1	Hanger	5 1/2	4.800	20.00	P-110	TXP-BTC	34	35	1.28		
1	Hanger Pup	5 1/2	4.800	20.00	P-110	TXP-BTC	35	40	4.35		
20	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	40	834	793.98		
1	Pup Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	834	839	5.17		
19	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	839	8,594	7,755.15		
8											
1	Marker Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	8,594	8,604	10.31		
25	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	8,604	18,527	9,922.85		
4											
1	Pup Jt	5 1/2	4.800	20.00	P-110	TXP-BTC	18,527	18,537	9.86		
1	RSI	5 1/2	4.800	20.00	P-110	TXP-BTC	18,537	18,544	6.66		
1	Pup Jt	5 1/2	4.800	20.00	P-110	TXP-BTC	18,544	18,554	9.87		
1	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	18,554	18,593	39.17		
1	Pup Jt	5 1/2	4.800	20.00	P-110	TXP-BTC	18,593	18,602	9.67		
1	Land Collar	5 1/2	4.800	20.00	P-110	TXP-BTC	18,602	18,604	1.46		
1	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	18,604	18,644	40.01		
1	Float Collar	5 1/2	4.800	20.00	P-110	TXP-BTC	18,644	18,646	2.42		
1	XRV	5 1/2	4.800	20.00	P-110	TXP-BTC	18,646	18,649	2.22		
1	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	18,649	18,691	42.42		
1	Float Shoe	5 1/2	4.800	20.00	P-110	TXP-BTC	18,691	18,694	3.04		



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,600.0	Vertical Section Direction (°) 359.71
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	155.0	760.0	
12 1/4	760.0	4,615.0	
8 3/4	4,615.0	18,709.0	

Multi-bowl, FMC on 8/19/2016 04:30

Sub-Type Multi-bowl			Install Date 8/19/2016		
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 750ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 8/19/2016	Set Depth (MD) (ftKB) 750	Stick Up (ftKB) -35.7	Set Tension (kips)
Centralizers 7	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1		13 3/8	12.615	54.50	J-55	13 3/8	ST&C	2.90	36	39
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	4.13	39	43
16	Casing Joint	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	661.19	43	704
1	Float Collar	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	1.38	704	705
1	Casing Joint	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	42.89	705	748
1	Float Shoe	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	1.78	748	750

Intermediate Casing 1, Planned?-N, 4,605ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 9/8/2016	Set Depth (MD) (ftKB) 4,605	Stick Up (ftKB) -34.4	Set Tension (kips)
Centralizers 30	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
0	Casing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	0.00	34	34
0	Landing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	0.00	34	34
1	Hanger	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	2.44	34	37
1	Casing Pup Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	4.20	37	41
108	Casing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	4,480.03	41	4,521
1	Float Collar	9 5/8	8.835			9 5/8	LT&C	1.49	4,521	4,523
2	Casing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	80.86	4,523	4,603
1	Float Shoe	9 5/8	8.835			9 5/8	LT&C	1.62	4,603	4,605

Production Casing, Planned?-N, 18,694ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 9/29/2016	Set Depth (MD) (ftKB) 18,694	Stick Up (ftKB) 6.5	Set Tension (kips)
Centralizers 171	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Landing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	40.66	-7	34
1	Hanger	5 1/2	4.800	20.00	P-110		TXP-BTC	1.28	34	35
1	Hanger Pup	5 1/2	4.800	20.00	P-110		TXP-BTC	4.35	35	40
20	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	793.98	40	834
1	Pup Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	5.17	834	839
198	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	7,755.15	839	8,594
1	Marker Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	10.31	8,594	8,604
254	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	9,922.85	8,604	18,527
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	9.86	18,527	18,537



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	RSI	5 1/2	4.800	20.00	P-110		TXP-BTC	6.66	18,537	18,544
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	9.87	18,544	18,554
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.17	18,554	18,593
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	9.67	18,593	18,602
1	Land Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	1.46	18,602	18,604
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	40.01	18,604	18,644
1	Float Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	2.42	18,644	18,646
1	XRV	5 1/2	4.800	20.00	P-110		TXP-BTC	2.22	18,646	18,649
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	42.42	18,649	18,691
1	Float Shoe	5 1/2	4.800	20.00	P-110		TXP-BTC	3.04	18,691	18,694

Surface Casing Cement, Casing, 8/19/2016 12:30

Cementing Start Date 8/19/2016	Cementing End Date 8/19/2016	Wellbore Original Hole
Evaluation Method Returns to Surface	Cement Evaluation Results 85 bbls of cement to surface.	
Comment		

1, 35.8-750.0ftKB

Top Depth (ftKB) 35.8	Bottom Depth (ftKB) 750.0	Full Return? N	Vol Cement Ret (bbl) 85.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 5	Final Pump Rate (bbl/min) 2.3	Avg Pump Rate (bbl/min) 5	Final Pump Pressure (psi) 280.0	Plug Bump Pressure (psi) 829.0	
Pipe Reciprocated? N	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated? N	Pipe RPM (rpm)	
Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date	

Preflush

Fluid Type Preflush	Fluid Description	Quantity (sacks) 50.0	Class N	Volume Pumped (bbl) 50.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description	Quantity (sacks) 844	Class C	Volume Pumped (bbl) 200.0
Estimated Top (ftKB) 35.8	Estimated Bottom Depth (ftKB) 750.0	Percent Excess Pumped (%) 125.0	Yield (ft ³ /sack) 1.33	Fluid Mix Ratio (gal/sack) 6.36
Free Water (%)	Density (lb/gal) 14.80	Zero Gel Time (min)	Thickening Time (hr) 4.13	1st Compressive Strength (psi) 93.0

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description	Quantity (sacks) 109.0	Class C	Volume Pumped (bbl) 109.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 10.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation			Mud Line Elevation (ft)
					Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Mini Kick Off Depth (ftKB) 8,600.0	Vertical Section Direction: ° 359.71
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	155.0	760.0	
12 1/4	760.0	4,615.0	
8 3/4	4,615.0	18,709.0	

Multi-bowl, FMC on 8/19/2016 04:30

Sub-Type Multi-bowl	Install Date 8/19/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 750ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 8/19/2016	Set Depth (MD) (ftKB) 750	Slick Up (ftKB) -35.7	Set Tension (kips)
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Centralizers
7

Scratchers

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1		13 3/8	12 615	54.50	J-55	13 3/8	ST&C	2.90	36	39
1	Casing Pup Joint	13 3/8	12 615	54.50	J-55	13 3/8	ST&C	4.13	39	43
16	Casing Joint	13 3/8	12 615	54.50	J-55	13 3/8	ST&C	661.19	43	704
1	Float Collar	13 3/8	12 615	54.50	J-55	13 3/8	ST&C	1.38	704	705
1	Casing Joint	13 3/8	12 615	54.50	J-55	13 3/8	ST&C	42.89	705	748
1	Float Shoe	13 3/8	12 615	54.50	J-55	13 3/8	ST&C	1.78	748	750

Intermediate Casing 1, Planned?-N, 4,605ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 9/8/2016	Set Depth (MD) (ftKB) 4,605	Slick Up (ftKB) -34.4	Set Tension (kips)
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Centralizers
30

Scratchers

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
0	Casing Joint	9 5/8	8 835	40.00	HCK-55	9 5/8	LT&C	0.00	34	34
0	Landing Joint	9 5/8	8 835	40.00	HCK-55	9 5/8	LT&C	0.00	34	34
1	Hanger	9 5/8	8 835	40.00	HCK-55	9 5/8	LT&C	2.44	34	37
1	Casing Pup Joint	9 5/8	8 835	40.00	HCK-55	9 5/8	LT&C	4.20	37	41
108	Casing Joint	9 5/8	8 835	40.00	HCK-55	9 5/8	LT&C	4,480.03	41	4,521
1	Float Collar	9 5/8	8 835			9 5/8	LT&C	1.49	4,521	4,523
2	Casing Joint	9 5/8	8 835	40.00	HCK-55	9 5/8	LT&C	80.86	4,523	4,603
1	Float Shoe	9 5/8	8 835			9 5/8	LT&C	1.62	4,603	4,605

Production Casing, Planned?-N, 18,694ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 9/29/2016	Set Depth (MD) (ftKB) 18,694	Slick Up (ftKB) 6.5	Set Tension (kips)
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Centralizers
171

Scratchers

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Landing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	40.66	-7	34
1	Hanger	5 1/2	4 800	20.00	P-110		TXP-BTC	1.28	34	35
1	Hanger Pup	5 1/2	4 800	20.00	P-110		TXP-BTC	4.35	35	40
20	Casing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	793.98	40	834
1	Pup Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	5.17	834	839
198	Casing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	7,755.15	839	8,594
1	Marker Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	10.31	8,594	8,604
254	Casing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	9,922.85	8,604	18,527
1	Pup Jt	5 1/2	4 800	20.00	P-110		TXP-BTC	9.86	18,527	18,537



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)
			Water Depth (ft)

Jts	Item Des	OD (in)	ID (in)	WT (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btn Depth (MD) (ftKB)
1	RSI	5 1/2	4.800	20.00	P-110		TXP-BTC	6.66	18,537	18,544
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	9.87	18,544	18,554
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.17	18,554	18,593
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	9.87	18,593	18,602
1	Land Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	1.46	18,602	18,604
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	40.01	18,604	18,644
1	Float Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	2.42	18,644	18,646
1	XRV	5 1/2	4.800	20.00	P-110		TXP-BTC	2.22	18,646	18,649
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	42.42	18,649	18,691
1	Float Shoe	5 1/2	4.800	20.00	P-110		TXP-BTC	3.04	18,691	18,694

Intermediate Casing Cement, Casing, 9/8/2016 05:00

Cementing Start Date 9/8/2016	Cementing End Date 9/8/2016	Wellbore Original Hole
Evaluation Method Returns to Surface	Cement Evaluation Results 226 bbls of cement to surface	
Comment		

1, 32.6-4,605.0ftKB

Top Depth (ftKB) 32.6	Bottom Depth (ftKB) 4,605.0	Full Return? Y	Vol Cement Ret (bbl) 226.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 4.8	Final Pump Rate (bbl/min) 2.5	Avg Pump Rate (bbl/min) 6.5	Final Pump Pressure (psi) 1,179.0	Plug Bump Pressure (psi) 1,750.0	
Pipe Reciprocated? N	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated? N	Pipe RPM (rpm)	
Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date	

Spacer

Fluid Type Spacer	Fluid Description 30 bbl dyed spacer	Quantity (sacks) 30	Class C	Volume Pumped (bbl) 30.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.33	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type Lead	Fluid Description 3% BWOB D020 + 5% BWOB D044 + 0.2% BWOB D046 + 10% BWOB D154	Quantity (sacks) 1,001	Class C	Volume Pumped (bbl) 453.0
Estimated Top (ftKB) 35.4	Estimated Bottom Depth (ftKB) 3,600.0	Percent Excess Pumped (%) 150.0	Yield (ft ³ /sack) 2.54	Fluid Mix Ratio (gal/sack) 13.86
Free Water (%)	Density (lb/gal) 11.90	Zero Gel Time (min)	Thickening Time (hr) 7.00	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description 0.01 gal/sk D177 Spike	Quantity (sacks) 426	Class C	Volume Pumped (bbl) 106.0
Estimated Top (ftKB) 3,600.0	Estimated Bottom Depth (ftKB) 4,605.0	Percent Excess Pumped (%) 85.0	Yield (ft ³ /sack) 1.33	Fluid Mix Ratio (gal/sack) 6.37
Free Water (%)	Density (lb/gal) 14.80	Zero Gel Time (min)	Thickening Time (hr) 3.50	1st Compressive Strength (psi)



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description Oil Based Mud	Quantity (sacks)	Class	Volume Pumped (bbl) 334.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 9.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation			Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,600.0	Vertical Section Direction (°) 359.71
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	155.0	760.0	
12 1/4	760.0	4,615.0	
8 3/4	4,615.0	18,709.0	

Multi-bowl, FMC on 8/19/2016 04:30

Sub-Type Multi-bowl	Install Date 8/19/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 750ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 8/19/2016	Set Depth (MD) (ftKB) 750	Stick Up (ftKB) -35.7	Set Tension (kips)					
Centralizers 7			Scratchers							
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Wellhead	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	2.90	36	39
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	4.13	39	43
16	Casing Joint	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	661.19	43	704
1	Float Collar	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	1.38	704	705
1	Casing Joint	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	42.89	705	748
1	Float Shoe	13 3/8	12.615	54.50	J-55	13 3/8	ST&C	1.78	748	750

Intermediate Casing 1, Planned?-N, 4,605ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 9/8/2016	Set Depth (MD) (ftKB) 4,605	Stick Up (ftKB) -34.4	Set Tension (kips)					
Centralizers 30			Scratchers							
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	0.00	34	34
1	Landing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	0.00	34	34
1	Hanger	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	2.44	34	37
1	Casing Pup Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	4.20	37	41
108	Casing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	4,480.03	41	4,521
1	Float Collar	9 5/8	8.835			9 5/8	LT&C	1.49	4,521	4,523
2	Casing Joint	9 5/8	8.835	40.00	HCK-55	9 5/8	LT&C	80.86	4,523	4,603
1	Float Shoe	9 5/8	8.835			9 5/8	LT&C	1.62	4,603	4,605

Production Casing, Planned?-N, 18,694ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 9/29/2016	Set Depth (MD) (ftKB) 18,694		Stick Up (ftKB) -35.7		Set Tension (kips)			
Centralizers 170			Scratchers							
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
24	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	36	36
1	Hanger	5 1/2	4.800	20.00	P-110		TXP-BTC	1.28	36	37
1	Hanger Pup	5 1/2	4.800	20.00	P-110		TXP-BTC	4.35	37	41
20	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	793.98	41	835
1	Pup Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	5.14	835	840
198	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	7,755.15	840	8,596
1	Marker Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	10.28	8,596	8,606
254	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	9,921.27	8,606	18,527
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	9.86	18,527	18,537



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	RSI	5 1/2	4 800	20.00	P-110		TXP-BTC	6.66	18,537	18,544
1	Pup Jt	5 1/2	4 800	20.00	P-110		TXP-BTC	9.87	18,544	18,554
1	Casing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	39.17	18,554	18,593
1	Pup Jt	5 1/2	4 800	20.00	P-110		TXP-BTC	9.67	18,593	18,602
1	Land Collar	5 1/2	4 800	20.00	P-110		TXP-BTC	1.48	18,602	18,604
1	Casing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	40.01	18,604	18,644
1	Float Collar	5 1/2	4 800	20.00	P-110		TXP-BTC	2.42	18,644	18,646
1	XRV	5 1/2	4 800	20.00	P-110		TXP-BTC	2.22	18,646	18,649
1	Casing Joint	5 1/2	4 800	20.00	P-110		TXP-BTC	42.42	18,649	18,691
1	Float Shoe	5 1/2	4 800	20.00	P-110		TXP-BTC	3.04	18,691	18,694

Production Casing Cement, Casing, 9/30/2016 07:00

Cementing Start Date 9/30/2016	Cementing End Date 9/30/2016	Wellbore Original Hole
Evaluation Method Lift Pressure	Cement Evaluation Results 1650 FCP at 4 bpm	
Comment		

1, 2,901.0-18,709.0ftKB

Top Depth (ftKB) 2,901.0	Bottom Depth (ftKB) 18,709.0	Full Return? N	Vol Cement Ret (bbl) 0.0	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbl/min) 4.2	Final Pump Rate (bbl/min) 4	Avg Pump Rate (bbl/min) 6.5	Final Pump Pressure (psi) 1,650.0	Plug Bump Pressure (psi) 2,200.0	
Pipe Reciprocated? N	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated? N	Pipe RPM (rpm)	
Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date	

Spacer

Fluid Type Spacer	Fluid Description 50 bbl MPE 114 bbl MRF	Quantity (sacks)	Class	Volume Pumped (bbl) 164.0
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 2,901.0	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type Lead	Fluid Description Lead 1 spiked 0.5/10 bbl D177 and CemNet added - 301 bbl, 621 sx, 11.5 ppg	Quantity (sacks) 621	Class H	Volume Pumped (bbl) 301.0
Estimated Top (ftKB) 2,901.0	Estimated Bottom Depth (ftKB) 49,558.0	Percent Excess Pumped (%) 50.0	Yield (ft ³ /sack) 2.72	Fluid Mix Ratio (gal/sack) 15.89
Free Water (%)	Density (lb/gal) 11.50	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type Lead	Fluid Description Lead 2 spiked 0.5/10 bbl D177 - 575 bbl, 1993 sx, 12.5 ppg	Quantity (sacks) 1,993	Class H	Volume Pumped (bbl) 575.0
Estimated Top (ftKB) 49,558.0	Estimated Bottom Depth (ftKB) 17,738.0	Percent Excess Pumped (%) 35.0	Yield (ft ³ /sack) 1.62	Fluid Mix Ratio (gal/sack) 8.48
Free Water (%)	Density (lb/gal) 12.50	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 24 FED P23 004H	Lessee	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Cement Fluid Additives

Add	Type	Conc
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Tail

Fluid Type Tail	Fluid Description Tail - 43 bbl, 111 sx, 15 ppg	Quantity (sacks) 111	Class H	Volume Pumped (bbl) 43.0
Estimated Top (ftKB) 17,738.0	Estimated Bottom Depth (ftKB) 18,709.0	Percent Excess Pumped (%) 0.0	Yield (ft ³ /sack) 2.18	Fluid Mix Ratio (gal/sack) 9.56
Free Water (%)	Density (lb/gal) 15.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc
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Displacement

Fluid Type Displacement	Fluid Description 411 bbl fresh water	Quantity (sacks)	Class	Volume Pumped (bbl) 411.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc
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