

HOBBS OCDUNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**NMOCD**
HobbsFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

DEC 02 2016

RECEIVED**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**5. Lease Serial No.
NMNM27506

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
SD EA 19 FEDERAL P6 005H9. API Well No.
30-025-4279710. Field and Pool, or Exploratory
BONE SPRING11. County or Parish, and State
LEA COUNTY, NM1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
CHEVRON U.S.A. INC. Contact: DENISE PINKERTON
E-Mail: leakejd@chevron.com3a. Address
6301 DEAUVILLE BLVD
MIDLAND, TX 797063b. Phone No. (include area code)
Ph: 432-687-73754. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 19 T26S R33E Mer NMP 227FNL 1747FEL

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

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

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleteness 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 recompleteness 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.)

01/30/2016: SPUD WELL. DRILL SURFACE HOLE FR 112-170, 560, 847.

01/31/2016: RUN 13 3/8", 54.5#, J-55 STC CSG SET @ 838'. TAG BTM @ 847. FC @ 796. NOTIFIED PAUL FLOWERS, BLM, OF INTENT TO RUN SURF CSG. PRESS TEST LINES TO 3469 PSI. PMP 40 BBLS SPACER @ 8.3 PPG. MIX & PUMP 1006 SX CMT @ 14.8 PPG. DISPL W/123 BBLS OF 8.3 PPG FW. BUMP PLUG W/543 PSI OVER FINAL CIRC PRESS. FULL RETURNS THROUGHOUT JOB. FINAL CIRC PRESS PRIOR TO BUMPING PLUG 324 PSI @ 2.1BPM. 120 BBLS OF CMT TO SURF.

03/04/2016: TEST BOPE TO 250 PSI LOW/5000 PSI HIGH.
03/05/2016: TEST SURF CSG TO 1500 PSI FOR 30 MINS. GOOD.
DRILL 859-1396, 2178, 2621, 3153, 3785, 4326, 4755.

See ATTACH

14. I hereby certify that the foregoing is true and correct. Electronic Submission #351893 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 09/29/2016 (I	
Name (Printed/Typed) DENISE PINKERTON	Title PERMITTING SPECIALIST
Signature (Electronic Submission)	Date 09/20/2016
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____ Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office _____
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	

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

Additional data for EC transaction #351893 that would not fit on the form

32. Additional remarks, continued

03/07/2016: RAN 9 5/8" INTERMEDIATE CSG SET @ 4745'. FC @ 4670.
PRESS TEST LINES TO 500 PSI LOW & 3000 PSI HIGH. PMP 35 BBLS DYED FW SPACER.
MIX & PUMP 1064 SX LEAD @ 11.9PPG. MIX & PUMP 460 SX TAIL @ 14.8PPG.
BUMP PLUG W/500 PSI OVER FINAL CIRC PRESS @ 1794 PSI. HELD FOR 5 MINS. FULL RETURNS THROUGHOUT JOB.
FINAL CIRC PRESS PRIOR TO BUMPING PLUG 1294 PSI @ 2.9BPM. 517 SX OF CMT RETURNED TO SURFACE. CMT
IN PLACE @ 15:14 HRS. WOC 8 HRS.

03/08/2016: DRILL 10' NEW FORMATION TO 4765, 6313, 7155, 7684, 7910, 8409, 8703, 8939, 9112, 9247,
9424, 9526, 9791, 10083, 10677, 11164, 11828, 12006, 12164, 12450, 12716, 12761, 13476, 13515,
13928. (TD REACHED ON 03/16/2016)

03/17/2016: RAN 5 1/2" 20# HCP-110 TXP BTC PRODUCTION CSG SET @ 13,915'. LC @ 13,823, RSI TOOL @
13755', MARKER JOINT @ 8619'.
PRESS TEST 500 PSI LOW, 5000 PSI HIGH.
03/18/2016: CMT W/621 SX 50:50 POZ H, 870 SX TX1 LEAD, & 123 SX CL H TAIL.
FINAL CIRC PRESS - 2443 PSI @ 3.8 BBL MIN. BUMP PLUG PRESS - 2981 PSI @ 1.9 BBL/MIN. GOOD RETURNS
THROUGHOUT JOB. 15 BBL SPACER BACK TO SURF. CMT IN PLACE @ 16:30 HRS. TOC @ 3760'.

03/19/2016: RELEASE RIG.

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1610090

OPERATOR Chevron

WELL NAME SD EA 19 Fed P6 5H

COUNTY & STATE Lea County, NM

API WELL NUMBER 30-025-42797

PROPOSED DIRECTION 185.99

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
834.00 ft	833.80 ft	1.9°	60.3°	8.72 N	13.01 E	Well Benders

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
5-Mar-16	962 ft	1.9°	60.9°

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
11-Mar-16	9,372 ft	74.5	174.1

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
11-Mar-16	9,423 ft	82.5	175

Robert Brewer

PRINT YOUR NAME ABOVE

Robert Brewer

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.60°
DECLINATION OR GRID	GRID

03/11/16

TODAY'S DATE

MWD SUPERVISOR 1

Robert Brewer

DIRECTIONAL DRILLER 1

Casey Tubbe

MWD SUPERVISOR 2

Michael Johnson

DIRECTIONAL DRILLER 2

Justin Jackson

12329 Cutten Rd., Houston, Texas 77066 (713)337-0600 (Voice), (713)337-0599 (Fax)



Chevron

Lea County, NM (NAD27 NME)

SD EA 19 Fed

P6 5H

OH / Job 1610090

Survey: Phoenix MWD Surveys

Standard Survey Report

22 March, 2016





Phoenix Technology Services Survey Report



Company: Chevron
Project: Lea County, NM (NAD27 NME)
Site: SD EA 19 Fed
Well: P6 5H
Wellbore: OH / Job 1610090
Design: Surveys (Pace X30)

Local Co-ordinate Reference: Well P6 5H
TVD Reference: RKB @ 3232.00usft (Pace X30)
MD Reference: RKB @ 3232.00usft (Pace X30)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

Project	Lea County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	SD EA 19 Fed		
Site Position:	Northings:	377,402.00 usft	Latitude: 32° 2' 7.86475 N
From: Map	Easting:	724,767.00 usft	Longitude: 103° 36' 28.78145 W
Position Uncertainty:	0.00 usft	Stot Radius: 13-3/16 "	Grid Convergence: 0.38 °

Well	P6 5H		
Well Position	+N/-S	0.00 usft	Northings: 377,402.00 usft
	+E/-W	0.00 usft	Easting: 724,767.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation: 0.00 usft	Ground Level: 3,205.00 usft

Wellbore	OH / Job 1610090		
Magnetics	Model Name	Sample Date	Declination
	HDGM	1/27/2016	8.98
			Dip Angle
			59.77
			Field Strength
			48,056

Design	Surveys (Pace X30)		
Audit Notes:			
Version:	1.0	Phase: ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction
			185.99

Survey Program	Date 3/22/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
182.47	834.00	Wellbenders MWD Surveys (OH / Job 161	MWD
962.00	9,423.00	Phoenix MWD Surveys (OH / Job 1610090	PHX+MWD+HDGM
			Description
			MWD - Standard
			PHX+OWSG MWD + HDGM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
834.00	1.80	60.30	833.80	8.72	13.01	-10.03	0.00	0.00	0.00
Tie-In to Wellbenders									
962.00	1.90	60.90	961.73	10.81	16.70	-12.49	0.02	0.00	0.47
First Phoenix MWD Survey									
1,143.00	1.40	346.90	1,142.67	14.42	18.82	-16.31	1.12	-0.28	-40.88
1,321.00	1.60	350.60	1,320.61	18.99	17.92	-20.76	0.12	0.11	2.08
1,498.00	1.60	328.00	1,497.55	23.52	16.21	-25.09	0.35	0.00	-12.77
1,675.00	1.80	333.00	1,674.47	28.10	13.64	-29.37	0.14	0.11	2.82
1,853.00	2.70	269.90	1,852.35	30.58	8.18	-31.27	1.39	0.51	-35.45



Phoenix Technology Services

Survey Report



Company: Chevron
 Project: Lea County, NM (NAD27 NME)
 Site: SD EA 19 Fed
 Well: P6 5H
 Wellbore: OH / Job 1610090
 Design: Surveys (Pace X30)

Local Co-ordinate Reference: Well P6 5H
 TVD Reference: RKB @ 3232.00usft (Pace X30)
 MD Reference: RKB @ 3232.00usft (Pace X30)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Compass 5000 GCR

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,030.00	3.20	265.20	2,029.12	30.16	-0.91	-29.90	0.31	0.28	-2.66
2,207.00	4.50	269.70	2,205.72	29.71	-12.78	-28.21	0.75	0.73	2.54
2,384.00	5.80	269.60	2,382.03	29.61	-28.36	-26.49	0.82	0.62	-0.06
2,561.00	5.80	268.80	2,558.15	29.36	-45.94	-24.41	0.12	0.11	-0.45
2,738.00	6.50	269.70	2,734.13	29.13	-64.90	-22.19	0.40	0.40	0.51
2,916.00	5.40	271.90	2,911.17	29.35	-83.35	-20.49	0.63	-0.62	1.24
3,093.00	4.00	267.00	3,087.57	29.30	-97.83	-18.93	0.82	-0.79	-2.77
3,271.00	4.20	262.60	3,265.12	28.14	-110.50	-16.45	0.21	0.11	-2.47
3,448.00	3.60	259.10	3,441.70	26.25	-122.38	-13.33	0.36	-0.34	-1.98
3,625.00	3.10	259.70	3,618.40	24.35	-132.55	-10.37	0.28	-0.28	0.34
3,803.00	3.70	270.00	3,796.09	23.49	-143.03	-8.42	0.48	0.34	5.79
3,980.00	4.20	272.30	3,972.67	23.75	-155.22	-7.41	0.30	0.28	1.30
4,158.00	3.40	272.80	4,150.28	24.27	-167.00	-6.69	0.45	-0.45	0.28
4,335.00	3.80	276.30	4,328.93	25.17	-178.07	-6.43	0.26	0.23	1.98
4,512.00	3.60	265.70	4,503.56	25.39	-189.44	-5.47	0.40	-0.11	-5.99
4,689.00	3.90	265.80	4,680.18	24.53	-200.99	-3.41	0.17	0.17	0.06
4,793.00	4.00	268.90	4,783.93	24.21	-208.14	-2.34	0.23	0.10	2.98
4,970.00	4.10	267.50	4,960.49	23.81	-220.64	-0.64	0.08	0.06	-0.79
5,147.00	4.50	278.90	5,137.00	24.61	-233.82	-0.06	0.53	0.23	6.44
5,325.00	4.30	279.10	5,314.47	26.75	-247.31	-0.77	0.11	-0.11	0.11
5,502.00	4.40	278.90	5,490.96	28.96	-260.55	-1.60	0.07	0.06	0.45
5,680.00	4.20	281.30	5,668.46	31.41	-273.66	-2.66	0.13	-0.11	0.79
5,857.00	4.00	278.40	5,845.01	33.59	-286.13	-3.52	0.16	-0.11	-1.64
6,034.00	3.90	278.40	6,021.59	35.37	-298.19	-4.03	0.06	-0.06	0.00
6,211.00	3.80	277.30	6,198.19	36.99	-309.96	-4.42	0.07	-0.06	-0.62
6,389.00	3.80	279.50	6,375.80	38.71	-321.63	-4.91	0.08	0.00	1.24
6,566.00	4.00	277.50	6,552.39	40.49	-333.54	-5.44	0.14	0.11	-1.13
6,743.00	3.70	278.50	6,728.99	42.14	-345.31	-5.85	0.17	-0.17	0.56
6,921.00	4.30	270.10	6,906.55	43.00	-357.66	-5.41	0.47	0.34	-4.72
7,098.00	4.40	275.60	7,083.04	43.67	-371.05	-4.69	0.24	0.06	3.11
7,275.00	4.10	276.60	7,259.56	45.06	-384.09	-4.71	0.17	-0.17	0.56
7,453.00	4.30	276.50	7,437.08	46.55	-397.05	-4.83	0.11	0.11	-0.06
7,631.00	3.50	282.20	7,614.67	48.45	-408.99	-5.48	0.50	-0.45	3.20
7,808.00	4.10	271.00	7,791.28	49.71	-420.59	-5.51	0.54	0.34	-6.33
7,986.00	4.30	275.40	7,968.80	50.44	-433.60	-4.89	0.21	0.11	2.47
8,163.00	3.50	282.80	8,145.39	50.39	-445.57	-3.59	0.66	-0.45	-7.12
8,340.00	3.70	282.10	8,322.04	48.93	-456.58	-0.98	0.12	0.11	-0.40
8,518.00	3.30	286.80	8,499.71	47.85	-467.39	1.22	0.28	-0.22	2.64
8,646.00	2.50	282.60	8,627.55	47.29	-473.84	2.45	0.65	-0.63	-3.28
8,751.00	8.60	213.90	8,732.04	40.47	-480.49	9.93	6.85	5.81	-46.38
8,795.00	17.20	208.40	8,774.80	32.00	-485.43	18.87	19.72	19.55	-12.50
8,840.00	23.60	210.20	8,817.05	18.35	-493.14	33.25	14.29	14.22	4.00
8,884.00	27.40	210.80	8,856.76	2.03	-502.75	50.48	8.66	8.64	1.36



Phoenix Technology Services Survey Report



Company: Chevron
Project: Lea County, NM (NAD27 NME)
Site: SD EA 19 Fed
Well: P6 5H
Wellbore: OH / Job 1610090
Design: Surveys (Pace X30)

Local Co-ordinate Reference: Well P6 5H
TVD Reference: RKB @ 3232.00usft (Pace X30)
MD Reference: RKB @ 3232.00usft (Pace X30)
North Reference: Gnd
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,928.00	31.70	210.40	8,895.03	-16.64	-513.79	70.21	9.78	9.77	-0.91
8,973.00	34.40	208.90	8,932.74	-37.97	-525.92	92.69	8.27	6.00	-3.33
9,017.00	36.10	202.20	8,968.69	-60.87	-536.83	116.60	9.60	3.86	-15.23
9,061.00	40.50	198.10	9,003.21	-86.47	-546.17	143.03	11.54	10.00	-9.32
9,106.00	43.50	196.10	9,036.65	-115.24	-555.01	172.57	7.30	6.67	-4.44
9,150.00	47.20	192.30	9,067.58	-145.58	-562.65	203.54	10.41	8.41	-8.64
9,194.00	50.70	191.00	9,096.47	-178.08	-569.34	236.56	8.26	7.95	-2.95
9,239.00	55.70	186.90	9,123.42	-213.65	-574.90	272.52	13.29	11.11	-9.11
9,283.00	60.90	181.90	9,146.55	-250.95	-577.73	309.91	15.26	11.82	-11.36
9,328.00	68.10	176.80	9,165.92	-291.52	-577.21	350.20	18.98	16.00	-11.33
9,372.00	74.50	174.10	9,180.02	-333.04	-573.89	391.15	15.66	14.55	-6.14
Final Phoenix MWD Survey									
9,423.00	82.50	175.00	9,190.18	-382.75	-569.15	440.09	15.78	15.69	1.76
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
834.00	833.80	8.72	13.01	Tie-in to Wellbenders
962.00	961.73	10.81	16.70	First Phoenix MWD Survey
9,372.00	9,180.02	-333.04	-573.89	Final Phoenix MWD Survey
9,423.00	9,190.18	-382.75	-569.15	Projection to TD

Checked By: _____ Approved By: _____ Date: _____



Directional Survey

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (ft)

Wellbore Name Original Hole		Parent Wellbore Original Hole		Min Kick Off Depth (ftKB) 8,703.0		Vertical Section Direction (°) 185.99	
Northing (Y) (ft)		Easting (X) (ft)		UTM Grid Zone			
Date 1/30/2016		Definitive? Y		Description MWD		Planned? N	
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)		Azimuth Tie In (°)	
						NSTie In (ft)	
						EW 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
182.47	0.50	64.20	182.47	0.35	0.72	-0.42	0.27	Magn MWD	Rig	0.27	0.80	35.18	N
275.77	0.70	51.90	275.76	0.88	1.53	-1.03	0.25	Magn MWD	Rig	0.21	1.76	-13.18	N
368.72	0.80	47.30	368.70	1.67	2.46	-1.91	0.13	Magn MWD	Rig	0.11	2.97	-4.95	N
461.93	1.20	50.30	461.90	2.73	3.68	-3.10	0.43	Magn MWD	Rig	0.43	4.59	3.22	N
557.63	1.80	50.50	557.57	4.33	5.62	-4.89	0.63	Magn MWD	Rig	0.63	7.09	0.21	N
649.68	1.90	61.20	649.57	5.98	8.07	-6.79	0.39	Magn MWD	Rig	0.11	10.04	11.62	N
742.18	1.60	61.20	742.03	7.34	10.54	-8.40	0.32	Magn MWD	Rig	-0.32	12.85	0.00	N
834.7	1.90	60.30	834.50	8.72	13.01	-10.03	0.33	Magn MWD	Rig	0.32	15.66	-0.97	N
962	1.90	60.90	961.73	10.80	16.68	-12.48	0.02	Magn MWD	Phoenix Directional	0.00	19.87	0.47	N
1,143	1.40	346.90	1,142.67	14.41	18.81	-16.29	1.12	Magn MWD	Phoenix Directional	-0.28	23.69	158.01	N
1,321	1.60	350.60	1,320.61	18.98	17.91	-20.74	0.12	Magn MWD	Phoenix Directional	0.11	26.09	2.08	N
1,498	1.60	328.00	1,497.55	23.51	16.19	-25.07	0.35	Magn MWD	Phoenix Directional	0.00	28.55	-12.77	N
1,675	1.80	333.00	1,674.47	28.09	13.62	-29.35	0.14	Magn MWD	Phoenix Directional	0.11	31.21	2.82	N
1,853	2.70	269.90	1,852.35	30.57	8.16	-31.25	1.39	Magn MWD	Phoenix Directional	0.51	31.64	-35.45	N
2,030	3.20	265.20	2,029.12	30.15	-0.93	-29.89	0.31	Magn MWD	Phoenix Directional	0.28	30.16	-2.66	N
2,207	4.50	269.70	2,205.72	29.70	-12.80	-28.20	0.75	Magn MWD	Phoenix Directional	0.73	32.34	2.54	N
2,384	5.60	269.60	2,382.03	29.60	-28.38	-26.48	0.62	Magn MWD	Phoenix Directional	0.62	41.01	-0.06	N
2,561	5.80	268.80	2,558.15	29.35	-45.96	-24.40	0.12	Magn MWD	Phoenix Directional	0.11	54.53	-0.45	N
2,738	6.50	269.70	2,734.13	29.11	-64.92	-22.18	0.40	Magn MWD	Phoenix Directional	0.40	71.15	0.51	N
2,916	5.40	271.90	2,911.17	29.34	-83.36	-20.48	0.63	Magn MWD	Phoenix Directional	-0.62	88.38	1.24	N
3,093	4.00	267.00	3,087.57	29.29	-97.85	-18.92	0.82	Magn MWD	Phoenix Directional	-0.79	102.14	-2.77	N
3,271	4.20	262.60	3,265.12	28.13	-110.52	-16.44	0.21	Magn MWD	Phoenix Directional	0.11	114.04	-2.47	N
3,448	3.60	259.10	3,441.71	26.24	-122.40	-13.33	0.36	Magn MWD	Phoenix Directional	-0.34	125.18	-1.98	N
3,625	3.10	259.70	3,618.40	24.34	-132.57	-10.37	0.28	Magn MWD	Phoenix Directional	-0.28	134.78	0.34	N
3,803	3.70	270.00	3,798.09	23.48	-143.05	-8.42	0.48	Magn MWD	Phoenix Directional	0.34	144.96	5.79	N
3,980	4.20	272.30	3,972.67	23.74	-155.23	-7.41	0.30	Magn MWD	Phoenix Directional	0.28	157.04	1.30	N
4,158	3.40	272.80	4,150.28	24.25	-167.02	-6.69	0.45	Magn MWD	Phoenix Directional	-0.45	168.77	0.28	N



Directional Survey

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (ft)

Survey Data

MD (RKB)	Incl (°)	Azm (°)	TVD (RKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
4,335	3.80	276.30	4,326.93	25.15	-178.09	-6.43	0.26	Magn MWD	Phoenix Directional	0.23	179.86	1.98	N
4,512	3.60	265.70	4,503.56	25.38	-189.46	-5.47	0.40	Magn MWD	Phoenix Directional	-0.11	191.15	-5.99	N
4,689	3.90	265.80	4,680.18	24.52	-201.01	-3.41	0.17	Magn MWD	Phoenix Directional	0.17	202.50	0.06	N
4,793	4.00	268.90	4,783.93	24.20	-208.16	-2.34	0.23	Magn MWD	Phoenix Directional	0.10	209.56	2.98	N
4,970	4.10	267.50	4,960.49	23.80	-220.65	-0.64	0.08	Magn MWD	Phoenix Directional	0.06	221.93	-0.79	N
5,147	4.50	278.90	5,137.00	24.60	-233.84	-0.06	0.53	Magn MWD	Phoenix Directional	0.23	235.13	6.44	N
5,325	4.30	279.10	5,314.47	26.74	-247.32	-0.78	0.11	Magn MWD	Phoenix Directional	-0.11	248.76	0.11	N
5,502	4.40	279.90	5,490.96	28.95	-260.56	-1.60	0.07	Magn MWD	Phoenix Directional	0.06	262.17	0.45	N
5,680	4.20	281.30	5,668.46	31.40	-273.68	-2.67	0.13	Magn MWD	Phoenix Directional	-0.11	275.48	0.79	N
5,857	4.00	278.40	5,845.01	33.58	-286.15	-3.53	0.16	Magn MWD	Phoenix Directional	-0.11	288.11	-1.64	N
6,034	3.90	278.40	6,021.59	35.36	-298.21	-4.04	0.06	Magn MWD	Phoenix Directional	-0.06	300.30	0.00	N
6,211	3.80	277.30	6,198.19	36.98	-309.98	-4.43	0.07	Magn MWD	Phoenix Directional	-0.06	312.18	-0.62	N
6,389	3.80	279.50	6,375.80	38.70	-321.65	-4.93	0.08	Magn MWD	Phoenix Directional	0.00	323.97	1.24	N
6,566	4.00	277.50	6,552.39	40.48	-333.55	-5.45	0.14	Magn MWD	Phoenix Directional	0.11	336.00	-1.13	N
6,743	3.70	278.50	6,728.99	42.13	-345.32	-5.86	0.17	Magn MWD	Phoenix Directional	-0.17	347.88	0.56	N
6,921	4.30	270.10	6,906.55	42.99	-357.68	-5.43	0.47	Magn MWD	Phoenix Directional	0.34	360.25	-4.72	N
7,098	4.40	275.60	7,083.05	43.66	-371.07	-4.70	0.24	Magn MWD	Phoenix Directional	0.06	373.63	3.11	N
7,275	4.10	276.60	7,259.56	45.05	-384.11	-4.72	0.17	Magn MWD	Phoenix Directional	-0.17	386.75	0.56	N
7,453	4.30	276.50	7,437.08	46.54	-397.06	-4.85	0.11	Magn MWD	Phoenix Directional	0.11	399.78	-0.06	N
7,631	3.50	282.20	7,614.67	48.44	-409.00	-5.50	0.50	Magn MWD	Phoenix Directional	-0.45	411.86	3.20	N
7,808	4.10	271.00	7,791.28	49.69	-420.61	-5.53	0.54	Magn MWD	Phoenix Directional	0.34	423.54	-6.33	N
7,986	4.30	275.40	7,968.80	50.43	-433.62	-4.91	0.21	Magn MWD	Phoenix Directional	0.11	436.54	2.47	N
8,163	3.50	262.80	8,145.39	50.38	-445.58	-3.61	0.66	Magn MWD	Phoenix Directional	-0.45	448.42	-7.12	N
8,340	3.70	262.10	8,322.04	48.92	-456.60	-1.00	0.12	Magn MWD	Phoenix Directional	0.11	459.21	-0.40	N
8,518	3.30	266.80	8,499.71	47.84	-467.41	1.19	0.28	Magn MWD	Phoenix Directional	-0.22	469.85	2.64	N
8,646	2.50	262.60	8,627.55	47.28	-473.85	2.43	0.65	Magn MWD	Phoenix Directional	-0.63	476.21	-3.28	N
8,751	8.60	213.90	8,732.04	40.46	-480.51	9.91	6.85	Magn MWD	Phoenix Directional	5.81	482.21	-46.38	N
8,795	17.20	208.40	8,774.90	31.99	-485.45	18.84	19.72	Magn MWD	Phoenix Directional	19.55	486.50	-12.50	N
8,840	23.60	210.20	8,817.05	18.34	-493.15	33.23	14.29	Magn MWD	Phoenix Directional	14.22	493.49	4.00	N
8,884	27.40	210.80	8,856.76	2.02	-502.77	50.46	8.66	Magn MWD	Phoenix Directional	8.64	502.78	1.36	N



Directional Survey

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (ft)

Survey Data

MD (RKB)	Incl (°)	Azm (°)	TVD (RKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
8,928	31.70	210.40	8,895.03	-16.65	-513.81	70.18	9.78	Magn MWD	Phoenix Directional	9.77	514.08	-0.91	N
8,973	34.40	208.90	8,932.74	-37.98	-525.94	92.66	6.27	Magn MWD	Phoenix Directional	6.00	527.31	-3.33	N
9,017	36.10	202.20	8,968.69	-60.88	-536.85	116.57	9.60	Magn MWD	Phoenix Directional	3.86	540.29	-15.23	N
9,061	40.50	198.10	9,003.21	-86.48	-546.19	143.00	11.54	Magn MWD	Phoenix Directional	10.00	553.00	-9.32	N
9,106	43.50	196.10	9,036.65	-115.25	-555.03	172.55	7.30	Magn MWD	Phoenix Directional	6.67	566.87	-4.44	N
9,150	47.20	192.30	9,067.58	-145.59	-562.67	203.52	10.41	Magn MWD	Phoenix Directional	8.41	581.20	-8.64	N
9,194	50.70	191.00	9,096.47	-178.09	-569.36	236.53	8.26	Magn MWD	Phoenix Directional	7.95	596.56	-2.95	N
9,239	55.70	186.90	9,123.42	-213.66	-574.92	272.49	13.29	Magn MWD	Phoenix Directional	11.11	613.34	-9.11	N
9,283	60.90	181.90	9,146.55	-250.96	-577.75	309.88	15.26	Magn MWD	Phoenix Directional	11.82	629.90	-11.36	N
9,328	68.10	176.80	9,165.92	-291.53	-577.23	350.17	18.98	Magn MWD	Phoenix Directional	16.00	646.67	-11.33	N
9,372	74.50	174.10	9,180.02	-333.05	-573.91	391.12	15.66	Magn MWD	Phoenix Directional	14.55	663.54	-6.14	N
9,412	81.84	174.98	9,188.21	-371.99	-570.19	429.46	18.48	Magn MWD	Phoenix Directional	18.35	680.80	2.20	N
9,450	84.48	174.64	9,192.74	-409.56	-566.78	466.47	7.00	Magn MWD	Phoenix Directional	6.95	699.27	-0.89	N
9,500	89.41	173.61	9,195.40	-459.21	-561.67	515.32	10.07	Magn MWD	Phoenix Directional	9.86	725.50	-2.06	N
9,589	91.85	172.90	9,194.42	-547.59	-551.21	602.12	2.86	Magn MWD	Phoenix Directional	2.74	776.97	-0.80	N
9,678	91.63	173.79	9,191.72	-635.95	-540.91	688.92	1.03	Magn MWD	Phoenix Directional	-0.25	834.87	1.00	N
9,766	91.14	174.08	9,189.59	-723.43	-531.61	774.95	0.65	Magn MWD	Phoenix Directional	-0.56	897.75	0.33	N
9,855	91.08	177.04	9,187.87	-812.13	-524.72	862.46	3.33	Magn MWD	Phoenix Directional	-0.07	966.90	3.33	N
9,944	91.23	182.00	9,186.07	-901.08	-523.98	950.84	5.57	Magn MWD	Phoenix Directional	0.17	1,042 36	5.57	N
10,032	91.11	182.76	9,184.28	-988.99	-527.63	1,038.65	0.87	Magn MWD	Phoenix Directional	-0.14	1,120 93	0.86	N
10,121	91.14	182.00	9,182.53	-1,077.89	-531.33	1,127.46	0.85	Magn MWD	Phoenix Directional	0.03	1,201 73	-0.85	N
10,209	91.26	179.76	9,180.69	-1,165.86	-532.68	1,215.08	2.55	Magn MWD	Phoenix Directional	0.14	1,281 78	-2.55	N
10,298	90.80	179.26	9,179.09	-1,254.84	-531.92	1,303.50	0.76	Magn MWD	Phoenix Directional	-0.52	1,362 92	-0.56	N
10,387	90.55	182.46	9,178.04	-1,343.81	-533.25	1,392.12	3.61	Magn MWD	Phoenix Directional	-0.28	1,445 75	3.60	N
10,475	90.40	181.97	9,177.31	-1,431.74	-536.65	1,479.93	0.58	Magn MWD	Phoenix Directional	-0.17	1,529 02	-0.56	N
10,564	91.29	180.77	9,176.00	-1,520.71	-538.78	1,568.63	1.68	Magn MWD	Phoenix Directional	1.00	1,613 33	-1.35	N
10,652	92.62	180.24	9,172.99	-1,608.65	-539.56	1,656.17	1.63	Magn MWD	Phoenix Directional	1.51	1,696 72	-0.60	N
10,741	90.58	177.76	9,170.51	-1,697.59	-538.00	1,744.46	3.61	Magn MWD	Phoenix Directional	-2.29	1,780 80	-2.79	N
10,829	90.31	175.81	9,169.83	-1,785.44	-533.07	1,831.32	2.24	Magn MWD	Phoenix Directional	-0.31	1,863 32	-2.22	N
10,918	89.20	175.13	9,170.21	-1,874.16	-526.04	1,918.83	1.46	Magn MWD	Phoenix Directional	-1.25	1,946 59	-0.76	N



Directional Survey

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (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
11,006	87.84	175.10	9,172.48	-1,961.81	-518.55	2,005.21	1.55	Magn MWD	Phoenix Directional	-1.55	2,029 19	-0.03	N
11,095	90.34	175.23	9,173.89	-2,050.48	-511.05	2,092.61	2.81	Magn MWD	Phoenix Directional	2.81	2,113 20	0.15	N
11,184	90.22	177.79	9,173.46	-2,139.30	-505.63	2,180.39	2.88	Magn MWD	Phoenix Directional	-0.13	2,198 25	2.88	N
11,272	90.77	181.09	9,172.70	-2,227.28	-504.77	2,267.80	3.80	Magn MWD	Phoenix Directional	0.63	2,283 77	3.75	N
11,361	90.65	182.76	9,171.59	-2,316.22	-507.76	2,356.56	1.88	Magn MWD	Phoenix Directional	-0.13	2,371 23	1.88	N
11,449	90.71	182.49	9,170.55	-2,404.13	-511.79	2,444.41	0.31	Magn MWD	Phoenix Directional	0.07	2,458 00	-0.31	N
11,538	90.59	182.73	9,169.54	-2,493.03	-515.84	2,533.25	0.30	Magn MWD	Phoenix Directional	-0.13	2,545 84	0.27	N
11,626	90.34	184.94	9,168.83	-2,580.82	-521.73	2,621.18	2.53	Magn MWD	Phoenix Directional	-0.28	2,633 03	2.51	N
11,715	89.94	183.26	9,168.61	-2,669.59	-528.09	2,710.12	1.94	Magn MWD	Phoenix Directional	-0.45	2,721 32	-1.89	N
11,803	90.06	182.01	9,168.61	-2,757.50	-532.14	2,797.97	1.43	Magn MWD	Phoenix Directional	0.14	2,808 37	-1.42	N
11,892	89.97	182.81	9,168.59	-2,846.42	-535.88	2,886.80	0.90	Magn MWD	Phoenix Directional	-0.10	2,896 42	0.90	N
11,981	89.82	179.45	9,168.75	-2,935.39	-537.63	2,975.46	3.78	Magn MWD	Phoenix Directional	-0.17	2,984 21	-3.78	N
12,070	93.94	180.67	9,165.83	-3,024.32	-537.73	3,063.92	4.83	Magn MWD	Phoenix Directional	4.63	3,071 75	1.37	N
12,158	88.95	180.72	9,163.61	-3,112.25	-538.79	3,151.49	5.67	Magn MWD	Phoenix Directional	-5.67	3,158 55	0.06	N
12,247	87.81	177.24	9,166.13	-3,201.19	-537.21	3,239.77	4.11	Magn MWD	Phoenix Directional	-1.28	3,245 95	-3.91	N
12,336	87.81	176.15	9,169.53	-3,289.98	-532.08	3,327.54	1.22	Magn MWD	Phoenix Directional	0.00	3,332 72	-1.22	N
12,425	87.29	178.25	9,173.33	-3,378.78	-527.74	3,415.41	2.43	Magn MWD	Phoenix Directional	-0.58	3,419 75	2.36	N
12,514	89.23	179.81	9,176.04	-3,467.72	-526.23	3,503.70	2.80	Magn MWD	Phoenix Directional	2.18	3,507 42	1.75	N
12,603	90.03	180.24	9,176.61	-3,556.72	-526.27	3,592.22	1.02	Magn MWD	Phoenix Directional	0.90	3,595 44	0.48	N
12,692	90.71	172.99	9,176.04	-3,645.50	-521.02	3,679.97	8.18	Magn MWD	Phoenix Directional	0.76	3,682 55	-8.15	N
12,781	90.83	168.95	9,174.84	-3,733.37	-507.06	3,765.90	4.54	Magn MWD	Phoenix Directional	0.13	3,767 65	-4.54	N
12,869	90.83	174.01	9,173.56	-3,820.36	-494.02	3,851.06	5.75	Magn MWD	Phoenix Directional	0.00	3,852 17	5.75	N
12,958	90.83	174.40	9,172.27	-3,908.90	-485.04	3,938.17	0.44	Magn MWD	Phoenix Directional	0.00	3,938 88	0.44	N
13,047	90.83	179.45	9,170.98	-3,997.73	-480.27	4,026.02	5.67	Magn MWD	Phoenix Directional	0.00	4,026 48	5.67	N
13,136	90.37	185.10	9,170.05	-4,086.62	-483.80	4,114.80	6.37	Magn MWD	Phoenix Directional	-0.52	4,115 16	6.35	N
13,224	90.46	187.65	9,169.41	-4,174.07	-493.57	4,202.79	2.90	Magn MWD	Phoenix Directional	0.10	4,203 15	2.90	N
13,313	90.18	185.36	9,168.92	-4,262.49	-503.65	4,291.77	2.59	Magn MWD	Phoenix Directional	-0.31	4,292 14	-2.57	N
13,401	90.55	181.49	9,168.36	-4,350.31	-508.91	4,379.67	4.42	Magn MWD	Phoenix Directional	0.42	4,379 98	-4.40	N
13,490	90.65	180.71	9,167.42	-4,439.29	-510.62	4,468.34	0.88	Magn MWD	Phoenix Directional	0.11	4,468 56	-0.88	N
13,579	90.55	178.64	9,166.49	-4,528.28	-510.11	4,556.79	2.33	Magn MWD	Phoenix Directional	-0.11	4,556 92	-2.33	N



Directional Survey

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (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
13,667	90.68	176.80	9,165.55	-4,616.20	-506.61	4,643.86	2.10	Magn MWD	Phoenix Directional	0.15	4,643.92	-2.09	N
13,756	91.20	177.29	9,164.09	-4,705.07	-502.02	4,731.77	0.80	Magn MWD	Phoenix Directional	0.58	4,731.78	0.55	N
13,845	91.51	179.64	9,161.98	-4,794.01	-499.64	4,819.97	2.66	Magn MWD	Phoenix Directional	0.35	4,819.97	2.64	N
13,903	91.51	182.47	9,160.45	-4,851.97	-500.71	4,877.73	4.88	Magn MWD	Phoenix Directional	0.00	4,877.74	4.88	N
13,928	91.51	182.47	9,159.79	-4,876.94	-501.78	4,902.68	0.00	Magn MWD	Phoenix Directional	0.00	4,902.69	0.00	N



Casing Summary

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (ft)

Surface, Planned? -N, 838ftKB

Set Depth (MD) (ftKB) 838		Set Tension (kips)		String Nominal OD (in) 13 3/8		String Min Drift (in)		Centralizers 9		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	Casing Joint	13 3/8	12.615	54.50	J-55		-5	-5	0.00		1,130.0
1	Landing Joint	13 3/8	12.615	54.50	J-55		-5	34	38.70		1,130.0
1	Wellhead	13 3/8	12.615	54.50	J-55		34	38	4.41		1,130.0
1	Pup Joint	13 3/8	12.615	54.50	J-55		38	41	2.88		1,130.0
17	Casing Joint	13 3/8	12.615	54.50	J-55		41	756	715.23		1,130.0
4	Casing Joint	13 3/8	12.615	54.50	J-55		756	838	81.67		1,130.0

Intermediate Casing 1, Planned? -N, 4,745ftKB

Set Depth (MD) (ftKB) 4,745		Set Tension (kips)		String Nominal OD (in) 9 5/8		String Min Drift (in)		Centralizers 32		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	Hanger	9 5/8	8.835	40.00	HCK-55	LTC	33	35	2.44		2,570.0
1	Pup Joint	9 5/8	8.835	40.00	HCK-55	LTC	35	39	4.11		2,570.0
11	Casing Joint	9 5/8	8.835	40.00	HCK-55	LTC	39	4,570	4,530.47		2,570.0
1	Pup Joint	9 5/8	8.835	40.00	HCK-55	LTC	4,570	4,580	10.12		2,570.0
2	Casing Joint	9 5/8	8.835	40.00	HCK-55	LTC	4,580	4,660	80.64		2,570.0
1	Float Collar	9 5/8	8.835	40.00	HCK-55	LTC	4,660	4,662	1.49		2,990.0
2	Casing Joint	9 5/8	8.835	40.00	HCK-55	LTC	4,662	4,743	81.50		2,990.0
1	Float Shoe	9 5/8	8.835	40.00	HCK-55	LTC	4,743	4,745	1.63		

Production Casing, Planned? -N, 13,915ftKB

Set Depth (MD) (ftKB) 13,915		Set Tension (kips)		String Nominal OD (in) 5 1/2		String Min Drift (in) 4.656		Centralizers 103		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	4.781	20.00	HCP-110	TXP BTC	-6	33	39.00	12,360.0	11,100.0
1	Hanger	5 1/2	4.781	20.00	HCP-110	TXP BTC	33	34	1.19	12,360.0	11,100.0
1	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	34	38	3.73	12,360.0	11,100.0
16	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	38	6,629	6,591.52	12,360.0	11,100.0
3	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	6,629	6,640	10.97	12,360.0	11,100.0
35	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	6,640	8,047	1,406.90	12,360.0	11,100.0
1	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	8,047	8,058	10.95	12,360.0	11,100.0
14	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	8,058	8,619	561.28	12,360.0	11,100.0
1	Marker Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	8,619	8,629	10.25	12,360.0	11,100.0
12	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	8,629	13,745	5,115.28	12,360.0	11,100.0
6	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,745	13,755	10.31	12,360.0	11,100.0
1	RSI Tool	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,755	13,762	6.67	12,360.0	11,100.0
1	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,762	13,772	10.27	12,360.0	11,100.0
1	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,772	13,813	41.15	12,360.0	11,100.0
1	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,813	13,823	10.15	12,360.0	11,100.0
1	Landing Collar	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,823	13,825	1.52	12,360.0	11,100.0
1	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,825	13,865	40.29	12,360.0	11,100.0
1	Float Collar	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,865	13,868	2.43	12,360.0	11,100.0
1	XRV Tool	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,868	13,870	2.21	12,360.0	11,100.0
1	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,870	13,912	42.57	12,360.0	11,100.0
1	Float Shoe	5 1/2	4.781	20.00	HCP-110	TXP BTC	13,912	13,915	2.68	12,360.0	11,100.0



Cement Summary

Production Casing Cement

Well Name SALADO DRAW EA 19 FED P6 005H	Lease Salado Draw EA 19 Fed P6	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015	Mud Line Elevation (ft) Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,703.0	Vertical Section Direction (°) 185.99
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	32.6	847.0	
12 1/4	847.0	4,755.0	
8 3/4	4,755.0	13,928.0	

Multi-bowl, FMC on 1/31/2016 13:00

Sub-Type Multi-bowl	Install Date 1/31/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 838ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 1/31/2016	Set Depth (MD) (ftKB) 838	Stick Up (ftKB) 4.9	Set Tension (kps)
Centralizers 9	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	13 3/8	12.615	54.50	J-55			0.00	-5	-5
1	Landing Joint	13 3/8	12.615	54.50	J-55			38.70	-5	34
1	Wellhead	13 3/8	12.615	54.50	J-55			4.41	34	38
1	Pup Joint	13 3/8	12.615	54.50	J-55			2.88	38	41
17	Casing Joint	13 3/8	12.615	54.50	J-55			715.23	41	756
4	Casing Joint	13 3/8	12.615	54.50	J-55			81.67	756	838

Intermediate Casing 1, Planned?-N, 4,745ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 3/7/2016	Set Depth (MD) (ftKB) 4,745	Stick Up (ftKB) -32.6	Set Tension (kps)
Centralizers 32	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	Hanger	9 5/8	8.835	40.00	HCK-55		LTC	2.44	33	35
1	Pup Joint	9 5/8	8.835	40.00	HCK-55		LTC	4.11	35	39
111	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	4,530.47	39	4,570
1	Pup Joint	9 5/8	8.835	40.00	HCK-55		LTC	10.12	4,570	4,580
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	80.64	4,580	4,660
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LTC	1.49	4,660	4,662
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	81.50	4,662	4,743
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LTC	1.63	4,743	4,745

Production Casing, Planned?-N, 13,915ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 3/17/2016	Set Depth (MD) (ftKB) 13,915	Stick Up (ftKB) 6.3	Set Tension (kps)
Centralizers 103	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	4.781	20.00	HCP-110		TXP BTC	39.00	-6	33
1	Hanger	5 1/2	4.781	20.00	HCP-110		TXP BTC	1.19	33	34
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	3.73	34	38
163	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	6,591.52	38	6,629
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.97	6,629	6,640
35	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	1,406.90	6,640	8,047
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.95	8,047	8,058
14	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	561.28	8,058	8,619
1	Marker Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.25	8,619	8,629
126	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	5,115.28	8,629	13,745
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.31	13,745	13,755
1	RSI Tool	5 1/2	4.781	20.00	HCP-110		TXP BTC	6.67	13,755	13,762
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.27	13,762	13,772
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	41.15	13,772	13,813
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.15	13,813	13,823
1	Landing Collar	5 1/2	4.781	20.00	HCP-110		TXP BTC	1.52	13,823	13,825
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	40.29	13,825	13,865
1	Float Collar	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.43	13,865	13,868



Cement Summary

Production Casing Cement

Well Name SALADO DRAW EA 19 FED P6 005H	Lease Salado Draw EA 19 Fed P6	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015	Mud Line Elevation (ft) Water Depth (ft)

Jls	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	XRV Tool	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.21	13,868	13,870
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	42.57	13,870	13,912
1	Float Shoe	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.68	13,912	13,915

Production Casing Cement, Casing, 3/18/2016 13:00

Cementing Start Date 3/18/2016	Cementing End Date 3/18/2016	Wellbore Original Hole
Evaluation Method Lift Pressure	Cement Evaluation Results Full returns 15 bbl mud push to surface	

Comment

Pump production cement job as follows:

Pressure Test 500 psi low 5000 psi high
Bleed off
Drop bottom plug
Pump 30 bbl Mudpush @ 10 ppg
Pump 308.9 bbl of lead 1 @ 5 bpm @ 11.5 ppg
- 1.5 lb/bbl CemNET for 20-70 bbl and 120-170 bbl
Pump 255.8 bbl of lead 2 @ 5.4 bpm @ 12.5 ppg
Pump 46.8 bbl of tail @ 4.1 bpm @ 15 ppg
Drop top plug and wiper balls
Pump 307 bbl of water displacement
- 20 bbl Acid @ 6 bpm
- 277 bbl Fresh water @ 6 bpm
- 20 bbl Fresh water @ 4 bpm
Bump plug at 2415 psi
Hold 500 psi over FCP for 5 minutes
Bled back 300 bbl
Floats held

Details:

Cement in place at 16:30

1, 3,900.0-13,928.0ftKB

Top Depth (ftKB) 3,900.0	Bottom Depth (ftKB) 13,928.0	Full Return? Y	Vol Cement Ret (bbl) 0.0	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbl/min) 5.3	Final Pump Rate (bbl/min) 3.8	Avg Pump Rate (bbl/min) 5	Final Pump Pressure (psi) 2,443.0	Plug Bump Pressure (psi) 2,981.0	
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 MUDPUSH Express Spacer	Quantity (sacks) 621	Class H	Volume Pumped (bbl) 298.6
Estimated Top (ftKB) 3,254.0	Estimated Bottom Depth (ftKB) 3,900.0	Percent Excess Pumped (%) 50.0	Yield (ft ³ /sack) 2.70	Fluid Mix Ratio (gal/sack) 15.77
Free Water (%) 11.50	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 50:50 Poz/H + .2% D046 + 6.5% D020 + 8% D154 + .2% D065 + 2lb/sk B288 + 2 lb/sk B289	Quantity (sacks) 621	Class H	Volume Pumped (bbl) 298.6
Estimated Top (ftKB) 3,900.0	Estimated Bottom Depth (ftKB) 8,743.0	Percent Excess Pumped (%) 50.0	Yield (ft ³ /sack) 2.70	Fluid Mix Ratio (gal/sack) 15.77
Free Water (%) 11.50	Density (lb/gal) 11.50	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 EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015			Mud Line Elevation (ft)	Water Depth (ft)	

Lead

Fluid Type Lead	Fluid Description TXI + 4% D020 + .2% D046 + 2% D065 + .5% D112 + .4% D013 + .08% D208	Quantity (sacks) 870	Class H	Volume Pumped (bbl) 250.9
Estimated Top (ftKB) 8,743.0	Estimated Bottom Depth (ftKB) 12,954.0	Percent Excess Pumped (%) 35.0	Yield (ft ³ /sack) 1.62	Fluid Mix Ratio (gal/sack) 8.70
Free Water (%)	Density (lb/gal) 12.50	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description Class H + 2% D046 + .2% D065 + .4% D167 + .2% D800 + 75% D151 + .1% D208	Quantity (sacks) 123	Class H	Volume Pumped (bbl) 47.7
Estimated Top (ftKB) 12,954.0	Estimated Bottom Depth (ftKB) 13,928.0	Percent Excess Pumped (%) 0.0	Yield (ft ³ /sack) 2.18	Fluid Mix Ratio (gal/sack) 9.58
Free Water (%)	Density (lb/gal) 15.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description 20 bbls Acetic Acid 287 bbls FW	Quantity (sacks)	Class	Volume Pumped (bbl) 307.0
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



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW EA 19 FED P6 005H	Lease Salado Draw EA 19 Fed P6	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015	Mud Line Elevation (ft) Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,703.0	Vertical Section Direction (°) 185.99
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	32.8	847.0	
12 1/4	847.0	4,755.0	
8 3/4	4,755.0	13,928.0	

Multi-bowl, FMC on 1/31/2016 13:00

Sub-Type Multi-bowl	Install Date 1/31/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 838ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 1/31/2016	Set Depth (MD) (ftKB) 838	Stick Up (ftKB) 4.9	Set Tension (kips)
Centralizers 9	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	13 3/8	12.615	54.50	J-55			0.00	-5	-5
1	Landing Joint	13 3/8	12.615	54.50	J-55			38.70	-5	34
1	Wellhead	13 3/8	12.615	54.50	J-55			4.41	34	38
1	Pup Joint	13 3/8	12.615	54.50	J-55			2.88	38	41
17	Casing Joint	13 3/8	12.615	54.50	J-55			715.23	41	756
4	Casing Joint	13 3/8	12.615	54.50	J-55			81.67	756	838

Intermediate Casing 1, Planned?-N, 4,745ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 3/7/2016	Set Depth (MD) (ftKB) 4,745	Stick Up (ftKB) -32.6	Set Tension (kips)
Centralizers 32	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	Hanger	9 5/8	8.835	40.00	HCK-55		LTC	2.44	33	35
1	Pup Joint	9 5/8	8.835	40.00	HCK-55		LTC	4.11	35	39
111	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	4,530.47	39	4,570
1	Pup Joint	9 5/8	8.835	40.00	HCK-55		LTC	10.12	4,570	4,580
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	80.64	4,580	4,660
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LTC	1.49	4,660	4,662
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	81.50	4,662	4,743
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LTC	1.63	4,743	4,745

Production Casing, Planned?-N, 13,915ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 3/17/2016	Set Depth (MD) (ftKB) 13,915	Stick Up (ftKB) 6.3	Set Tension (kips)
Centralizers 103	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	4.781	20.00	HCP-110		TXP BTC	39.00	-6	33
1	Hanger	5 1/2	4.781	20.00	HCP-110		TXP BTC	1.19	33	34
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	3.73	34	38
163	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	6,591.52	38	6,629
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.97	6,629	6,640
35	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	1,406.90	6,640	8,047
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.95	8,047	8,058
14	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	561.28	8,058	8,619
1	Marker Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.25	8,619	8,629
126	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	5,115.28	8,629	13,745
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.31	13,745	13,755
1	RSI Tool	5 1/2	4.781	20.00	HCP-110		TXP BTC	6.67	13,755	13,762
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.27	13,762	13,772
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	41.15	13,772	13,813
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.15	13,813	13,823
1	Landing Collar	5 1/2	4.781	20.00	HCP-110		TXP BTC	1.52	13,823	13,825
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	40.29	13,825	13,865
1	Float Collar	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.43	13,865	13,868



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation			Mud Line Elevation (ft)	Water Depth (ft)	
3,205.00	3,237.60	3,237.60, 12/15/2015					

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	XRV Tool	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.24	13,868	13,870
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	42.57	13,870	13,912
1	Float Shoe	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.68	13,912	13,915

Intermediate Casing Cement, Casing, 3/7/2016 11:00

Cementing Start Date 3/7/2016		Cementing End Date 3/7/2016		Wellbore Original Hole	
----------------------------------	--	--------------------------------	--	---------------------------	--

Evaluation Method Returns to Surface	Cement Evaluation Results Full returns. 224 bbls cement to surface (460 sxs).
---	--

Comment
Tested service lines to 5000 psi. Pumped 35 bbl FW dyed spacer, 461 bbl (1065 sx) of Lead cement, 109 bbl (460 sx) of Tail cement, displaced with 344 bbl of 8.34 ppg FW. Bumped plug with 500 over final circulating pressure. Bled back 2.5 bbl. Floats held.

1, 32.6-4,755.0ftKB

Top Depth (ftKB) 32.6	Bottom Depth (ftKB) 4,755.0	Full Return? Y	Vol Cement Ret (bbl) 224.0	Top Plug? N	Bottom Plug? Y
Initial Pump Rate (bbl/min) 4.9	Final Pump Rate (bbl/min) 6.8	Avg Pump Rate (bbl/min) 5.9	Final Pump Pressure (psi) 1,294.0	Plug Bump Pressure (psi) 1,794.0	
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	Quantity (sacks) 35.0	Class	Volume Pumped (bbl) 35.0
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 0.0	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	Quantity (sacks) 1,065	Class	Volume Pumped (bbl) 461.0
Estimated Top (ftKB) 32.0	Estimated Bottom Depth (ftKB) 3,750.0	Percent Excess Pumped (%) 150.0	Yield (ft ³ /sack) 2.43	Fluid Mix Ratio (gal/sack) 13.98
Free Water (%)	Density (lb/gal) 11.90	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) 460	Class	Volume Pumped (bbl) 109.0
Estimated Top (ftKB) 3,750.0	Estimated Bottom Depth (ftKB) 4,755.0	Percent Excess Pumped (%) 85.0	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)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description	Quantity (sacks) 344.0	Class	Volume Pumped (bbl) 344.0
Estimated Top (ftKB) 4,755.0	Estimated Bottom Depth (ftKB) 4,755.0	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



Cement Summary

Production Casing Cement

Well Name SALADO DRAW EA 19 FED P6 005H	Lease Salado Draw EA 19 Fed P6	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015	Mud Line Elevation (ft) 185.99

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,703.0	Vertical Section Direction (°) 185.99
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	32.6	847.0	
12 1/4	847.0	4,755.0	
8 3/4	4,755.0	13,928.0	

Multi-bowl, FMC on 1/31/2016 13:00

Sub-Type Multi-bowl	Install Date 1/31/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 838ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 1/31/2016	Set Depth (MD) (ftKB) 838	Stick Up (ftKB) 4.9	Set Tension (kips)
-------------------------------	---------------------------	-----------------------	------------------------------	------------------------	--------------------

Centralizers					Scratchers					
9										
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	13 3/8	12.615	54.50	J-55			0.00	-5	-5
1	Landing Joint	13 3/8	12.615	54.50	J-55			38.70	-5	34
1	Wellhead	13 3/8	12.615	54.50	J-55			4.41	34	38
1	Pup Joint	13 3/8	12.615	54.50	J-55			2.88	38	41
17	Casing Joint	13 3/8	12.615	54.50	J-55			715.23	41	756
4	Casing Joint	13 3/8	12.615	54.50	J-55			81.67	756	838

Intermediate Casing 1, Planned?-N, 4,745ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 3/7/2016	Set Depth (MD) (ftKB) 4,745	Stick Up (ftKB) -32.6	Set Tension (kips)
---	---------------------------	----------------------	--------------------------------	--------------------------	--------------------

Centralizers 32					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	Hanger	9 5/8	8.835	40.00	HCK-55		LTC	2.44	33	35
1	Pup Joint	9 5/8	8.835	40.00	HCK-55		LTC	4.11	35	39
11	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	4,530.47	39	4,570
1	Pup Joint	9 5/8	8.835	40.00	HCK-55		LTC	10.12	4,570	4,580
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	80.64	4,580	4,660
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LTC	1.49	4,660	4,662
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	81.50	4,662	4,743
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LTC	1.63	4,743	4,745

Production Casing, Planned?-N, 13,915ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 3/17/2016	Set Depth (MD) (ftKB) 13,915	Stick Up (ftKB) 6.3	Set Tension (kips)
---	---------------------------	-----------------------	---------------------------------	------------------------	--------------------

Centralizers 103					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	4.781	20.00	HCP-110		TXP BTC	39.00	-6	33
1	Hanger	5 1/2	4.781	20.00	HCP-110		TXP BTC	1.19	33	34
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	3.73	34	38
163	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	6,591.52	38	6,629
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.97	6,629	6,640
35	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	1,406.90	6,640	8,047
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.95	8,047	8,058
14	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	561.28	8,058	8,619
1	Marker Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.25	8,619	8,629
126	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	5,115.28	8,629	13,745
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.31	13,745	13,755
1	RSI Tool	5 1/2	4.781	20.00	HCP-110		TXP BTC	6.67	13,755	13,762
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.27	13,762	13,772
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	41.15	13,772	13,813
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	10.15	13,813	13,823
1	Landing Collar	5 1/2	4.781	20.00	HCP-110		TXP BTC	1.52	13,823	13,825
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	40.29	13,825	13,865
1	Float Collar	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.43	13,865	13,868



Cement Summary

Production Casing Cement

Well Name SALADO DRAW EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				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	XRV Tool	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.21	13,868	13,870
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP BTC	42.57	13,870	13,912
1	Float Shoe	5 1/2	4.781	20.00	HCP-110		TXP BTC	2.68	13,912	13,915

Production Casing Cement, Casing, 3/18/2016 13:00

Cementing Start Date 3/18/2016		Cementing End Date 3/18/2016	Wellbore Original Hole
Evaluation Method Lift Pressure		Cement Evaluation Results Full returns 15 bbl mud push to surface	

Comment

Pump production cement job as follows:

Pressure Test 500 psi low 5000 psi high
Bleed off
Drop bottom plug
Pump 30 bbl Mudpush @ 10 ppg
Pump 308.9 bbl of lead 1 @ 5 bpm @ 11.5 ppg
- 1.5 lb/bbl CemNET for 20-70 bbl and 120-170 bbl
Pump 255.8 bbl of lead 2 @ 5.4 bpm @ 12.5 ppg
Pump 46.8 bbl of tail @ 4.1 bpm @ 15 ppg
Drop top plug and wiper balls
Pump 307 bbl of water displacement
- 20 bbl Acid @ 6 bpm
- 277 bbl Fresh water @ 6 bpm
- 20 bbl Fresh water @ 4 bpm
Bump plug at 2415 psi
Hold 500 psi over FCP for 5 minutes
Bled back 300 bbl
Floats held

Details:

Cement in place at 16:30

1, 3,900.0-13,928.0ftKB

Top Depth (ftKB) 3,900.0	Bottom Depth (ftKB) 13,928.0	Full Return? Y	Vol Cement Ret (bbl) 0.0	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbl/min) 5.3	Final Pump Rate (bbl/min) 3.8	Avg Pump Rate (bbl/min) 5	Final Pump Pressure (psi) 2,443.0	Plug Bump Pressure (psi) 2,981.0	
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 MUDPUSH Express Spacer	Quantity (sacks) 30.0	Class H	Volume Pumped (bbl) 30.0
Estimated Top (ftKB) 3,254.0	Estimated Bottom Depth (ftKB) 3,900.0	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

Lead

Fluid Type Lead	Fluid Description 50:50 Poz/H + .2% D046 + 6.5% D020 + 8% D154 + .2% D065 + 2lb/sk B288 + 2 lb/sk B289	Quantity (sacks) 621	Class H	Volume Pumped (bbl) 298.6
Estimated Top (ftKB) 3,900.0	Estimated Bottom Depth (ftKB) 8,743.0	Percent Excess Pumped (%) 50.0	Yield (ft ³ /sack) 2.70	Fluid Mix Ratio (gal/sack) 15.77
Free Water (%)	Density (lb/gal) 11.50	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 EA 19 FED P6 005H		Lease Salado Draw EA 19 Fed P6		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft) 3,205.00	Original RKB (ft) 3,237.60	Current RKB Elevation 3,237.60, 12/15/2015				Mud Line Elevation (ft)	Water Depth (ft)

Lead

Fluid Type Lead	Fluid Description TXI + 4% D020 + .2% D046 + .2% D065 + .5% D112 + .4% D013 + .08% D208	Quantity (sacks) 870	Class H	Volume Pumped (bbl) 250.9
Estimated Top (ftKB) 8,743.0	Estimated Bottom Depth (ftKB) 12,954.0	Percent Excess Pumped (%) 35.0	Yield (ft ³ /sack) 1.62	Fluid Mix Ratio (gal/sack) 8.70
Free Water (%)	Density (lb/gal) 12.50	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description Class H + 2% D046 + .2% D065 + .4% D167 + .2% D800 + 75% D151 + .1% D208	Quantity (sacks) 123	Class H	Volume Pumped (bbl) 47.7
Estimated Top (ftKB) 12,954.0	Estimated Bottom Depth (ftKB) 13,928.0	Percent Excess Pumped (%) 0.0	Yield (ft ³ /sack) 2.18	Fluid Mix Ratio (gal/sack) 9.58
Free Water (%)	Density (lb/gal) 15.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description 20 bbls Acetic Acid 287 bbls FW	Quantity (sacks)	Class	Volume Pumped (bbl) 307.0
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