

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD
Hobbs

FORM 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.

HOBBS OCD
OCT 24 2016
RECEIVED

5. Lease Serial No.
NMNM118723

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
SD WE 14 FED P 5 1H

9. API Well No.
30-025-42800-00-X1

10. Field and Pool, or Exploratory
JENNINGS

11. County or Parish, and State
LEA COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
CHEVRON USA INCORPORATED
Contact: DENISE PINKERTON
E-Mail: leakejd@chevron.com

3a. Address
15 SMITH ROAD
MIDLAND, TX 79705

3b. Phone No. (include area code)
Ph: 432-687-7375

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 14 T26S R32E SWSW 10FSL 623FWL

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

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

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 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.)

06/12/2016: SPUD WELL. RIG ACCEPTED @ 20:30 HRS.
 06/13/2016: DRILL SURFACE HOLE FR 112-259, 690.
 RUN 13 3/8", 54.5#, J-55 STC SURFACE CASING SET @ 681'. FC @ 635'. PRESS TEST LINES TO 500/3000PSI.
 PMP 40 BBLs 8.4PPG FW SPACER W/DYE. CMT W/845 SX CMT @ 14.8PPG. BUMP PLUG 2W/574PSI OVER FINAL
 CIRC PRESS @ 854PSI. FULL RETURNS THROUGHOUT JOB. FINAL CIRC PRESS PRIOR TO BUMPING PLUG 280PSI @
 2.2BPM. 498 SX CMT TO SURF. CMT IN PLACE @ 22:30.

07/30/2016: TEST BOPE TO 250L/5000H.
 07/31/2016: PRESS TST SURF CSG TO 1500PSI FOR 30 MINS. GOOD.
 08/01/2016: DRILL 10' NEW FORMATION TO 700'.
 DRILL INTERMEDIATE HOLE 700-1008, 1549, 2613, 3230, 3722, 4534.

TOC on production string?

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #353707 verified by the BLM Well Information System
For CHEVRON USA INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by JENNIFER SANCHEZ on 10/06/2016 (17JAS0008SE)

Name (Printed/Typed) DENISE PINKERTON Title REGULATORY SPECIALIST

Signature (Electronic Submission) Date 10/06/2016

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 _____

ACCEPTED FOR REC'D
OCT 6 2016
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD 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.

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

Additional data for EC transaction #353707 that would not fit on the form

32. Additional remarks, continued

08/03/2016: RUN 9 5/8", 40#, HCK-55 LTC INTERMEDIATE CSG & SET @ 4524. FC @ 44325. TEST LINES TO 500/3500PSI. PUMP 30 BBLS 8.4PPG FW SPACER W/DYE. CMT W/1030 SX LEAD @ 11.9PPG, & 460 SX TAIL @ 14.8PPG. DISPL W/336 BBLS 8.7PPG CUT BRINE. BUMP PLUG W/520PSI OVER FINAL CIRC PRESS @ 1770PSI. FULL RETURNS THROUGHOUT JOB. FINAL CIRC PRESS PRIOR TO BUMPING PLUG 1250PSI @ 3.1BPM. 167 BBLS CMT TO SURF. CMT IN PLACE @ 12:21 HRS. WOC. TEST CSG TO 2765PSI FOR 30 MINS. DRILL 10' NEW FORMATION TO 4544'.

08/04/2016: DRILL PRODUCTION HOLE 4544-4732, 5263, 5706, 6355, 6800, 7630, 8042, 8365, 8480, 8631, 8794, 8953, 9241, 10078, 10683, 11169, 11777, 11956, 12543, 12985, 13887. (***TD REACHED ON 08/11/2016)

08/13/2016: RUN 5 1/2", 20#, HCP-110 TXP BTC PRODUCTION CSG SET @ 13,878. LC @ 13787, RSI TOOL @ 13721, MRKR JT @ 8422'. CMT W/625 SX CL H LEAD, 833 SX CL H LEAD, & 120 SX CL TAIL CMT. PMP 304 BBLS DISPL. FINAL CIRC PRESS 1350PSI @ 2.0BPM. BUMP PLUG 550 PSI OVER FCP @ 1900 PSI. LOST RETURNS @ 241 BBLS INTO DISPL. FINAL CIRC PRESS 1350PSI @ 2.0BPM. CMT IN PLACE @ 14.:45 HRS.

08/14/2016: RELEASE RIG.



Casing Summary

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016			Mud Line Elevation (ft)	Water Depth (ft)

Surface, Planned? -N, 681ftKB

Set Depth (MD) (ftKB) 681		Set Tension (kips)		String Nominal OD (in) 13 3/8		String Min Drift (in) 12.489		Centralizers 8		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	Wellhead	13 3/8	12.625	54.50	J-55	ST&C	33	36	2.85	2,730.0	1,130.0
1	Pup Joint	13 3/8	12.625	54.50	J-55	ST&C	36	41	4.54	2,730.0	1,130.0
14	Casing Joint	13 3/8	12.625	54.50	J-55	ST&C	41	635	594.65	2,730.0	1,130.0
1	Float Collar	13 3/8	12.625	54.50	J-55	ST&C	635	637	1.35	2,730.0	1,130.0
1	Casing Joint	13 3/8	12.625	54.50	J-55	ST&C	637	679	42.52	2,730.0	1,130.0
1	Float Shoe	13 3/8	12.625	54.50	J-55	ST&C	679	681	1.76	2,730.0	1,130.0

Intermediate Casing 1, Planned? -N, 4,524ftKB

Set Depth (MD) (ftKB) 4,524		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)
1	Setting Tool	9 5/8	8.844	40.00	HCK-55	LT&C	34	36	1.60	3,950.0	4,230.0
1	Pup Joint & HGR	9 5/8	8.844	40.00	HCK-55	LT&C	36	40	3.83	3,950.0	4,230.0
10	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	40	4,435	4,395.48	3,950.0	4,230.0
7											
1	Float Collar	9 5/8	8.844	40.00	HCK-55	LT&C	4,435	4,437	1.50	3,950.0	4,230.0
2	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	4,437	4,522	85.49	3,950.0	4,230.0
1	Float Shoe	9 5/8	8.844	40.00	HCK-55	LT&C	4,522	4,524	1.63	3,950.0	4,230.0

Production Casing, Planned? -N, 13,878ftKB

Set Depth (MD) (ftKB) 13,878		Set Tension (kips)		String Nominal OD (in) 5 1/2		String Min Drift (in)		Centralizers 107		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-S	-4	34	38.23		
1	Hanger	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	34	34	0.27		
1	Hanger PUP	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	34	38	4.03		
53	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	38	2,133	2,094.96		
1	Pup Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	2,133	2,138	5.18		
16	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	2,138	8,422	6,283.64		
0											
1	Marker Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	8,422	8,431	9.18		
13	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	8,431	13,711	5,279.58		
4											
1	RSI Pup	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,711	13,721	9.84		
1	RSI	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,721	13,727	6.67		
1	RSI Pup	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,727	13,737	9.86		
1	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,737	13,777	40.15		
1	LC Pup	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,777	13,787	9.90		
1	Landing Collar	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,787	13,789	1.41		
1	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,789	13,830	41.60		
1	Float Collar	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,830	13,833	2.51		
1	Casing Joint	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,833	13,875	42.54		
1	Float Shoe	5 1/2	4.781	20.00	HCP-110	TXP-BTC-S	13,875	13,878	2.70		



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft) Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,480.0	Vertical Section Direction (*) 359.84
Hole Size (in)	Act Top (ftKB)		Act Btm (ftKB)
17 1/2	32.6		890.0
12 1/4	690.0		4,534.0
8 3/4	4,534.0		13,867.0

Multi-bowl, FMC on 6/13/2016 19:00

Sub-Type Multi-bowl	Install Date 6/13/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 681ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 6/13/2016	Set Depth (MD) (ftKB) 681	Stick Up (ftKB) -33.3	Set Tension (kips)
Centralizers 8	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	12.625	54.50	J-55		ST&C	2.85	33	36
1	Pup Joint	13 3/8	12.625	54.50	J-55		ST&C	4.54	38	41
14	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	594.65	41	635
1	Float Collar	13 3/8	12.625	54.50	J-55		ST&C	1.35	635	637
1	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	42.52	637	679
1	Float Shoe	13 3/8	12.625	54.50	J-55		ST&C	1.78	679	681

Intermediate Casing 1, Planned?-N, 4,524ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 8/3/2016	Set Depth (MD) (ftKB) 4,524	Stick Up (ftKB) -34.5	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	Setting Tool	9 5/8	8.844	40.00	HCK-55		LT&C	1.80	34	36
1	Pup Joint & HGR	9 5/8	8.844	40.00	HCK-55		LT&C	3.83	36	40
107	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,395.48	40	4,435
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.50	4,435	4,437
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	85.49	4,437	4,522
1	Float Shoe	9 5/8	8.844	40.00	HCK-55		LT&C	1.63	4,522	4,524

Production Casing, Planned?-N, 13,878ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 8/13/2016	Set Depth (MD) (ftKB) 13,878	Stick Up (ftKB) 4.3	Set Tension (kips)
Centralizers 107	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-S	38.23	-4	34
1	Hanger	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	0.27	34	34
1	Hanger PUP	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	4.03	34	38
53	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2,094.96	38	2,133
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	5.18	2,133	2,138
160	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	6,283.64	2,138	8,422
1	Marker Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.18	8,422	8,431
134	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	5,279.58	8,431	13,711
1	RSI Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.84	13,711	13,721
1	RSI	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	6.67	13,721	13,727



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS		Business Unit Mid-Continent
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016			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 Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.86	13,727	13,737
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	40.15	13,737	13,777
1	LC Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.90	13,777	13,787
1	Landing Collar	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	1.41	13,787	13,789
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	41.60	13,789	13,830
1	Float Collar	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2.51	13,830	13,833
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	42.54	13,833	13,875
1	Float Shoe	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2.70	13,875	13,878

Surface Casing Cement, Casing, 6/13/2016 21:00

Cementing Start Date 6/13/2016	Cementing End Date 6/13/2016	Wellbore Original Hole
Evaluation Method Returns to Surface	Cement Evaluation Results 118 bbis cmt to surface	
Comment		

1, 32.6-690.0ftKB

Top Depth (ftKB) 32.6	Bottom Depth (ftKB) 690.0	Full Return? Y	Vol Cement Ret (bbi) 118.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 3.4	Final Pump Rate (bbl/min) 2.2	Avg Pump Rate (bbl/min) 5.1	Final Pump Pressure (psi) 280.0	Plug Bump Pressure (psi) 854.0	
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 FW w/ Dye	Quantity (sacks)	Class	Volume Pumped (bbi) 40.0
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

Tail

Fluid Type Tail	Fluid Description	Quantity (sacks) 845	Class C	Volume Pumped (bbi) 199.0
Estimated Top (ftKB) 32.6	Estimated Bottom Depth (ftKB) 680.0	Percent Excess Pumped (%) 125.0	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)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description Water Base Mud	Quantity (sacks)	Class	Volume Pumped (bbi) 99.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.60	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 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole		Directional Type Horizontal	Min K&K Off Depth (ftKB) 8,480.0	Vertical Section Direction (°) 359.84	
Hole Size (in)		Act Top (ftKB)		Act Btm (ftKB)	
17 1/2		32.6		690.0	
12 1/4		690.0		4,534.0	
8 3/4		4,534.0		13,887.0	

Multi-bowl, FMC on 6/13/2016 19:00

Sub-Type Multi-bowl			Install Date 6/13/2016		
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 681ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 6/13/2016	Set Depth (MD) (ftKB) 681	Stick Up (ftKB) -33.3	Set Tension (kips)
Centralizers 8			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	12.625	54.50	J-55		ST&C	2.85	33	36
1	Pup Joint	13 3/8	12.625	54.50	J-55		ST&C	4.54	36	41
14	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	594.65	41	635
1	Float Collar	13 3/8	12.625	54.50	J-55		ST&C	1.35	635	637
1	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	42.52	637	679
1	Float Shoe	13 3/8	12.625	54.50	J-55		ST&C	1.76	679	681

Intermediate Casing 1, Planned?-N, 4,524ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 8/3/2016	Set Depth (MD) (ftKB) 4,524	Stick Up (ftKB) -34.5	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	Setting Tool	9 5/8	8.844	40.00	HCK-55		LT&C	1.60	34	36
1	Pup Joint & HGR	9 5/8	8.844	40.00	HCK-55		LT&C	3.83	36	40
107	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,395.48	40	4,435
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.50	4,435	4,437
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	85.49	4,437	4,522
1	Float Shoe	9 5/8	8.844	40.00	HCK-55		LT&C	1.63	4,522	4,524

Production Casing, Planned?-N, 13,878ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 8/13/2016	Set Depth (MD) (ftKB) 13,878	Stick Up (ftKB) 4.3	Set Tension (kips)
Centralizers 107			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-S	38.23	-4	34
1	Hanger	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	0.27	34	34
1	Hanger PUP	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	4.03	34	38
53	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2,094.96	38	2,133
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	5.18	2,133	2,138
160	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	6,283.64	2,138	8,422
1	Marker Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.18	8,422	8,431
134	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	5,279.58	8,431	13,711
1	RSI Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.84	13,711	13,721
1	RSI	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	6.67	13,721	13,727



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 14 FED P5 001H		Lease		Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016				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)	Bin Depth (MD) (ftKB)
1	RSI Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.86	13,727	13,737
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	40.15	13,737	13,777
1	LC Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.90	13,777	13,787
1	Landing Collar	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	1.41	13,787	13,789
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	41.60	13,789	13,830
1	Float Collar	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2.51	13,830	13,833
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	42.54	13,833	13,875
1	Float Shoe	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2.70	13,875	13,878

Intermediate Casing Cement, Casing, 8/3/2016 08:30

Cementing Start Date 8/3/2016	Cementing End Date 8/3/2016	Wellbore Original Hole
Evaluation Method Returns to Surface	Cement Evaluation Results 167 BBL returned to surface	
Comment		

1, 32.6-4,534.0ftKB

Top Depth (ftKB) 32.6	Bottom Depth (ftKB) 4,534.0	Full Return? Y	Vol Cement Ret (bbl) 167.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 4.8	Final Pump Rate (bbl/min) 3.1	Avg Pump Rate (bbl/min) 6.5	Final Pump Pressure (psi) 1,250.0	Plug Bump Pressure (psi) 1,770.0	
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)	Class	Volume Pumped (bbl) 40.0
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

Lead

Fluid Type Lead	Fluid Description 50/50 D035 "C" 84 + 3% D020 + 5% D044 + .2% D046 + 10% D154	Quantity (sacks) 1,030	Class C	Volume Pumped (bbl) 442.0
Estimated Top (ftKB) 34.5	Estimated Bottom Depth (ftKB) 3,536.0	Percent Excess Pumped (%) 150.0	Yield (ft ³ /sack) 2.41	Fluid Mix Ratio (gal/sack) 13.86
Free Water (%) 0.00	Density (lb/gal) 11.90	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi) 50.0

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description Class C + 0.25% D800 + .010 gal/sk D177 spike	Quantity (sacks) 460	Class C	Volume Pumped (bbl) 110.0
Estimated Top (ftKB) 3,536.0	Estimated Bottom Depth (ftKB) 4,536.0	Percent Excess Pumped (%) 85.0	Yield (ft ³ /sack) 1.33	Fluid Mix Ratio (gal/sack) 6.35
Free Water (%) 0.00	Density (lb/gal) 14.80	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi) 50.0

Cement Fluid Additives

Add	Type	Conc



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft)	Water Depth (ft)

Displacement				
Fluid Type Displacement	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl) 336.0
Estimated Top (ft)	Estimated Bottom Depth (ft)	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



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft)
				Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,480.0	Vertical Section Direction (°) 359.84
Hole Size (in)	Act Top (ftKB)		Act Btm (ftKB)
17 1/2	32.6		690.0
12 1/4	690.0		4,534.0
8 3/4	4,534.0		13,867.0

Multi-bowl, FMC on 6/13/2016 19:00

Sub-Type Multi-bowl	Install Date 6/13/2016		
Des	Make	Model	WP (psi)
			Service
			SN

Surface, Planned?-N, 681ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 6/13/2016	Set Depth (MD) (ftKB) 681	Suck Up (ftKB) -33.3	Set Tension (kips)
Centralizers 8	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	12.625	54.50	J-55		ST&C	2.85	33	36
1	Pup Joint	13 3/8	12.625	54.50	J-55		ST&C	4.54	36	41
14	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	594.65	41	635
1	Float Collar	13 3/8	12.625	54.50	J-55		ST&C	1.35	635	637
1	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	42.52	637	679
1	Float Shoe	13 3/8	12.625	54.50	J-55		ST&C	1.76	679	681

Intermediate Casing 1, Planned?-N, 4,524ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 6/13/2016	Set Depth (MD) (ftKB) 4,524	Suck Up (ftKB) -34.5	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	Setting Tool	9 5/8	8.844	40.00	HCK-55		LT&C	1.60	34	36
1	Pup Joint & HGR	9 5/8	8.844	40.00	HCK-55		LT&C	3.83	36	40
107	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,395.48	40	4,435
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.50	4,435	4,437
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	85.49	4,437	4,522
1	Float Shoe	9 5/8	8.844	40.00	HCK-55		LT&C	1.63	4,522	4,524

Production Casing, Planned?-N, 13,878ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 6/13/2016	Set Depth (MD) (ftKB) 13,878	Suck Up (ftKB) 4.3	Set Tension (kips)
Centralizers 107	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-S	38.23	-4	34
1	Hanger	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	0.27	34	34
1	Hanger PUP	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	4.03	34	38
53	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2,094.96	38	2,133
1	Pup Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	5.18	2,133	2,138
160	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	6,283.64	2,138	8,422
1	Marker Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.18	8,422	8,431
134	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	5,279.58	8,431	13,711
1	RSI Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.84	13,711	13,721
1	RSI	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	6.67	13,721	13,727



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		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)	Blm Depth (MD) (ftKB)
1	RSI Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.86	13,727	13,737
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	40.15	13,737	13,777
1	LC Pup	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	9.90	13,777	13,787
1	Landing Collar	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	1.41	13,787	13,789
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	41.60	13,789	13,830
1	Float Collar	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2.51	13,830	13,833
1	Casing Joint	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	42.54	13,833	13,875
1	Float Shoe	5 1/2	4.781	20.00	HCP-110		TXP-BTC-S	2.70	13,875	13,878

Production Casing Cement, Casing, 8/13/2016 11:00

Cementing Start Date 8/13/2016	Cementing End Date 8/13/2016	Wellbore Original Hole
Evaluation Method Lift Pressure	Cement Evaluation Results FCP of 1,350 psi. Expected lift pressure of 1,098 psi.	

Comment

1, 3,680.0-13,887.0ftKB

Top Depth (ftKB) 3,680.0	Bottom Depth (ftKB) 13,887.0	Full Return? N	Vol Cement Ret (bbi) 0.0	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbi/min) 5.4	Final Pump Rate (bbi/min) 2	Avg Pump Rate (bbi/min) 5.5	Final Pump Pressure (psi) 1,350.0	Plug Bump Pressure (psi) 1,900.0	
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 bbls MPE @ 10.0 ppg	Quantity (sacks)	Class	Volume Pumped (bbi) 30.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%) 0.0	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 625 sks / 2.72 / cu ft. 1700 / 302 bbls @ 11.5 ppg / CemNet / D-177	Quantity (sacks) 625	Class H	Volume Pumped (bbi) 302.0
Estimated Top (ftKB) 3,680.0	Estimated Bottom Depth (ftKB) 8,516.0	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 833 sks / 1.60 / cu ft. 1333 / 234 bbls @ 12.5 ppg	Quantity (sacks) 833	Class H	Volume Pumped (bbi) 237.0
Estimated Top (ftKB) 8,516.0	Estimated Bottom Depth (ftKB) 12,887.0	Percent Excess Pumped (%) 35.0	Yield (ft ³ /sack) 1.60	Fluid Mix Ratio (gal/sack) 8.62
Free Water (%)	Density (lb/gal) 12.50	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 WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft)	Water Depth (ft)

Tail				
Fluid Type Tail	Fluid Description 120 sks / 2.18 / cu ft. 262 / 46 bbbls @ 15.0 ppg / D-177 .01% spike	Quantity (sacks) 120	Class H	Volume Pumped (bbl) 46.0
Estimated Top (ftKB) 12,887.0	Estimated Bottom Depth (ftKB) 13,887.0	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

Displacement				
Fluid Type Displacement	Fluid Description FW	Quantity (sacks)	Class	Volume Pumped (bbl) 306.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%) 0.0	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.30	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

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Directional Survey

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft) Water Depth (ft)

Wellbore Name Original Hole	Parent Wellbore Original Hole	Min K&E Off Depth (RKB) 8,480.0	Vertical Section Direction (°) 359.84
Northing (Y) (ft)	Easting (X) (ft)	UTM Grd Zone	

Date 9/6/2016	Definitive? N	Description Dir Plan	Planned? Y
MD Tie In (RKB) 0.00	TVD Tie In (RKB) 0.00	Inclination Tie In (°) 0.00	Azimuth Tie In (°) 0.00
NSTie in (ft) 0.00		EWTie in (ft) 0.00	

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
0	0.00	284.59	0.00	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
32.6	0.00	284.59	32.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	872.98	N
132.6	0.00	284.59	132.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
232.6	0.00	284.59	232.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
332.6	0.00	284.59	332.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
432.6	0.00	284.59	432.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
532.6	0.00	284.59	532.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
632.6	0.00	284.59	632.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
732.6	0.00	284.59	732.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
832.6	0.00	284.59	832.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
932.6	0.00	284.59	932.60	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
1,000	0.00	284.59	1,000.00	0.00	0.00	0.00	0.00	Magn MWD	Baker Hughes	0.00	0.00	0.00	N
1,032.6	0.33	284.59	1,032.60	0.02	-0.09	0.02	1.00	Magn MWD	Baker Hughes	1.00	0.09	0.00	N
1,132.6	1.33	284.59	1,132.59	0.39	-1.48	0.39	1.00	Magn MWD	Baker Hughes	1.00	1.53	0.00	N
1,232.6	2.33	284.59	1,232.54	1.19	-4.57	1.20	1.00	Magn MWD	Baker Hughes	1.00	4.72	0.00	N
1,332.6	3.33	284.59	1,332.41	2.43	-9.34	2.46	1.00	Magn MWD	Baker Hughes	1.00	9.65	0.00	N
1,432.6	4.33	284.59	1,432.19	4.11	-15.80	4.16	1.00	Magn MWD	Baker Hughes	1.00	16.32	0.00	N
1,532.6	5.33	284.59	1,531.83	6.23	-23.94	6.30	1.00	Magn MWD	Baker Hughes	1.00	24.74	0.00	N
1,600	6.00	284.59	1,598.90	7.91	-30.37	7.99	1.00	Magn MWD	Baker Hughes	1.00	31.39	0.00	N
1,632.6	6.00	284.59	1,631.33	8.77	-33.67	8.86	0.00	Magn MWD	Baker Hughes	0.00	34.79	0.00	N
1,732.6	6.00	284.59	1,730.78	11.40	-43.79	11.52	0.00	Magn MWD	Baker Hughes	0.00	45.25	0.00	N
1,832.6	6.00	284.59	1,830.23	14.03	-53.90	14.18	0.00	Magn MWD	Baker Hughes	0.00	55.70	0.00	N
1,932.6	6.00	284.59	1,929.68	16.67	-64.02	16.85	0.00	Magn MWD	Baker Hughes	0.00	66.15	0.00	N
2,032.6	6.00	284.59	2,029.13	19.30	-74.14	19.51	0.00	Magn MWD	Baker Hughes	0.00	76.61	0.00	N
2,132.6	6.00	284.59	2,128.59	21.93	-84.25	22.17	0.00	Magn MWD	Baker Hughes	0.00	87.06	0.00	N
2,232.6	6.00	284.59	2,228.04	24.57	-94.37	24.83	0.00	Magn MWD	Baker Hughes	0.00	97.51	0.00	N
2,332.6	6.00	284.59	2,327.49	27.20	-104.48	27.49	0.00	Magn MWD	Baker Hughes	0.00	107.96	0.00	N



Directional Survey

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016			Mud Line Elevation (ft)	Water Depth (ft)

Survey Data													
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
2,432.6	6.00	284.59	2,426.94	29.83	-114.60	30.15	0.00	Magn MWD	Baker Hughes	0.00	118.42	0.00	N
2,532.6	6.00	284.59	2,526.40	32.47	-124.71	32.82	0.00	Magn MWD	Baker Hughes	0.00	128.87	0.00	N
2,632.6	6.00	284.59	2,625.85	35.10	-134.83	35.48	0.00	Magn MWD	Baker Hughes	0.00	139.32	0.00	N
2,732.6	6.00	284.59	2,725.30	37.73	-144.95	38.14	0.00	Magn MWD	Baker Hughes	0.00	149.78	0.00	N
2,832.6	6.00	284.59	2,824.75	40.37	-155.06	40.80	0.00	Magn MWD	Baker Hughes	0.00	160.23	0.00	N
2,932.6	6.00	284.59	2,924.20	43.00	-165.18	43.46	0.00	Magn MWD	Baker Hughes	0.00	170.68	0.00	N
3,032.6	6.00	284.59	3,023.66	45.63	-175.29	46.12	0.00	Magn MWD	Baker Hughes	0.00	181.13	0.00	N
3,132.6	6.00	284.59	3,123.11	48.27	-185.41	48.79	0.00	Magn MWD	Baker Hughes	0.00	191.59	0.00	N
3,232.6	6.00	284.59	3,222.56	50.90	-195.52	51.45	0.00	Magn MWD	Baker Hughes	0.00	202.04	0.00	N
3,332.6	6.00	284.59	3,322.01	53.53	-205.64	54.11	0.00	Magn MWD	Baker Hughes	0.00	212.49	0.00	N
3,432.6	6.00	284.59	3,421.46	56.17	-215.75	56.77	0.00	Magn MWD	Baker Hughes	0.00	222.95	0.00	N
3,532.6	6.00	284.59	3,520.92	58.80	-225.87	59.43	0.00	Magn MWD	Baker Hughes	0.00	233.40	0.00	N
3,632.6	6.00	284.59	3,620.37	61.43	-235.99	62.09	0.00	Magn MWD	Baker Hughes	0.00	243.85	0.00	N
3,732.6	6.00	284.59	3,719.82	64.07	-246.10	64.76	0.00	Magn MWD	Baker Hughes	0.00	254.30	0.00	N
3,832.6	6.00	284.59	3,819.27	66.70	-256.22	67.42	0.00	Magn MWD	Baker Hughes	0.00	264.76	0.00	N
3,894.26	6.00	284.59	3,880.60	68.33	-262.45	69.08	0.00	Magn MWD	Baker Hughes	0.00	271.20	0.00	N
3,932.6	5.62	284.59	3,918.74	69.30	-266.21	70.05	1.00	Magn MWD	Baker Hughes	-1.00	275.08	0.00	N
4,032.6	4.62	284.59	4,018.34	71.55	-274.84	72.32	1.00	Magn MWD	Baker Hughes	-1.00	284.00	0.00	N
4,132.6	3.62	284.59	4,118.08	73.36	-281.79	74.15	1.00	Magn MWD	Baker Hughes	-1.00	291.18	0.00	N
4,232.6	2.62	284.59	4,217.93	74.73	-287.05	75.53	1.00	Magn MWD	Baker Hughes	-1.00	296.62	0.00	N
4,332.6	1.62	284.59	4,317.88	75.66	-290.63	76.47	1.00	Magn MWD	Baker Hughes	-1.00	300.31	0.00	N
4,432.6	0.62	284.59	4,417.84	76.15	-292.51	76.97	1.00	Magn MWD	Baker Hughes	-1.00	302.26	0.00	N
4,494.26	0.00	359.84	4,479.50	76.23	-292.83	77.05	1.00	Magn MWD	Baker Hughes	-1.00	302.59	122.04	N
4,532.6	0.00	359.84	4,517.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
4,632.6	0.00	359.84	4,617.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
4,732.6	0.00	359.84	4,717.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
4,832.6	0.00	359.84	4,817.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
4,932.6	0.00	359.84	4,917.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,032.6	0.00	359.84	5,017.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,132.6	0.00	359.84	5,117.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N



Directional Survey

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		Mud Line Elevation (ft)
				Water Depth (ft)

Survey Data													
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
5,232.6	0.00	359.84	5,217.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,332.6	0.00	359.84	5,317.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,432.6	0.00	359.84	5,417.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,532.6	0.00	359.84	5,517.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,632.6	0.00	359.84	5,617.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,732.6	0.00	359.84	5,717.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,832.6	0.00	359.84	5,817.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
5,932.6	0.00	359.84	5,917.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,032.6	0.00	359.84	6,017.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,132.6	0.00	359.84	6,117.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,232.6	0.00	359.84	6,217.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,332.6	0.00	359.84	6,317.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,432.6	0.00	359.84	6,417.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,532.6	0.00	359.84	6,517.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,632.6	0.00	359.84	6,617.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,732.6	0.00	359.84	6,717.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,832.6	0.00	359.84	6,817.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
6,932.6	0.00	359.84	6,917.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,032.6	0.00	359.84	7,017.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,132.6	0.00	359.84	7,117.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,232.6	0.00	359.84	7,217.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,332.6	0.00	359.84	7,317.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,432.6	0.00	359.84	7,417.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,532.6	0.00	359.84	7,517.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,632.6	0.00	359.84	7,617.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,732.6	0.00	359.84	7,717.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,832.6	0.00	359.84	7,817.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
7,932.6	0.00	359.84	7,917.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
8,032.6	0.00	359.84	8,017.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
8,132.6	0.00	359.84	8,117.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N



Directional Survey

Well Name SALADO DRAW WE 14 FED P5 001H		Lease		Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016				Mud Line Elevation (ft)	Water Depth (ft)

Survey Data													
MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
8,232.6	0.00	359.84	8,217.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
8,332.6	0.00	359.84	8,317.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
8,432.6	0.00	359.84	8,417.84	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
8,512.83	0.00	359.84	8,498.07	76.23	-292.83	77.05	0.00	Magn MWD	Baker Hughes	0.00	302.59	0.00	N
8,532.6	2.37	359.84	8,517.83	76.64	-292.83	77.46	12.00	Magn MWD	Baker Hughes	12.00	302.70	0.00	N
8,632.6	14.37	359.84	8,616.59	91.18	-292.88	91.99	12.00	Magn MWD	Baker Hughes	12.00	306.74	0.00	N
8,732.6	26.37	359.84	8,710.16	125.92	-292.97	126.74	12.00	Magn MWD	Baker Hughes	12.00	318.89	0.00	N
8,832.6	38.37	359.84	8,794.47	179.37	-293.12	180.19	12.00	Magn MWD	Baker Hughes	12.00	343.65	0.00	N
8,932.6	50.37	359.84	8,865.82	249.17	-293.32	249.99	12.00	Magn MWD	Baker Hughes	12.00	384.86	0.00	N
9,032.6	62.37	359.84	8,921.10	332.28	-293.55	333.10	12.00	Magn MWD	Baker Hughes	12.00	443.38	0.00	N
9,132.6	74.37	359.84	8,957.89	425.07	-293.81	425.89	12.00	Magn MWD	Baker Hughes	12.00	516.73	0.00	N
9,232.6	86.37	359.84	8,974.58	523.48	-294.08	524.30	12.00	Magn MWD	Baker Hughes	12.00	600.43	0.00	N
9,249.08	88.35	359.84	8,975.34	539.95	-294.13	540.76	12.00	Magn MWD	Baker Hughes	12.00	614.86	0.00	N
9,332.6	88.35	359.84	8,977.74	623.43	-294.36	624.25	0.00	Magn MWD	Baker Hughes	0.00	689.43	0.00	N
9,432.6	88.35	359.84	8,980.62	723.39	-294.64	724.21	0.00	Magn MWD	Baker Hughes	0.00	781.09	0.00	N
9,532.6	88.35	359.84	8,983.50	823.35	-294.92	824.17	0.00	Magn MWD	Baker Hughes	0.00	874.57	0.00	N
9,632.6	88.35	359.84	8,986.38	923.30	-295.20	924.13	0.00	Magn MWD	Baker Hughes	0.00	969.35	0.00	N
9,732.6	88.35	359.84	8,989.26	1,023.26	-295.48	1,024.08	0.00	Magn MWD	Baker Hughes	0.00	1,065.07	0.00	N
9,832.6	88.35	359.84	8,992.14	1,123.22	-295.76	1,124.04	0.00	Magn MWD	Baker Hughes	0.00	1,161.51	0.00	N
9,932.6	88.35	359.84	8,995.02	1,223.18	-296.04	1,224.00	0.00	Magn MWD	Baker Hughes	0.00	1,258.49	0.00	N
10,032.6	88.35	359.84	8,997.90	1,323.14	-296.32	1,323.96	0.00	Magn MWD	Baker Hughes	0.00	1,355.91	0.00	N
10,132.6	88.35	359.84	9,000.78	1,423.10	-296.59	1,423.92	0.00	Magn MWD	Baker Hughes	0.00	1,453.67	0.00	N
10,232.6	88.35	359.84	9,003.66	1,523.05	-296.87	1,523.88	0.00	Magn MWD	Baker Hughes	0.00	1,551.72	0.00	N
10,332.6	88.35	359.84	9,006.54	1,623.01	-297.15	1,623.84	0.00	Magn MWD	Baker Hughes	0.00	1,649.99	0.00	N
10,432.6	88.35	359.84	9,009.42	1,722.97	-297.43	1,723.79	0.00	Magn MWD	Baker Hughes	0.00	1,748.45	0.00	N
10,459.08	88.35	359.84	9,010.18	1,749.44	-297.51	1,750.26	0.00	Magn MWD	Baker Hughes	0.00	1,774.56	0.00	N
10,532.6	89.82	359.84	9,011.35	1,822.95	-297.71	1,823.77	2.00	Magn MWD	Baker Hughes	2.00	1,847.10	0.00	N
10,573.08	90.63	359.84	9,011.20	1,863.43	-297.82	1,864.25	2.00	Magn MWD	Baker Hughes	2.00	1,887.08	0.00	N
10,632.6	90.63	359.84	9,010.54	1,922.94	-297.99	1,923.77	0.00	Magn MWD	Baker Hughes	0.00	1,945.89	0.00	N
10,732.6	90.63	359.84	9,009.44	2,022.94	-298.27	2,023.76	0.00	Magn MWD	Baker Hughes	0.00	2,044.81	0.00	N



Directional Survey

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS		Business Unit Mid Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016			Mud Line Elevation (ft)	Water Depth (ft)

Survey Data													
MD (ftKB)	Incl (°)	Azm (°)	TvD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depth (ft)	Turn (°/100ft)	Unuse d data
10,832.6	90.63	359.84	9,008.34	2,122.93	-298.55	2,123.76	0.00	Magn MWD	Baker Hughes	0.00	2,143.82	0.00	N
10,932.6	90.63	359.84	9,007.24	2,222.92	-298.83	2,223.75	0.00	Magn MWD	Baker Hughes	0.00	2,242.92	0.00	N
11,032.6	90.63	359.84	9,006.14	2,322.92	-299.11	2,323.74	0.00	Magn MWD	Baker Hughes	0.00	2,342.09	0.00	N
11,132.6	90.63	359.84	9,005.04	2,422.91	-299.39	2,423.74	0.00	Magn MWD	Baker Hughes	0.00	2,441.34	0.00	N
11,232.6	90.63	359.84	9,003.94	2,522.90	-299.67	2,523.73	0.00	Magn MWD	Baker Hughes	0.00	2,540.64	0.00	N
11,332.6	90.63	359.84	9,002.84	2,622.90	-299.95	2,623.72	0.00	Magn MWD	Baker Hughes	0.00	2,639.99	0.00	N
11,432.6	90.63	359.84	9,001.74	2,722.89	-300.22	2,723.72	0.00	Magn MWD	Baker Hughes	0.00	2,739.39	0.00	N
11,532.6	90.63	359.84	9,000.65	2,822.88	-300.50	2,823.71	0.00	Magn MWD	Baker Hughes	0.00	2,838.83	0.00	N
11,632.6	90.63	359.84	8,999.55	2,922.88	-300.78	2,923.71	0.00	Magn MWD	Baker Hughes	0.00	2,938.31	0.00	N
11,732.6	90.63	359.84	8,998.45	3,022.87	-301.06	3,023.70	0.00	Magn MWD	Baker Hughes	0.00	3,037.83	0.00	N
11,832.6	90.63	359.84	8,997.35	3,122.87	-301.34	3,123.69	0.00	Magn MWD	Baker Hughes	0.00	3,137.37	0.00	N
11,932.6	90.63	359.84	8,996.25	3,222.86	-301.62	3,223.69	0.00	Magn MWD	Baker Hughes	0.00	3,236.94	0.00	N
12,032.6	90.63	359.84	8,995.15	3,322.85	-301.90	3,323.68	0.00	Magn MWD	Baker Hughes	0.00	3,336.54	0.00	N
12,132.6	90.63	359.84	8,994.05	3,422.85	-302.18	3,423.68	0.00	Magn MWD	Baker Hughes	0.00	3,436.16	0.00	N
12,232.6	90.63	359.84	8,992.95	3,522.84	-302.46	3,523.67	0.00	Magn MWD	Baker Hughes	0.00	3,535.80	0.00	N
12,332.6	90.63	359.84	8,991.85	3,622.83	-302.74	3,623.66	0.00	Magn MWD	Baker Hughes	0.00	3,635.46	0.00	N
12,432.6	90.63	359.84	8,990.75	3,722.83	-303.02	3,723.66	0.00	Magn MWD	Baker Hughes	0.00	3,735.14	0.00	N
12,532.6	90.63	359.84	8,989.65	3,822.82	-303.30	3,823.65	0.00	Magn MWD	Baker Hughes	0.00	3,834.83	0.00	N
12,632.6	90.63	359.84	8,988.55	3,922.81	-303.58	3,923.65	0.00	Magn MWD	Baker Hughes	0.00	3,934.54	0.00	N
12,732.6	90.63	359.84	8,987.45	4,022.81	-303.85	4,023.64	0.00	Magn MWD	Baker Hughes	0.00	4,034.27	0.00	N
12,832.6	90.63	359.84	8,986.35	4,122.80	-304.13	4,123.63	0.00	Magn MWD	Baker Hughes	0.00	4,134.00	0.00	N
12,932.6	90.63	359.84	8,985.25	4,222.79	-304.41	4,223.63	0.00	Magn MWD	Baker Hughes	0.00	4,233.75	0.00	N
13,032.6	90.63	359.84	8,984.15	4,322.79	-304.69	4,323.62	0.00	Magn MWD	Baker Hughes	0.00	4,333.51	0.00	N
13,132.6	90.63	359.84	8,983.05	4,422.78	-304.97	4,423.62	0.00	Magn MWD	Baker Hughes	0.00	4,433.28	0.00	N
13,232.6	90.63	359.84	8,981.95	4,522.78	-305.25	4,523.61	0.00	Magn MWD	Baker Hughes	0.00	4,533.06	0.00	N
13,332.6	90.63	359.84	8,980.85	4,622.77	-305.53	4,623.60	0.00	Magn MWD	Baker Hughes	0.00	4,632.85	0.00	N
13,432.6	90.63	359.84	8,979.75	4,722.76	-305.81	4,723.60	0.00	Magn MWD	Baker Hughes	0.00	4,732.65	0.00	N
13,532.6	90.63	359.84	8,978.65	4,822.76	-306.09	4,823.59	0.00	Magn MWD	Baker Hughes	0.00	4,832.46	0.00	N
13,632.6	90.63	359.84	8,977.55	4,922.75	-306.37	4,923.59	0.00	Magn MWD	Baker Hughes	0.00	4,932.27	0.00	N
13,732.6	90.63	359.84	8,976.46	5,022.74	-306.65	5,023.58	0.00	Magn MWD	Baker Hughes	0.00	5,032.10	0.00	N



Directional Survey

Well Name SALADO DRAW WE 14 FED P5 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,157.00	Original RKB (ft) 3,189.60	Current RKB Elevation 3,189.60, 6/2/2016		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
13,832.6	90.63	359.84	8,975.36	5,122.74	-306.93	5,123.57	0.00	Magn MWD	Baker Hughes	0.00	5,131 92	0.00	N
13,865.08	90.63	359.84	8,975.00	5,155.21	-307.02	5,156.05	0.00	Magn MWD	Baker Hughes	0.00	5,164 35	0.00	N