



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016		Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole		Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,556.0	Vertical Section Direction (*) 356.27
Hole Size (in)	Act Top (ftKB)		Act Btm (ftKB)	
17 1/2	32.6		838.0	
12 1/4	838.0		4,580.0	
8 3/4	4,580.0		13,803.0	

<typ>, <make> on <dtmstart>

Sub-Type			Install Date		
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 828ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 4/16/2016	Set Depth (MD) (ftKB) 828	Stick Up (ftKB) 0.3	Set Tension (kips)
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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	Landing Joint	13 3/8	12.625	54.50	J-55		ST&C	33.00	0	33
1	13-3/8 UH-2 CSG Head	13 3/8	12.625	54.50	J-55		ST&C	2.88	33	36
1	Pup Joint	13 3/8	12.625	54.50	J-55		ST&C	3.72	36	39
18	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	743.11	39	782
1	Float Collar	13 3/8	12.625	54.50	J-55		ST&C	1.32	782	784
1	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	42.45	784	826
1	TX Pattern Float Shoe	13 3/8	12.625	54.50	J-55		ST&C	1.77	826	828

Intermediate Casing 1, Planned?-N, 4,570ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 5/30/2016	Set Depth (MD) (ftKB) 4,570	Stick Up (ftKB) 0.3	Set Tension (kips)
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Centralizers 31			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	9 5/8	8.835	40.00	HCK-55		LTC	35.00	0	35
1	Hanger	9 5/8	8.835	40.00	HCK-55		LTC	1.63	35	36
1	Hanger PUP	9 5/8	8.835	40.00	HCK-55		LTC	4.20	36	41
106	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	4,441.23	41	4,482
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LTC	1.48	4,482	4,483
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	85.10	4,483	4,568
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LTC	1.64	4,568	4,570

Production Casing, Planned?-N, 13,788ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 6/8/2016	Set Depth (MD) (ftKB) 13,788	Stick Up (ftKB) 0.5	Set Tension (kips)
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Centralizers 71			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 Jt	5 1/2	4.778	20.00	HCP-110		TXP-BTC	34.00	0	34
1	Hanger	5 1/2	4.778	20.00	HCP-110		TXP-BTC	1.14	34	35
1	Hanger PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	4.51	35	39
205	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	8,459.50	39	8,499
1	Pup Jt	5 1/2	4.778	20.00	HCP-110		TXP-BTC	5.14	8,499	8,504
125	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	5,115.15	8,504	13,619
1	RSI PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.48	13,619	13,629
1	RSI	5 1/2	4.778	20.00	HCP-110		TXP-BTC	6.62	13,629	13,636
1	RSI PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.21	13,636	13,646



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016		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	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	40.47	13,646	13,687
1	LC PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.15	13,687	13,697
1	Land Collar	5 1/2	4.778	20.00	HCP-110		TXP-BTC	1.57	13,697	13,698
1	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	42.05	13,698	13,741
1	Float Collar	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.41	13,741	13,743
1	Vibrator	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.22	13,743	13,745
1	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	40.18	13,745	13,785
1	Float Shoe	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.69	13,785	13,788

Surface Casing Cement, Casing, 4/17/2016 03:30

Cementing Start Date 4/17/2016		Cementing End Date 4/17/2016		Wellbore Original Hole	
Evaluation Method Returns to Surface		Cement Evaluation Results 107 bbls cmt to surface			
Comment					

1, 32.6-838.0ftKB

Top Depth (ftKB) 32.6	Bottom Depth (ftKB) 838.0	Full Return? Y	Vol Cement Ret (bbl) 107.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 4.4	Final Pump Rate (bbl/min) 2.1	Avg Pump Rate (bbl/min) 5.1		Final Pump Pressure (psi) 316.0	
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 (ft³/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) 960	Class C	Volume Pumped (bbl) 227.0
Estimated Top (ftKB) 32.6	Estimated Bottom Depth (ftKB) 838.0	Percent Excess Pumped (%) 125.0	Yield (ft³/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	Quantity (sacks)	Class	Volume Pumped (bbl) 119.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016		Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole		Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,556.0	Vertical Section Direction (°) 356.27
Hole Size (in)	Act Top (ftKB)		Act Btm (ftKB)	
17 1/2	32.6		838.0	
12 1/4	838.0		4,580.0	
8 3/4	4,580.0		13,803.0	

<typ>, <make> on <dtmstart>

Sub-Type			Install Date		
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 828ftKB

Casing Description Surface		Wellbore Original Hole		Run Date 4/16/2016		Set Depth (MD) (ftKB) 828		Stick Up (ftKB) 0.3		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	Landing Joint	13 3/8	12.625	54.50	J-55		ST&C	33.00	0	33	
1	13-3/8 UH-2 CSG Head	13 3/8	12.625	54.50	J-55		ST&C	2.88	33	36	
1	Pup Joint	13 3/8	12.625	54.50	J-55		ST&C	3.72	36	39	
18	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	743.11	39	782	
1	Float Collar	13 3/8	12.625	54.50	J-55		ST&C	1.32	782	784	
1	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	42.45	784	826	
1	TX Pattern Float Shoe	13 3/8	12.625	54.50	J-55		ST&C	1.77	826	828	

Intermediate Casing 1, Planned?-N, 4,570ftKB

Casing Description Intermediate Casing 1		Wellbore Original Hole		Run Date 5/30/2016		Set Depth (MD) (ftKB) 4,570		Stick Up (ftKB) 0.3		Set Tension (kips)	
Centralizers 31						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	9 5/8	8.835	40.00	HCK-55		LTC	35.00	0	35	
1	Hanger	9 5/8	8.835	40.00	HCK-55		LTC	1.63	35	36	
1	Hanger PUP	9 5/8	8.835	40.00	HCK-55		LTC	4.20	36	41	
106	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	4,441.23	41	4,482	
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LTC	1.48	4,482	4,483	
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	85.10	4,483	4,568	
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LTC	1.64	4,568	4,570	

Production Casing, Planned?-N, 13,788ftKB

Casing Description Production Casing		Wellbore Original Hole		Run Date 6/8/2016		Set Depth (MD) (ftKB) 13,788		Stick Up (ftKB) 0.5		Set Tension (kips)	
Centralizers 71						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 Jt	5 1/2	4.778	20.00	HCP-110		TXP-BTC	34.00	0	34	
1	Hanger	5 1/2	4.778	20.00	HCP-110		TXP-BTC	1.14	34	35	
1	Hanger PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	4.51	35	39	
205	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	8,459.50	39	8,499	
1	Pup Jt	5 1/2	4.778	20.00	HCP-110		TXP-BTC	5.14	8,499	8,504	
125	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	5,115.15	8,504	13,619	
1	RSI PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.48	13,619	13,629	
1	RSI	5 1/2	4.778	20.00	HCP-110		TXP-BTC	6.62	13,629	13,636	
1	RSI PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.21	13,636	13,646	



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease		Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016				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	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	40.47	13,646	13,687
1	LC PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.15	13,687	13,697
1	Land Collar	5 1/2	4.778	20.00	HCP-110		TXP-BTC	1.57	13,697	13,698
1	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	42.05	13,698	13,741
1	Float Collar	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.41	13,741	13,743
1	Vibrator	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.22	13,743	13,745
1	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	40.18	13,745	13,785
1	Float Shoe	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.69	13,785	13,788

Intermediate Casing Cement, Casing, 5/30/2016 19:50

Cementing Start Date 5/30/2016		Cementing End Date 5/30/2016		Wellbore Original Hole	
Evaluation Method Returns to Surface		Cement Evaluation Results 235 bbl /543 sx CMT to surface			

Comment
Design lift pressure - 970 psi

1, 32.6-4,580.0ftKB

Top Depth (ftKB) 32.6	Bottom Depth (ftKB) 4,580.0	Full Return? Y	Vol Cement Ret (bbl) 235.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 5.4	Final Pump Rate (bbl/min) 3	Avg Pump Rate (bbl/min) 6.5		Final Pump Pressure (psi) 1,140.0	
Pipe Reciprocated? N	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? N	
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 Dyed Spacer	Quantity (sacks)	Class C	Volume Pumped (bbl) 35.0	
Estimated Top (ftKB) 32.6	Estimated Bottom Depth (ftKB) 32.6	Percent Excess Pumped (%)	Yield (ft³/sack) 2.43	Fluid Mix Ratio (gal/sack) 13.77	
Free Water (%)	Density (lb/gal) 8.30	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/C	Quantity (sacks) 1,055	Class C	Volume Pumped (bbl) 456.0	
Estimated Top (ftKB) 32.6	Estimated Bottom Depth (ftKB) 2,731.0	Percent Excess Pumped (%) 150.0	Yield (ft³/sack) 2.43	Fluid Mix Ratio (gal/sack) 13.77	
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 Class C + 0.25% D800	Quantity (sacks) 462	Class C	Volume Pumped (bbl) 109.0	
Estimated Top (ftKB) 2,731.0	Estimated Bottom Depth (ftKB) 4,578.0	Percent Excess Pumped (%) 85.0	Yield (ft³/sack) 1.33	Fluid Mix Ratio (gal/sack) 6.35	
Free Water (%)	Density (lb/gal) 14.80	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 P7 003H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016		Mud Line Elevation (ft)	Water Depth (ft)

Displacement				
Fluid Type Displacement	Fluid Description Displacement	Quantity (sacks)	Class	Volume Pumped (bbl) 340.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/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



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016		Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB) 8,556.0	Vertical Section Direction (*) 356.27
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	32.6	838.0	
12 1/4	838.0	4,580.0	
8 3/4	4,580.0	13,803.0	

<typ>, <make> on <dtmstart>

Sub-Type			Install Date		
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 828ftKB

Casing Description Surface		Wellbore Original Hole		Run Date 4/16/2016		Set Depth (MD) (ftKB) 828		Stick Up (ftKB) 0.3		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	Landing Joint	13 3/8	12.625	54.50	J-55		ST&C	33.00	0	33	
1	13-3/8 UH-2 CSG Head	13 3/8	12.625	54.50	J-55		ST&C	2.88	33	36	
1	Pup Joint	13 3/8	12.625	54.50	J-55		ST&C	3.72	36	39	
18	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	743.11	39	782	
1	Float Collar	13 3/8	12.625	54.50	J-55		ST&C	1.32	782	784	
1	Casing Joint	13 3/8	12.625	54.50	J-55		ST&C	42.45	784	826	
1	TX Pattern Float Shoe	13 3/8	12.625	54.50	J-55		ST&C	1.77	826	828	

Intermediate Casing 1, Planned?-N, 4,570ftKB

Casing Description Intermediate Casing 1		Wellbore Original Hole		Run Date 5/30/2016		Set Depth (MD) (ftKB) 4,570		Stick Up (ftKB) 0.3		Set Tension (kips)	
Centralizers 31						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	9 5/8	8.835	40.00	HCK-55		LTC	35.00	0	35	
1	Hanger	9 5/8	8.835	40.00	HCK-55		LTC	1.63	35	36	
1	Hanger PUP	9 5/8	8.835	40.00	HCK-55		LTC	4.20	36	41	
106	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	4,441.23	41	4,482	
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LTC	1.48	4,482	4,483	
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LTC	85.10	4,483	4,568	
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LTC	1.64	4,568	4,570	

Production Casing, Planned?-N, 13,788ftKB

Casing Description Production Casing		Wellbore Original Hole		Run Date 6/8/2016		Set Depth (MD) (ftKB) 13,788		Stick Up (ftKB) 0.5		Set Tension (kips)	
Centralizers 71						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 Jt	5 1/2	4.778	20.00	HCP-110		TXP-BTC	34.00	0	34	
1	Hanger	5 1/2	4.778	20.00	HCP-110		TXP-BTC	1.14	34	35	
1	Hanger PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	4.51	35	39	
205	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	8,459.50	39	8,499	
1	Pup Jt	5 1/2	4.778	20.00	HCP-110		TXP-BTC	5.14	8,499	8,504	
125	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	5,115.15	8,504	13,619	
1	RSI PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.48	13,619	13,629	
1	RSI	5 1/2	4.778	20.00	HCP-110		TXP-BTC	6.62	13,629	13,636	
1	RSI PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.21	13,636	13,646	



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease		Field Name JENNINGS		Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016				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	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	40.47	13,646	13,687
1	LC PUP	5 1/2	4.778	20.00	HCP-110		TXP-BTC	10.15	13,687	13,697
1	Land Collar	5 1/2	4.778	20.00	HCP-110		TXP-BTC	1.57	13,697	13,698
1	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	42.05	13,698	13,741
1	Float Collar	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.41	13,741	13,743
1	Vibrator	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.22	13,743	13,745
1	Casing Joint	5 1/2	4.778	20.00	HCP-110		TXP-BTC	40.18	13,745	13,785
1	Float Shoe	5 1/2	4.778	20.00	HCP-110		TXP-BTC	2.69	13,785	13,788

Production Casing Cement, Casing, 6/8/2016 06:45

Cementing Start Date 6/8/2016		Cementing End Date 6/8/2016		Wellbore Original Hole	
Evaluation Method Lift Pressure		Cement Evaluation Results Final Lift pressure 1815 psi			

Comment
Actual final lift pressure exceeded design lift pressure. Design lift pressure 1043

1, 2,610.0-13,803.0ftKB

Top Depth (ftKB) 2,610.0	Bottom Depth (ftKB) 13,803.0	Full Return? Y	Vol Cement Ret (bbl) 0.0	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbl/min) 4.7	Final Pump Rate (bbl/min) 3.5	Avg Pump Rate (bbl/min) 6.8		Final Pump Pressure (psi) 1,815.0	
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 D047 - .2 gal/bbl B389 - .45 lb/bbl BW IV Spacer D035 - 117.74 lb/bbl	Quantity (sacks)	Class	Volume Pumped (bbl) 30.0	
Estimated Top (ftKB) 1,963.0	Estimated Bottom Depth (ftKB) 2,610.0	Percent Excess Pumped (%)	Yield (ft³/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 + .1% D208 spike	Quantity (sacks) 624	Class H	Volume Pumped (bbl) 299.0	
Estimated Top (ftKB) 2,610.0	Estimated Bottom Depth (ftKB) 8,556.0	Percent Excess Pumped (%) 50.0	Yield (ft³/sack) 2.69	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

Lead

Fluid Type Lead	Fluid Description TXI + 3% D020 + .2% D046 + .2% D065 + .4% D238 + .4% D013 + .06% D208	Quantity (sacks) 906	Class H	Volume Pumped (bbl) 258.0	
Estimated Top (ftKB) 8,556.0	Estimated Bottom Depth (ftKB) 12,788.0	Percent Excess Pumped (%) 35.0	Yield (ft³/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 Summary

Production Casing Cement

Well Name SALADO DRAW WE 14 FED P7 003H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft) 3,165.00	Original RKB (ft) 3,197.60	Current RKB Elevation 3,197.60, 3/28/2016		Mud Line Elevation (ft)	Water Depth (ft)

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description Class H + .2% D046 + .2% D065 + .4% D167 + .15% D800 + 75% D151 + .1% D208	Quantity (sacks) 121	Class H	Volume Pumped (bbl) 47.0
Estimated Top (ftKB) 12,788.0	Estimated Bottom Depth (ftKB) 13,803.0	Percent Excess Pumped (%) 0.0	Yield (ft³/sack) 2.18	Fluid Mix Ratio (gal/sack) 9.55
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 284 bbls FW	Quantity (sacks)	Class	Volume Pumped (bbl) 304.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack) 8.33
Free Water (%)	Density (lb/gal) 8.33	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc