

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
HobbsFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**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 page 2**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	8. Well Name and No. SD WE 24 FED P23 1H
2. Name of Operator CHEVRON USA INC	9. API Well No. 30-025-43318-00-X1
3a. Address 1616 W. BENDER BLVD HOBBS, NM 88240	10. Field and Pool or Exploratory Area WC025G06S263319P-BONE SPRING
3b. Phone No. (include area code) Ph: 432-687-7375	11. County or Parish, State LEA COUNTY, NM
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 24 T26S R32E SESW 260FSL 1283FWL	

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

TYPE OF SUBMISSION	TYPE OF ACTION
☐ Notice of Intent	☐ Acidize
☒ Subsequent Report	☐ Deepen
☐ Final Abandonment Notice	☐ Hydraulic Fracturing
	☐ New Construction
	☐ Plug and Abandon
	☐ Plug Back
	☐ Production (Start/Resume)
	☐ Reclamation
	☐ Recombine
	☐ Temporarily Abandon
	☐ Water Shut-Off
	☐ Well Integrity
	☒ Other Drilling Operations
	☐ 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 recompleate 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 must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

THIS REPORT IS FOR THE SPUD & DRILLING OPERATIONS OF THIS NEW WELL.

PLEASE SEE ATTACHED DETAILED REPORT FOR SPUD, SURFACE CASING, INTERMEDIATE CASING, & PRODUCTION CASING, CEMENTING INFORMATION, AND RELEASE OF RIG.

ALSO FIND ATTACHED, THE DIRECTIONAL SURVEY, & CASING AND CEMENTING INFORMATION.

THE WELL IS CURRENTLY BEING COMPLETED AND PRODUCTION START UP WILL BE SUBMITTED UPON COMPLETION.

08/21/2016: SPUD WELL. DRILL 153 0 755'.

SET SURFACE CSG @ 745.

08/23/2016 THROUGH 08/25/2016: DRILLED 765 - 4599'.

circulate on surface casing? Loc on production?

14. I hereby certify that the foregoing is true and correct. Electronic Submission #360874 verified by the BLM Well Information System For CHEVRON USA INC, sent to the Hobbs Committed to AFMSS for processing by JENNIFER SANCHEZ on 12/20/2016 (17JAS0131SE)	
Name (Printed/Typed) DENISE PINKERTON	Title PERMITTING SPECIALIST
Signature (Electronic Submission)	Date 12/14/2016
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office _____
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED *****K-E*

Additional data for EC transaction #360874 that would not fit on the form

32. Additional remarks, continued

08/26/2016: SET INTERMEDIATE CSG @ 4589'. ✓
11/06/2016 THROUGH 11/20/2016: DRILLED 4609' - 19,366' TD.
11/21/2016: SET PRODUCTRION CASING @ 19,351'. ✓
11/23/2016: RELEASE RIG.

SD WE 24 FED P23 No. 1H

Nabors X-30 began drilling the 17 1/2" hole on 08/21/2016.

Surface Casing

TD 17 1/2" hole at 755' on 08/21/2016.

Ran 13 3/8", 54.5#, J-55 STC Surface casing and set @ 745'.

Centralizer placed 10' above float shoe, 10' above the FC, & every 3rd joint to surface.

Cemented with:

Tail – 844 sx Class "C", Yield – 1.33, Fluid Mix Ratio: (gals/sack) 6.36, Density: 14.80

Install wellhead. NUBOP. Test BOPE to 250L/5000H. 08/23/2016.

Intermediate Casing

TD 12 1/4" hole at 4599' on 08/25/2016.

Ran 9 5/8", 40#, HCT-55 LTC intermediate casing and set @ 4589'.

Centralized w/30 bow spring centralizers, 3 on the shoe track, 1 bow spring centralizer every 4 joints to surface.

Cemented with:

Lead – 1030 sacks Class "C", Yield: 2.54, Fluid Mix Ratio – 14.82, Density – 11.90

Tail – 464 sacks Class "C", Yield: 1.33, Fluid Mix Ratio – 6.36, Density – 14.80

Displace w/341 bbls OBM.

Circulated 200 bbls cement to surface. ✓

Full returns throughout job.

Install wellhead. NU BOP. Test BOPE to 250L/5000H 11/05/2016. Pressure test csg to 2840 psi for 30 mins. Good.

Production Casing

TD 8 3/4" hole at 19,366' on 11/20/2016.

Ran 5 1/2", 20#, HCP-110 TXP BTC production casing and set @ 19,351.

Circulate 1.5 B/U through casing valves to downstream manifold @ 8 BPM W/870psi.

Cemented with:

Lead 1 – 628 sacks Class "H", 7.5%D020+0.02 gal/sk D047+2 lb/sk B289+8%D154+0.2%D065+2 lb/sk B288+0/04 gal/sk D177 Spike. Yield-2.71, Fluid Mix Ratio-15.84, Density-11.50

Circulated?

Lead 2 – 2123 sacks Class "H" with 0.4%D238+0.05%D208+0.0 gal/sk D047+0.4%D013+3% D020+0.2%D065. Yield – 1.60, Fluid Mix Ratio-8.62, Density-12.50.

Tail – 121 sacks Class "H" with 0.1%D800+75%D151+0.4%D255+0.02 gal/sk D047+0.2%D065+0.1% D208.

Yield – 2.18, Fluid Mix Ratio-9.56, Density – 15.00.

Displacement – 420 bbls fresh water.

Pressure Test production casing to 1000L/4000H

Bump plug 500psi over FCP @ 1900 psi. Final circ press – 1400 psi @ 4 BPM.

Lost returns @ 178 bbls into displacement. Cement in place @ 00:29 hrs 11/23/2016.

Release rig @ 18:00 hrs on 11/23/2016.

706.



Casing Summary

Well Name SALADO DRAW WE 24 FED P23 001H		Lease	Field Name JENNINGS		Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)		Water Depth (ft)

Surface, Planned 7-N, 745ftKB

Set Depth (MD) (ftKB) 745		Set Tension (kips)		String Nominal OD (in) 13 3/8		String Min Drift (in)		Centralizers 7		Scratchers	
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Wellhead	13 3/8	12 615				35	38	2 90		
1	Casing Pup Joint	13 3/8	12 615	54 50	J-55		38	43	4 30		
16	Casing Joint	13 3/8	12 615	54 50	J-55		43	699	656 25		1,130.0
1	Float Collar	13 3/8	12 615	54 50	J-55		699	700	1 37		
1	Casing Joint	13 3/8	12 615	54 50	J-55		700	743	42 90		1,130.0
1	Float Shoe	13 3/8	12 615	54 50	J-55		743	745	1 81		

Intermediate Casing 1, Planned 7-N, 4,589ftKB

Set Depth (MD) (ftKB) 4,589		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	Casing Hanger	9 5/8	8.844	40.00	HCK-55		37	38	1.63	3,950.0	4,230.0
1	Hanger Pup Joint	9 5/8	8.844	40.00	HCK-55		38	43	4.90	3,950.0	4,230.0
10 9	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	43	4,501	4,458.04	3,950.0	4,230.0
1	Float Collar	9 5/8	8.844	40.00	HCK-55	LT&C	4,501	4,503	1.55	3,950.0	4,230.0
2	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	4,503	4,587	84.62	3,950.0	4,230.0
1	Float Shoe	9 5/8					4,587	4,589	1.63		

Production Casing, Planned 7-N, 19,351ftKB

Set Depth (MD) (ftKB) 19,351		Set Tension (kips)		String Nominal OD (in) 5 1/2		String Min Drift (in)		Centralizers 178		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)
6	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	33	33	0.00		
1	Landing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	33	33	0.00		
1	Hanger	5 1/2	4.800	20.00	P-110	TXP-BTC	33	36	2.39		
1	Pup Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	36	40	4.25		
21 9	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	40	8,607	8,567.08		
1	Marker Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	8,607	8,612	5.25		
26 8	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	8,612	19,189	10,577.14		
1	Pup Jt	5 1/2	4.800	20.00	P-110	TXP-BTC	19,189	19,200	10.32		
1	RSI	5 1/2	4.800	20.00	P-110	TXP-BTC	19,200	19,206	6.67		
1	Pup Jt	5 1/2	4.800	20.00	P-110	TXP-BTC	19,206	19,217	10.23		
1	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	19,217	19,256	39.28		
1	Pup Jt	5 1/2	4.800	20.00	P-110	TXP-BTC	19,256	19,266	10.18		
1	Land Collar	5 1/2	4.800	20.00	P-110	TXP-BTC	19,266	19,267	1.25		
1	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	19,267	19,307	39.19		
1	Float Collar	5 1/2	4.800	20.00	P-110	TXP-BTC	19,307	19,309	2.43		
1	Casing Joint	5 1/2	4.800	20.00	P-110	TXP-BTC	19,309	19,348	39.32		
1	Float Shoe	5 1/2	4.800	20.00	P-110	TXP-BTC	19,348	19,351	2.68		



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)
			Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB)	Vertical Section Direction (°) 359.71
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	153.0	755.0	
12 1/4	755.0	4,599.0	
8 3/4	4,599.0	19,366.0	

Multi-bowl, FMC on 8/21/2016 22:00

Sub-Type Multi-bowl	Install Date 8/21/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 745ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 8/21/2016	Set Depth (MD) (ftKB) 745	Sick Up (ftKB) -35.5	Set Tension (kips)
Centralizers 7			Scratchers		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Wellhead	13 3/8	12 6/15					2.90	35	38
1	Casing Pup Joint	13 3/8	12 6/15	54.50	J-55			4.30	38	43
16	Casing Joint	13 3/8	12 6/15	54.50	J-55			656.25	43	699
1	Float Collar	13 3/8	12 6/15	54.50	J-55			1.37	699	700
1	Casing Joint	13 3/8	12 6/15	54.50	J-55			42.90	700	743
1	Float Shoe	13 3/8	12 6/15	54.50	J-55			1.81	743	745

Intermediate Casing 1, Planned?-N, 4,589ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 8/26/2016	Set Depth (MD) (ftKB) 4,589	Sick Up (ftKB) -36.6	Set Tension (kips)
Centralizers 30			Scratchers		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Hanger	9 5/8	8.844	40.00	HCK-55			1.63	37	38
1	Hanger Pup Joint	9 5/8	8.844	40.00	HCK-55			4.90	38	43
109	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,458.04	43	4,501
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.56	4,501	4,503
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	84.62	4,503	4,587
1	Float Shoe	9 5/8						1.63	4,587	4,589

Production Casing, Planned?-N, 19,351ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 11/22/2016	Set Depth (MD) (ftKB) 19,351	Sick Up (ftKB) -33.3	Set Tension (kips)
Centralizers 178			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)
6	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	33	33
1	Landing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	33	33
1	Hanger	5 1/2	4.800	20.00	P-110		TXP-BTC	2.39	33	36
1	Pup Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	4.25	36	40
219	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	8,567.08	40	8,607
1	Marker Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	5.25	8,607	8,612
268	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	10,577.14	8,612	19,189
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.32	19,189	19,200
1	RSI	5 1/2	4.800	20.00	P-110		TXP-BTC	6.67	19,200	19,206
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.23	19,206	19,217



Cement Summary

Surface Casing Cement

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Blm Depth (MD) (ftKB)
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.28	19,217	19,256
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.18	19,256	19,266
1	Land Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	1.25	19,266	19,267
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.19	19,267	19,307
1	Float Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	2.43	19,307	19,309
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.32	19,309	19,348
1	Float Shoe	5 1/2	4.800	20.00	P-110		TXP-BTC	2.68	19,348	19,351

Surface Casing Cement, Casing, 8/22/2016 00:00

Cementing Start Date 8/22/2016	Cementing End Date 8/22/2016	Wellbore Original Hole
Evaluation Method Returns to Surface	Cement Evaluation Results 95 bbls of cement to surface	
Comment		

1, 35.4-745.0ftKB

Top Depth (ftKB) 35.4	Bottom Depth (ftKB) 745.0	Full Return? N	Vol Cement Ret (bbl) 95.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 4.8	Final Pump Rate (bbl/min) 2.3	Avg Pump Rate (bbl/min) 4.8	Final Pump Pressure (psi) 305.0	Plug Bump Pressure (psi) 960.0	
Pipe Reciprocated? N	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated? N	Pipe RPM (rpm)	
Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date	

Preflush

Fluid Type Preflush	Fluid Description	Quantity (sacks)	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

Tail

Fluid Type Tail	Fluid Description	Quantity (sacks) 844	Class C	Volume Pumped (bbl) 200.0
Estimated Top (ftKB) 35.4	Estimated Bottom Depth (ftKB) 945.0	Percent Excess Pumped (%) 125.0	Yield (ft ³ /sack) 1.33	Fluid Mix Ratio (gal/sack) 6.36
Free Water (%)	Density (lb/gal) 14.80	Zero Gel Time (min)	Thickening Time (hr) 4.13	1st Compressive Strength (psi) 93.0

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl) 108.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 10.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB)	Vertical Section Direction (°) 359.71
Hole Size (in)	Act Top (ftKB)	Act Blm (ftKB)	
17 1/2	153.0	755.0	
12 1/4	755.0	4,599.0	
8 3/4	4,599.0	19,366.0	

Multi-bowl, FMC on 8/21/2016 22:00

Sub-Type Multi-bowl	Install Date 8/21/2016				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 745ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 8/21/2016	Set Depth (MD) (ftKB) 745	Stick Up (ftKB) -35.5	Set Tension (kips)
Centralizers 7			Scratchers		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Blm Depth (MD) (ftKB)
1	Wellhead	13 3/8	12.615					2.90	35	38
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55			4.30	38	43
16	Casing Joint	13 3/8	12.615	54.50	J-55			656.25	43	699
1	Float Collar	13 3/8	12.615	54.50	J-55			1.37	699	700
1	Casing Joint	13 3/8	12.615	54.50	J-55			42.90	700	743
1	Float Shoe	13 3/8	12.615	54.50	J-55			1.81	743	745

Intermediate Casing 1, Planned?-N, 4,589ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 8/26/2016	Set Depth (MD) (ftKB) 4,589	Stick Up (ftKB) -36.6	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)	Blm Depth (MD) (ftKB)
1	Casing Hanger	9 5/8	8.844	40.00	HCK-55			1.63	37	38
1	Hanger Pup Joint	9 5/8	8.844	40.00	HCK-55			4.90	38	43
109	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,458.04	43	4,501
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.55	4,501	4,503
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	84.62	4,503	4,587
1	Float Shoe	9 5/8						1.63	4,587	4,589

Production Casing, Planned?-N, 19,351ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 11/22/2016	Set Depth (MD) (ftKB) 19,351	Stick Up (ftKB) -33.3	Set Tension (kips)
Centralizers 178			Scratchers		

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)
6	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	33	33
1	Landing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	33	33
1	Hanger	5 1/2	4.800	20.00	P-110		TXP-BTC	2.39	33	36
1	Pup Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	4.25	36	40
219	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	8,567.08	40	8,607
1	Marker Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	5.25	8,607	8,612
268	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	10,577.14	8,612	19,189
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.32	19,189	19,200
1	RSI	5 1/2	4.800	20.00	P-110		TXP-BTC	6.67	19,200	19,206
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.23	19,206	19,217



Cement Summary

Intermediate Casing Cement

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.28	19,217	19,256
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.18	19,256	19,266
1	Land Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	1.25	19,266	19,267
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.19	19,267	19,307
1	Float Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	2.43	19,307	19,309
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.32	19,309	19,348
1	Float Shoe	5 1/2	4.800	20.00	P-110		TXP-BTC	2.68	19,348	19,351

Intermediate Casing Cement, Casing, 8/26/2016 07:45

Cementing Start Date 8/26/2016	Cementing End Date 8/26/2016	Wellbore Original Hole
Evaluation Method Returns to Surface	Cement Evaluation Results 200 bbls of cement to surface	
Comment		

1, 35.4-4,589.0ftKB

Top Depth (ftKB) 35.4	Bottom Depth (ftKB) 4,589.0	Full Return? N	Vol Cement Ret (bbl) 200.0	Top Plug? Y	Bottom Plug? N
Initial Pump Rate (bbl/min) 5.2	Final Pump Rate (bbl/min)	Avg Pump Rate (bbl/min) 6.5	Final Pump Pressure (psi) 1,090.0	Plug Bump Pressure (psi) 1,632.0	
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) 35.4	Class C	Volume Pumped (bbl) 35.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.33	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type Lead	Fluid Description	Quantity (sacks) 1,030	Class C	Volume Pumped (bbl) 441.0
Estimated Top (ftKB) 35.4	Estimated Bottom Depth (ftKB) 3,600.0	Percent Excess Pumped (%) 150.0	Yield (ft ³ /sack) 2.54	Fluid Mix Ratio (gal/sack) 14.82
Free Water (%) 0.00	Density (lb/gal) 11.90	Zero Gel Time (min)	Thickening Time (hr) 7.00	1st Compressive Strength (psi) 50.0

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description	Quantity (sacks) 464	Class C	Volume Pumped (bbl) 109.0
Estimated Top (ftKB) 3,600.0	Estimated Bottom Depth (ftKB) 4,589.0	Percent Excess Pumped (%) 85.0	Yield (ft ³ /sack) 1.33	Fluid Mix Ratio (gal/sack) 6.36
Free Water (%) 0.40	Density (lb/gal) 14.80	Zero Gel Time (min)	Thickening Time (hr) 4.87	1st Compressive Strength (psi) 50.0

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description Oil Base Mud	Quantity (sacks)	Class	Volume Pumped (bbl) 341.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 9.00	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 24 FED P23 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Original Hole

Wellbore Name Original Hole	Directional Type Horizontal	Min Kick Off Depth (ftKB)	Vertical Section Direction (*) 350 71
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	153.0	755.0	
12 1/4	755.0	4,599.0	
8 3/4	4,599.0	19,366.0	

Multi-bowl, FMC on 8/21/2016 22:00

Sub-Type Multi-bowl			Install Date 8/21/2016		
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned?-N, 745ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 8/21/2016	Set Depth (MD) (ftKB) 745	Stick Up (ftKB) -35.5	Set Tension (kips)
Centralizers 7	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Wellhead	13 3/8	12 615					2.90	35	38
1	Casing Pup Joint	13 3/8	12 615	54.50	J-55			4.30	38	43
16	Casing Joint	13 3/8	12 615	54.50	J-55			656.25	43	699
1	Float Collar	13 3/8	12 615	54.50	J-55			1.37	699	700
1	Casing Joint	13 3/8	12 615	54.50	J-55			42.90	700	743
1	Float Shoe	13 3/8	12 615	54.50	J-55			1.81	743	745

Intermediate Casing 1, Planned?-N, 4,589ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 8/26/2016	Set Depth (MD) (ftKB) 4,589	Stick Up (ftKB) -36.6	Set Tension (kips)
Centralizers 30	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Hanger	9 5/8	8.844	40.00	HCK-55			1.63	37	38
1	Hanger Pup Joint	9 5/8	8.844	40.00	HCK-55			4.90	38	43
109	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,458.04	43	4,501
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.55	4,501	4,503
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	84.62	4,503	4,587
1	Float Shoe	9 5/8						1.63	4,587	4,589

Production Casing, Planned?-N, 19,351ftKB

Casing Description Production Casing	Wellbore Original Hole	Run Date 11/22/2016	Set Depth (MD) (ftKB) 19,351	Stick Up (ftKB) -33.3	Set Tension (kips)
Centralizers 178	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)
6	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	33	33
1	Landing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	0.00	33	33
1	Hanger	5 1/2	4.800	20.00	P-110		TXP-BTC	2.39	33	36
1	Pup Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	4.25	36	40
219	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	8,567.08	40	8,607
1	Marker Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	5.25	8,607	8,612
268	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	10,577.14	8,612	19,189
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.32	19,189	19,200
1	RSI	5 1/2	4.800	20.00	P-110		TXP-BTC	6.67	19,200	19,206
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.23	19,206	19,217



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 24 FED P23 - 001H		Lease	Field Name JENNINGS		Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation			Mud Line Elevation (ft)
					Water Depth (ft)

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.28	19,217	19,256
1	Pup Jt	5 1/2	4.800	20.00	P-110		TXP-BTC	10.18	19,256	19,266
1	Land Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	1.25	19,266	19,267
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.19	19,267	19,307
1	Float Collar	5 1/2	4.800	20.00	P-110		TXP-BTC	2.43	19,307	19,309
1	Casing Joint	5 1/2	4.800	20.00	P-110		TXP-BTC	39.32	19,309	19,348
1	Float Shoe	5 1/2	4.800	20.00	P-110		TXP-BTC	2.68	19,348	19,351

Production Casing Cement, Casing, 11/22/2016 19:30

Cementing Start Date 11/22/2016	Cementing End Date 11/23/2016	Wellbore Original Hole
Evaluation Method Lift Pressure	Cement Evaluation Results FCP - 1,400 psi @ 4 bpm. Design lift pressure - 1,100 psi	
Comment		

1, 3,549.0-19,351.0ftKB

Top Depth (ftKB) 3,549.0	Bottom Depth (ftKB) 19,351.0	Full Return? N	Vol Cement Ret (bbl) 0.0	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbl/min) 6	Final Pump Rate (bbl/min) 4	Avg Pump Rate (bbl/min) 6.5	Final Pump Pressure (psi) 1,400.0	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)	Opil Out Date	

Spacer

Fluid Type Spacer	Fluid Description Mud Push Express Spacer - 117.74 lb/bbl D035 + 0.2 gal/bbl D175A + 0.7 lb/bbl B389 + 2 gal/bbl B220	Quantity (sacks)	Class	Volume Pumped (bbl) 54.0	
Estimated Top (ftKB) 500.0	Estimated Bottom Depth (ftKB) 3,549.0	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 Lead 1 - 7.5% D020 + 0.02 gal/sk D047 + 2 lb/sk B289 + 8% D154 + 0.2% D065 + 2 lb/sk B288 + 0.04 gal/sk D177 Spike	Quantity (sacks) 628	Class H	Volume Pumped (bbl) 303.0	
Estimated Top (ftKB) 3,549.0	Estimated Bottom Depth (ftKB) 8,582.0	Percent Excess Pumped (%) 50.0	Yield (ft ³ /sack) 2.71	Fluid Mix Ratio (gal/sack) 15.84	
Free Water (%)	Density (lb/gal) 11.50	Zero Gel Time (min)	Thickening Time (hr) 8.15	1st Compressive Strength (psi)	

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type Lead	Fluid Description Lead 2 - 0.4% D238 + 0.05% D208 + 0.02 gal/sk D047 + 0.4% D013 + 3% D020 + 0.2% D065	Quantity (sacks) 2,123	Class H	Volume Pumped (bbl) 605.0	
Estimated Top (ftKB) 8,582.0	Estimated Bottom Depth (ftKB) 18,351.0	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) 5.42	1st Compressive Strength (psi)	



Cement Summary

Production Casing Cement

Well Name SALADO DRAW WE 24 FED P23 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type Tail	Fluid Description Tail - 0.1% D800 + 75% D151 + 0.4% D255 + 0.02 gal/sk D047 + 0.2% D065 + 0.1% D208	Quantity (sacks) 121	Class H	Volume Pumped (bbl) 47.0
Estimated Top (ftKB) 18,351.0	Estimated Bottom Depth (ftKB) 19,351.0	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) 3.42	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description Fresh Water	Quantity (sacks)	Class	Volume Pumped (bbl) 420.0
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



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Wellbore Name Original Hole		Parent Wellbore Original Hole		Min Kick Off Depth (RKB)		Vertical Section Direction (°) 359.71	
Northing (Y) (ft)		Easting (X) (ft)		UTM Grid Zone			
Date 8/21/2016		Definitive? N		Description MWD		Planned? N	
MD Tie In (RKB)		TVD Tie In (RKB)		Inclination Tie In (°)		Azimuth Tie In (°)	
						NST Tie 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
80	0.90	258.00	80.00	-0.13	-0.61	-0.13	1.13	Magn MS		1.13	0.63	322.50	N
171	2.40	236.00	170.96	-1.34	-2.89	-1.33	1.76	Magn MS		1.65	3.19	-24.18	N
337	1.90	259.00	336.84	-3.81	-8.48	-3.77	0.59	Magn MS		-0.30	9.29	13.86	N
439	1.70	263.00	438.79	-4.32	-11.64	-4.26	0.23	Magn MS		-0.20	12.41	3.92	N
615	2.10	243.00	614.70	-6.10	-17.10	-6.02	0.44	Magn MS		0.23	18.16	-11.36	N
720	1.70	214.30	719.64	-8.26	-19.69	-8.16	0.97	Magn MS		-0.38	21.36	-27.33	N
802	1.62	236.19	801.61	-9.91	-21.34	-9.80	0.77	Magn MWD	Baker Hughes	-0.10	23.53	26.70	N
893	1.67	223.96	892.57	-11.58	-23.33	-11.46	0.39	Magn MWD	Baker Hughes	0.05	26.05	-13.44	N
984	2.79	243.20	983.50	-13.54	-26.23	-13.40	1.46	Magn MWD	Baker Hughes	1.23	29.52	21.14	N
1,074	4.19	251.61	1,073.33	-15.56	-31.30	-15.40	1.65	Magn MWD	Baker Hughes	1.56	34.96	9.34	N
1,165	5.06	255.34	1,164.04	-17.62	-38.33	-17.43	1.00	Magn MWD	Baker Hughes	0.95	42.19	4.10	N
1,254	5.32	253.67	1,252.67	-19.77	-46.08	-19.54	0.35	Magn MWD	Baker Hughes	0.30	50.16	-1.88	N
1,342	5.36	261.17	1,340.29	-21.55	-54.06	-21.28	0.79	Magn MWD	Baker Hughes	0.05	58.20	8.52	N
1,431	5.35	266.55	1,428.90	-22.44	-62.31	-22.12	0.56	Magn MWD	Baker Hughes	-0.01	66.23	6.04	N
1,519	5.45	265.61	1,516.51	-23.01	-70.57	-22.65	0.15	Magn MWD	Baker Hughes	0.11	74.23	-1.07	N
1,607	5.49	267.17	1,604.11	-23.54	-78.94	-23.14	0.17	Magn MWD	Baker Hughes	0.05	82.38	1.77	N
1,696	6.23	265.81	1,692.65	-24.10	-88.01	-23.65	0.85	Magn MWD	Baker Hughes	0.83	91.25	-1.53	N
1,784	8.14	262.11	1,779.95	-25.30	-98.95	-24.80	2.23	Magn MWD	Baker Hughes	2.17	102.13	-4.20	N
1,872	9.61	257.51	1,866.90	-27.75	-112.29	-27.18	1.85	Magn MWD	Baker Hughes	1.67	115.67	-5.23	N
1,961	10.12	261.18	1,954.58	-30.56	-127.27	-29.91	0.91	Magn MWD	Baker Hughes	0.57	130.85	4.12	N
2,049	10.21	264.46	2,041.20	-32.49	-142.67	-31.77	0.67	Magn MWD	Baker Hughes	0.10	145.32	3.73	N
2,138	10.35	262.64	2,128.77	-34.28	-158.45	-33.47	0.40	Magn MWD	Baker Hughes	0.16	162.12	-2.04	N
2,226	10.05	259.88	2,215.38	-36.64	-173.85	-35.78	0.65	Magn MWD	Baker Hughes	-0.34	177.67	-3.14	N
2,315	9.96	259.45	2,303.03	-39.41	-189.06	-38.45	0.13	Magn MWD	Baker Hughes	-0.10	193.13	-0.48	N
2,404	10.01	260.34	2,390.68	-42.12	-204.25	-41.08	0.18	Magn MWD	Baker Hughes	0.06	208.55	1.00	N
2,493	9.99	262.10	2,478.33	-44.48	-219.53	-43.37	0.34	Magn MWD	Baker Hughes	-0.02	223.99	1.98	N
2,670	9.05	264.09	2,652.89	-48.02	-248.58	-46.76	0.56	Magn MWD	Baker Hughes	-0.53	253.18	1.12	N
2,847	7.90	270.26	2,827.96	-49.40	-274.59	-48.01	0.83	Magn MWD	Baker Hughes	-0.65	279.00	3.49	N
3,024	7.69	269.13	3,003.32	-49.52	-298.60	-48.01	0.15	Magn MWD	Baker Hughes	-0.12	302.68	-0.64	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Grood Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (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
3.202	5.83	261.06	3,180.08	-51.11	-319.44	-49.49	1.17	Magn MWD	Baker Hughes	-1.04	323.50	-4.53	N
3.379	6.48	251.40	3,356.06	-55.69	-337.78	-53.98	0.69	Magn MWD	Baker Hughes	0.37	342.35	-5.46	N
3.556	7.98	234.54	3,531.67	-66.01	-357.26	-64.20	1.46	Magn MWD	Baker Hughes	0.85	363.31	-9.53	N
3.733	9.34	233.09	3,706.65	-81.76	-378.75	-79.84	0.78	Magn MWD	Baker Hughes	0.77	387.48	-0.82	N
3.910	9.67	241.04	3,881.23	-97.59	-403.25	-95.54	0.76	Magn MWD	Baker Hughes	0.19	414.89	4.49	N
4.087	10.66	253.40	4,055.47	-109.48	-431.95	-107.28	1.36	Magn MWD	Baker Hughes	0.58	445.60	6.98	N
4.264	9.85	250.05	4,229.64	-119.31	-461.87	-116.97	0.57	Magn MWD	Baker Hughes	-0.46	477.03	-1.89	N
4.441	10.04	252.34	4,403.98	-129.15	-490.80	-126.67	0.25	Magn MWD	Baker Hughes	0.11	507.51	1.29	N
4.530	11.02	264.51	4,491.49	-132.32	-506.66	-129.75	2.72	Magn MWD	Baker Hughes	1.10	523.65	13.67	N
4.618	10.75	267.37	4,577.91	-133.50	-523.23	-130.85	0.69	Magn MWD	Baker Hughes	-0.31	539.99	3.25	N
4.795	10.64	266.69	4,751.84	-135.20	-556.04	-132.39	0.09	Magn MWD	Baker Hughes	-0.06	572.24	-0.38	N
4.972	10.47	265.62	4,925.84	-137.37	-588.38	-134.39	0.15	Magn MWD	Baker Hughes	-0.10	604.21	-0.60	N
5.149	11.98	266.83	5,099.45	-139.62	-622.76	-136.46	0.86	Magn MWD	Baker Hughes	0.85	638.22	0.68	N
5.326	11.70	266.45	5,272.68	-141.75	-659.02	-138.41	0.18	Magn MWD	Baker Hughes	-0.16	674.09	-0.21	N
5.503	11.59	265.58	5,446.04	-144.23	-694.86	-140.71	0.12	Magn MWD	Baker Hughes	-0.06	709.47	-0.49	N
5.681	11.06	264.37	5,620.57	-147.28	-729.48	-143.59	0.33	Magn MWD	Baker Hughes	-0.30	744.19	-0.68	N
5.859	10.78	264.86	5,795.35	-150.45	-763.05	-146.58	0.17	Magn MWD	Baker Hughes	-0.16	777.74	0.28	N
6.035	10.36	264.91	5,968.36	-153.32	-796.20	-149.30	0.24	Magn MWD	Baker Hughes	-0.24	809.85	0.03	N
6.212	8.78	261.21	6,142.90	-156.80	-824.41	-152.63	0.98	Magn MWD	Baker Hughes	-0.89	839.19	-2.09	N
6.389	8.45	260.24	6,317.90	-161.07	-850.57	-156.76	0.20	Magn MWD	Baker Hughes	-0.19	865.69	-0.55	N
6.566	8.13	258.99	6,493.05	-165.67	-875.68	-161.23	0.21	Magn MWD	Baker Hughes	-0.18	891.21	-0.71	N
6.742	6.19	254.66	6,667.67	-170.55	-897.04	-166.01	1.14	Magn MWD	Baker Hughes	-1.10	913.11	-2.46	N
6.920	3.74	241.49	6,845.00	-175.86	-911.40	-171.25	1.51	Magn MWD	Baker Hughes	-1.38	928.22	-7.40	N
7.096	1.09	236.29	7,020.82	-179.53	-917.84	-174.88	1.51	Magn MWD	Baker Hughes	-1.51	935.23	-2.95	N
7.273	1.06	231.40	7,197.79	-181.49	-920.52	-176.83	0.05	Magn MWD	Baker Hughes	-0.02	938.24	-2.76	N
7.451	1.73	229.62	7,375.74	-184.26	-923.85	-179.58	0.38	Magn MWD	Baker Hughes	0.38	942.05	-1.00	N
7.539	0.45	153.42	7,463.72	-185.43	-924.71	-180.74	1.91	Magn MWD	Baker Hughes	-1.45	943.12	-86.59	N
7.628	0.71	165.40	7,552.72	-186.27	-924.42	-181.59	0.32	Magn MWD	Baker Hughes	0.29	943.00	13.46	N
7.805	0.63	200.19	7,729.71	-188.25	-924.48	-183.57	0.23	Magn MWD	Baker Hughes	-0.05	943.45	19.66	N
7.982	1.04	214.67	7,906.69	-190.48	-925.73	-185.79	0.26	Magn MWD	Baker Hughes	-0.23	945.12	8.18	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (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
8,159	1.46	214.98	8,083.65	-193.65	-927.93	-188.95	0.24	Magn MWD	Baker Hughes	0.24	947.92	0.18	N
8,335	1.79	209.35	8,259.58	-197.88	-930.56	-193.17	0.21	Magn MWD	Baker Hughes	0.19	951.37	-3.20	N
8,512	1.88	212.09	8,436.48	-202.75	-933.46	-198.03	0.07	Magn MWD	Baker Hughes	0.05	955.23	1.55	N
8,557	1.94	215.64	8,481.46	-204.00	-934.30	-199.27	0.29	Magn MWD	Baker Hughes	0.13	956.31	7.89	N
8,646	8.62	348.07	8,570.16	-198.68	-936.56	-193.94	11.27	Magn MWD	Baker Hughes	7.51	957.40	148.80	N
8,734	18.31	339.87	8,655.64	-179.20	-942.70	-174.43	11.20	Magn MWD	Baker Hughes	11.01	959.58	-9.32	N
8,823	28.33	343.74	8,737.27	-145.72	-953.45	-140.89	11.38	Magn MWD	Baker Hughes	11.26	964.52	4.35	N
8,912	35.30	351.98	8,812.89	-99.90	-962.96	-95.03	9.21	Magn MWD	Baker Hughes	7.83	968.13	9.26	N
9,029	42.42	4.68	8,904.08	-26.89	-964.47	-22.01	9.11	Magn MWD	Baker Hughes	6.09	964.84	-	N
9,118	51.24	4.98	8,964.91	37.73	-958.99	42.58	9.91	Magn MWD	Baker Hughes	9.91	959.73	0.34	N
9,206	62.09	5.16	9,013.20	110.85	-952.50	115.67	12.33	Magn MWD	Baker Hughes	12.33	958.93	0.20	N
9,295	73.57	3.12	9,046.73	192.92	-946.62	197.71	13.07	Magn MWD	Baker Hughes	12.90	966.08	-2.29	N
9,384	86.58	1.60	9,062.82	280.21	-943.04	284.98	13.58	Magn MWD	Baker Hughes	13.47	983.79	-1.71	N
9,428	90.28	1.32	9,064.42	324.15	-941.92	328.92	10.75	Magn MWD	Baker Hughes	10.73	996.14	-0.64	N
9,472	90.65	1.04	9,064.06	368.14	-941.02	372.90	1.05	Magn MWD	Baker Hughes	0.84	1,010.47	-0.64	N
9,561	90.43	359.96	9,063.23	457.13	-940.24	461.89	1.24	Magn MWD	Baker Hughes	-0.25	1,045.48	403.28	N
9,649	90.59	359.04	9,062.44	545.13	-940.32	549.88	0.18	Magn MWD	Baker Hughes	0.18	1,086.91	-0.02	N
9,738	90.55	1.00	9,061.56	634.12	-939.59	638.87	1.19	Magn MWD	Baker Hughes	-0.04	1,133.55	403.30	N
9,826	90.55	0.86	9,060.71	722.11	-938.16	726.86	0.18	Magn MWD	Baker Hughes	0.00	1,183.88	-0.18	N
9,916	90.68	1.96	9,059.75	812.07	-935.94	816.80	1.23	Magn MWD	Baker Hughes	0.14	1,239.13	1.22	N
10,004	92.37	2.58	9,067.40	899.97	-932.46	904.68	2.05	Magn MWD	Baker Hughes	1.92	1,296.98	0.70	N
10,093	90.25	2.43	9,055.37	988.86	-928.57	993.54	2.39	Magn MWD	Baker Hughes	-2.38	1,356.50	-0.17	N
10,181	90.49	1.28	9,054.80	1,076.81	-925.72	1,081.48	1.38	Magn MWD	Baker Hughes	0.27	1,420.03	-1.31	N
10,269	90.49	1.10	9,054.05	1,164.78	-923.90	1,169.44	0.20	Magn MWD	Baker Hughes	0.00	1,486.71	-0.20	N
10,358	91.08	1.48	9,052.83	1,253.75	-921.89	1,258.40	0.79	Magn MWD	Baker Hughes	0.66	1,556.21	0.43	N
10,446	90.25	1.25	9,051.81	1,341.72	-919.80	1,346.36	0.98	Magn MWD	Baker Hughes	-0.94	1,626.73	-0.26	N
10,536	93.88	359.58	9,048.56	1,431.64	-919.14	1,436.28	4.44	Magn MWD	Baker Hughes	4.03	1,701.30	398.14	N
10,624	88.58	358.74	9,046.68	1,519.58	-920.43	1,524.22	6.70	Magn MWD	Baker Hughes	-6.02	1,776.60	-0.95	N
10,713	91.48	0.28	9,046.63	1,608.56	-921.19	1,613.21	3.69	Magn MWD	Baker Hughes	3.26	1,853.67	402.76	N
10,802	91.79	358.22	9,044.09	1,697.52	-922.36	1,702.16	2.34	Magn MWD	Baker Hughes	0.35	1,931.82	402.18	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Survey Data

MD (ftKB)	Inc (")	Azm (")	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS ("/100ft)	Method	Survey Company	Build ("/100ft)	Depart (ft)	Turn ("/100ft)	Unuse d data
10,890	90.25	356.96	9,042.52	1,785.42	-926.06	1,790.08	2.28	Magn MWD	Baker Hughes	-1.75	2,011.29	-1.43	N
10,983	91.79	356.98	9,040.87	1,878.27	-930.97	1,882.96	1.68	Magn MWD	Baker Hughes	1.66	2,096.33	0.02	N
11,074	89.88	355.81	9,089.54	1,969.08	-936.70	1,973.79	2.48	Magn MWD	Baker Hughes	-2.10	2,180.52	-1.29	N
11,166	89.38	355.13	9,040.14	2,060.79	-943.96	2,065.54	0.92	Magn MWD	Baker Hughes	-0.54	2,266.69	-0.74	N
11,257	89.57	356.72	9,040.97	2,151.55	-950.43	2,156.33	1.76	Magn MWD	Baker Hughes	0.21	2,352.12	1.75	N
11,348	89.41	357.94	9,041.78	2,242.44	-954.67	2,247.25	1.35	Magn MWD	Baker Hughes	-0.18	2,437.20	1.34	N
11,438	89.38	359.15	9,042.73	2,332.41	-956.95	2,337.22	1.34	Magn MWD	Baker Hughes	-0.03	2,521.09	1.34	N
11,529	89.85	0.65	9,043.34	2,423.40	-957.11	2,428.22	1.73	Magn MWD	Baker Hughes	0.52	2,605.56	-	N
11,620	89.29	0.40	9,044.02	2,514.40	-956.28	2,519.21	0.67	Magn MWD	Baker Hughes	-0.62	2,690.10	-0.27	N
11,711	89.91	1.02	9,044.66	2,605.39	-955.15	2,610.19	0.96	Magn MWD	Baker Hughes	0.68	2,774.95	0.68	N
11,802	89.72	0.60	9,044.96	2,696.38	-953.86	2,701.17	0.51	Magn MWD	Baker Hughes	-0.21	2,860.12	-0.46	N
11,890	91.23	0.93	9,044.22	2,784.36	-952.69	2,789.15	1.76	Magn MWD	Baker Hughes	1.72	2,942.84	0.38	N
11,979	89.75	0.34	9,043.46	2,873.35	-951.70	2,878.13	1.79	Magn MWD	Baker Hughes	-1.66	3,026.86	-0.66	N
12,067	90.18	0.42	9,043.52	2,961.35	-951.12	2,966.13	0.50	Magn MWD	Baker Hughes	0.49	3,110.34	0.09	N
12,155	92.31	0.76	9,041.61	3,049.32	-950.21	3,054.09	2.45	Magn MWD	Baker Hughes	2.42	3,193.94	0.39	N
12,244	91.08	359.71	9,088.97	3,138.28	-949.85	3,143.04	1.82	Magn MWD	Baker Hughes	-1.38	3,278.87	403.31	N
12,332	91.14	0.47	9,087.27	3,226.26	-949.71	3,231.02	0.87	Magn MWD	Baker Hughes	0.07	3,363.14	-	N
12,421	86.98	358.24	9,038.73	3,315.22	-950.71	3,319.99	5.30	Magn MWD	Baker Hughes	-4.67	3,448.84	401.99	N
12,509	87.51	358.23	9,042.96	3,408.07	-953.42	3,407.86	0.60	Magn MWD	Baker Hughes	0.60	3,534.11	-0.01	N
12,598	89.20	359.36	9,045.51	3,492.01	-955.29	3,496.80	2.28	Magn MWD	Baker Hughes	1.90	3,620.32	1.27	N
12,686	90.22	359.57	9,045.96	3,580.01	-956.11	3,584.80	1.18	Magn MWD	Baker Hughes	1.16	3,705.48	0.24	N
12,775	89.38	358.57	9,046.27	3,668.99	-957.55	3,673.79	1.47	Magn MWD	Baker Hughes	-0.94	3,791.89	-1.12	N
12,863	89.63	358.47	9,047.03	3,756.96	-959.83	3,761.77	0.31	Magn MWD	Baker Hughes	0.28	3,877.63	-0.11	N
12,952	89.17	359.57	9,047.96	3,845.94	-961.35	3,850.76	1.34	Magn MWD	Baker Hughes	-0.52	3,964.27	1.24	N
13,041	89.51	0.06	9,048.99	3,934.93	-961.64	3,939.75	0.67	Magn MWD	Baker Hughes	0.38	4,050.73	-	N
13,130	86.55	359.33	9,052.05	4,023.87	-962.11	4,028.69	3.43	Magn MWD	Baker Hughes	-3.33	4,137.29	403.67	N
13,218	88.31	1.27	9,055.99	4,111.77	-961.65	4,116.59	2.97	Magn MWD	Baker Hughes	2.00	4,222.73	-	N
13,307	90.65	2.60	9,056.80	4,200.71	-958.64	4,205.51	3.02	Magn MWD	Baker Hughes	2.63	4,308.71	1.49	N
13,395	90.25	2.54	9,056.11	4,288.62	-954.70	4,293.39	0.46	Magn MWD	Baker Hughes	-0.45	4,393.60	-0.07	N
13,484	90.55	2.04	9,055.49	4,377.54	-951.14	4,382.30	0.56	Magn MWD	Baker Hughes	0.34	4,479.68	-0.56	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Buid (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
13,572	90 40	1 03	9,054.78	4,465.51	-948.78	4,470.25	1 16	Magn MWD	Baker Hughes	-0.17	4,565. 19	-1.15	N
13,661	89 51	358 79	9,054.83	4,554.50	-948.92	4,559.25	2 71	Magn MWD	Baker Hughes	-1 00	4,652. 30	401 98	N
13,750	90 03	0 64	9,055.18	4,643.49	-949.37	4,648.24	2 16	Magn MWD	Baker Hughes	0 58	4,739. 55	402.42	N
13,838	91 54	1 21	9,053.98	4,731.47	-947.95	4,736.21	1.83	Magn MWD	Baker Hughes	1 72	4,825. 50	0.65	N
13,927	89 48	359 75	9,053.19	4,820.46	-947.20	4,825.19	2 84	Magn MWD	Baker Hughes	-2 31	4,912. 64	402.85	N
14,015	90 62	0 08	9,053.11	4,908.46	-947.33	4,913.19	1 35	Magn MWD	Baker Hughes	1.30	4,999. 04	408 72	N
14,105	89 69	358 78	9,052.87	4,998.45	-948.23	5,003.18	1 78	Magn MWD	Baker Hughes	-1 03	5,087. 59	398 56	N
14,193	89 72	358 58	9,053.32	5,086.42	-950.25	5,091.17	0 23	Magn MWD	Baker Hughes	0.03	5,174. 43	-0.23	N
14,282	93 02	359 90	9,051.19	5,175.38	-951.43	5,180.13	3 99	Magn MWD	Baker Hughes	3 71	5,262. 11	1 48	N
14,370	92 43	0 61	9,047.01	5,263.28	-951.04	5,268.02	1.05	Magn MWD	Baker Hughes	-0.67	5,348. 51	408 28	N
14,459	90 52	357 93	9,044.72	5,352.23	-952.18	5,356.98	3 70	Magn MWD	Baker Hughes	-2 15	5,436. 26	401 48	N
14,547	90 18	357.30	9,044.18	5,440.15	-955.84	5,444.92	0 81	Magn MWD	Baker Hughes	-0.39	5,523. 48	-0 72	N
14,636	90 68	359.44	9,043.51	5,529.10	-958.37	5,533.88	2 47	Magn MWD	Baker Hughes	0 56	5,611. 55	2.40	N
14,724	88 86	358 56	9,043.86	5,617.09	-958.91	5,621.87	2.30	Magn MWD	Baker Hughes	-2.07	5,698. 51	-1 00	N
14,813	89 51	0 49	9,045.13	5,706.07	-960.64	5,710.86	2 29	Magn MWD	Baker Hughes	0.73	5,788. 37	402 33	N
14,901	89 51	0 72	9,045.88	5,794.06	-959.71	5,798.84	0 26	Magn MWD	Baker Hughes	0.00	5,873. 00	0.26	N
14,989	89 54	0 41	9,046.61	5,882.05	-958.85	5,886.83	0 35	Magn MWD	Baker Hughes	0.03	5,959. 69	-0.35	N
15,078	89 20	359.10	9,047.59	5,971.04	-959.23	5,975.82	1.52	Magn MWD	Baker Hughes	-0.38	6,047. 60	403.02	N
15,167	89 57	358 77	9,048.55	6,060.02	-960.88	6,064.81	0.58	Magn MWD	Baker Hughes	0.42	6,135. 73	-0.37	N
15,255	91 91	358 33	9,047.41	6,147.98	-963.11	6,152.78	2 71	Magn MWD	Baker Hughes	2 66	6,222. 96	-0.50	N
15,343	89 78	356.51	9,046.11	6,235.87	-967.07	6,240.69	3.18	Magn MWD	Baker Hughes	-2 42	6,310. 42	-2.07	N
15,432	93 11	358.04	9,043.87	6,324.73	-971.30	6,328.57	4 12	Magn MWD	Baker Hughes	3.74	6,398. 88	1.72	N
15,520	89 88	364 95	9,041.57	6,412.51	-976.68	6,417.37	6.08	Magn MWD	Baker Hughes	-3 67	6,486. 46	-3.51	N
15,609	90 25	358 29	9,041.47	6,501.35	-981.92	6,506.23	3 78	Magn MWD	Baker Hughes	0.42	6,575. 08	3.75	N
15,697	89 60	369.56	9,041.59	6,589.33	-983.57	6,594.22	1.62	Magn MWD	Baker Hughes	-0.74	6,662. 33	1.44	N
15,786	89 45	0 46	9,042.32	6,678.32	-983.56	6,683.22	1.03	Magn MWD	Baker Hughes	-0.17	6,750. 36	403.48	N
15,874	89 51	1 17	9,043.12	6,766.31	-982.31	6,771.20	0 81	Magn MWD	Baker Hughes	0 07	6,837. 24	0.81	N
15,963	89 35	2 14	9,044.01	6,855.27	-979.74	6,860.14	1.10	Magn MWD	Baker Hughes	-0.18	6,924. 93	1.09	N
16,051	89 51	2 29	9,044.88	6,943.20	-976.34	6,948.06	0.25	Magn MWD	Baker Hughes	0.18	7,011. 51	0.17	N
16,140	89 41	2 79	9,045.72	7,032.11	-972.39	7,036.94	0.57	Magn MWD	Baker Hughes	-0.11	7,099. 02	0.56	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H	Lease	Field Name JENNINGS	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)
			Water Depth (ft)

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
16.228	88.65	2.19	9,047.21	7,120.01	-968.57	7,124.82	1.10	Magn MWD	Baker Hughes	-0.88	7,185. 59	-0.68	N
16.316	89.78	3.17	9,048.42	7,207.90	-964.45	7,212.69	1.70	Magn MWD	Baker Hughes	1.28	7,272. 14	1.11	N
16.405	91.11	2.84	9,047.73	7,296.78	-959.79	7,301.54	1.54	Magn MWD	Baker Hughes	1.49	7,359. 63	-0.37	N
16.493	91.73	1.69	9,045.55	7,384.68	-958.31	7,389.42	1.48	Magn MWD	Baker Hughes	0.70	7,446. 34	-1.31	N
16.583	89.45	358.95	9,044.62	7,474.66	-955.81	7,479.40	3.96	Magn MWD	Baker Hughes	-2.53	7,535. 52	396.96	N
16.672	90.00	358.95	9,045.05	7,563.64	-957.44	7,568.39	0.62	Magn MWD	Baker Hughes	0.62	7,624. 00	0.00	N
16.761	89.57	358.42	9,045.38	7,652.62	-959.48	7,657.37	0.77	Magn MWD	Baker Hughes	-0.48	7,712. 53	-0.60	N
16.849	89.45	358.56	9,046.13	7,740.58	-961.80	7,745.35	0.21	Magn MWD	Baker Hughes	-0.14	7,800. 11	0.16	N
16.938	89.57	358.59	9,046.89	7,829.55	-964.02	7,834.33	0.14	Magn MWD	Baker Hughes	0.13	7,888. 68	0.03	N
17.026	89.54	357.95	9,047.58	7,917.51	-966.67	7,922.30	0.73	Magn MWD	Baker Hughes	-0.03	7,976. 30	-0.73	N
17.115	88.27	356.53	9,049.28	8,006.39	-970.96	8,011.20	2.14	Magn MWD	Baker Hughes	-1.43	8,065. 05	-1.60	N
17.203	89.20	357.98	9,051.22	8,094.26	-975.17	8,099.09	1.96	Magn MWD	Baker Hughes	1.06	8,152. 79	1.65	N
17.292	89.23	358.25	9,052.44	8,183.20	-978.10	8,188.05	0.31	Magn MWD	Baker Hughes	0.03	8,241. 45	0.30	N
17.380	89.11	359.16	9,053.71	8,271.17	-980.09	8,276.02	1.04	Magn MWD	Baker Hughes	-0.14	8,329. 08	1.03	N
17.469	89.38	0.86	9,054.89	8,360.16	-980.07	8,365.01	1.93	Magn MWD	Baker Hughes	0.30	8,417. 41	-	N
17.558	89.54	1.02	9,055.73	8,449.14	-978.61	8,453.99	0.25	Magn MWD	Baker Hughes	0.18	8,505. 63	0.18	N
17.646	89.45	0.87	9,056.50	8,537.13	-977.16	8,541.96	0.20	Magn MWD	Baker Hughes	-0.10	8,592. 87	-0.17	N
17.735	89.94	1.16	9,056.98	8,626.11	-975.58	8,630.94	0.64	Magn MWD	Baker Hughes	0.55	8,681. 10	0.33	N
17.823	91.11	1.35	9,056.17	8,714.08	-973.65	8,718.90	1.35	Magn MWD	Baker Hughes	1.33	8,768. 31	0.22	N
17.912	90.95	2.20	9,054.57	8,803.03	-970.90	8,807.83	0.97	Magn MWD	Baker Hughes	-0.18	8,856. 41	0.96	N
18.000	90.22	2.72	9,053.67	8,890.94	-967.12	8,895.72	1.02	Magn MWD	Baker Hughes	-0.83	8,943. 39	0.59	N
18.089	89.91	0.74	9,053.57	8,979.90	-964.43	8,984.66	2.25	Magn MWD	Baker Hughes	-0.35	9,031. 54	-2.22	N
18.177	90.28	0.09	9,053.42	9,067.89	-963.80	9,072.65	0.85	Magn MWD	Baker Hughes	0.42	9,118. 97	-0.74	N
18.266	89.75	358.19	9,053.40	9,156.88	-965.13	9,161.65	2.22	Magn MWD	Baker Hughes	-0.60	9,207. 60	402.36	N
18.355	89.85	357.14	9,053.71	9,245.80	-968.76	9,250.59	1.19	Magn MWD	Baker Hughes	0.11	9,296. 42	-1.18	N
18.443	89.82	358.24	9,053.96	9,333.73	-972.31	9,338.53	1.25	Magn MWD	Baker Hughes	-0.03	9,384. 24	1.25	N
18.532	89.94	359.80	9,054.15	9,422.71	-973.83	9,427.52	1.76	Magn MWD	Baker Hughes	0.13	9,472. 90	1.75	N
18.620	89.91	0.81	9,054.27	9,510.71	-973.36	9,515.52	1.15	Magn MWD	Baker Hughes	-0.03	9,560. 39	-	N
18.709	89.82	359.06	9,054.48	9,599.71	-973.46	9,604.51	1.97	Magn MWD	Baker Hughes	-0.10	9,648. 94	402.53	N
18.797	89.85	358.94	9,054.73	9,687.69	-975.06	9,692.50	0.14	Magn MWD	Baker Hughes	0.03	9,736. 63	-0.14	N



Directional Survey

Well Name SALADO DRAW WE 24 FED P23 001H		Lease	Field Name JENNINGS	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
18,886	89.94	0.52	9,054.89	9,776.69	-975.42	9,781.50	1.78	Magn MWD	Baker Hughes	0.10	9,825. 23	- 402.72	N
18,975	90.06	0.64	9,054.89	9,885.69	-974.51	9,870.49	0.19	Magn MWD	Baker Hughes	0.13	9,913. 70	0.13	N
19,063	89.51	359.15	9,055.22	9,963.68	-974.68	9,958.49	1.80	Magn MWD	Baker Hughes	-0.62	10,001. 29	407.40	N
19,152	89.97	358.18	9,055.63	10,042.66	-976.75	10,047.47	1.21	Magn MWD	Baker Hughes	0.52	10,090. 04	-1.09	N
19,240	89.94	357.68	9,055.70	10,130.60	-979.98	10,135.43	0.57	Magn MWD	Baker Hughes	-0.03	10,177. 88	-0.57	N
19,329	90.09	357.89	9,055.67	10,219.53	-983.37	10,224.38	0.29	Magn MWD	Baker Hughes	0.17	10,266. 73	0.24	N
19,366	90.09	357.89	9,055.61	10,256.51	-984.73	10,261.36	0.00	Extrap	Baker Hughes	0.00	10,303. 67	0.00	N