

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.

5. Lease Serial No.
NMNM27506

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
CHEVRON USA INCORPORATEDContact: DENISE PINKERTON
E-Mail: leakejd@chevron.com3a. Address
15 SMITH ROAD
MIDLAND, TX 797053b. Phone No. (include area code)
Ph: 432-687-73758. Well Name and No.
SALADO DRAW 29 26 33 FED COM 1H9. API Well No.
30-025-42629-00-X110. Field and Pool, or Exploratory
WC025G06S263319P-BONE SPRING

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 29 T26S R33E NWNW 200FNL 1283FWL

11. County or Parish, and State

LEA COUNTY, NM

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

TYPE OF SUBMISSION

TYPE OF ACTION

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

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

11/15/2015: SPUD WELL. DRILL 17 1/2" SURFACE HOLE 80-870.

11/16/2015: RAN 13 3/8", 48#, H-40 STC SURFACE CASING SET @ 860'.
CEMENT W/1008 SX CLASS C TAIL CMT @ 14.8PPG. DISPL W/128.8 BBLS FW. BUMP PLUG W/500 PSI OVER FINAL
CIRC PRESS @ 796PSI. FULL RETURNS THROUGHOUT JOB. FINAL CIRC PRESS-296PSI. 528 SX CMT RETURNED TO
SURFACE.11/17/2015: TEST BOPE TO 250PSI LOW/5000PSI HIGH. TIH TO 783 - TOC. TEST CSG 1200 PSI FOR 30 MINS.
GOOD. DRILL OUT & CLEAN OUT 10' OPEN HOLE.
DRILL INTERMEDIATE HOLE 870-1073, 1627, 2247, 2602, 3156, 3437, 3812, 3932, 4109, 4556, 4801.

11/21/2015: RAN 9 5/8" INTERMEDIATE CSG SET @ 4791.

TOC on production?

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #347930 verified by the BLM Well Information System
For CHEVRON USA INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by JENNIFER SANCHEZ on 08/24/2016 (16CRW0016SE)

Name (Printed/Typed) DENISE PINKERTON

Title REGULATORY SPECIALIST

Signature (Electronic Submission)

Date 08/16/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE AUG 24 2016

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.

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

Additional data for EC transaction #347930 that would not fit on the form

32. Additional remarks, continued

CEMENT WITH 468 BBLS LEAD CMT & 110 BBLS TAIL CMT. PMP 354 BBLS FW DISPLACEMENT. FINAL CIRC PRESS-1200PSI. WOC 8 HRS. 286 SX CMT TO SURFACE.

11/22/2015: TAG CMT @ 4708. TEST CSG TO 2500PSI. DRILL 8 3/4" VERTICAL HOLE 4801-5451, 6340, 7152, 7405, 7760, 8203, 8512, 8575, 8745, 8885, 9106, 9121, 9392, 9549, 9994, 10255, 10610, 10954, 11131, 11751, 12194, 12647, 12903, 13036, 13258, 13425, 13879, 14420, 14676, 15058, 15429, 15562, 15903, 16094, 16114, 16272, 16326, 16361, 16376, 16449, 16469, 16545.

12/06/2015: ESTIMATED TOF - 8886 MD. TEST BOPE TO 250PSI LOW, 5000PSI HIGH. TAG TOP OF FISH @ 8991'. TIH W/22 JOINTS 2 7/8" TBG

12/07/2015: TAG TOP OF FISH @ 8991. WELL FLOWING @ 120-130BPH.

PERFORM A BALANCED CEMENT PLUG OPERATION: PMP 49.5 BBLS OF TAIL @ 5 BPM @ 17.5PPG, 9.4 BBLS CHEMICAL WASH @ 5 BPM, 128.7 BBLS BRINE DISPLACEMENT.

12/09/2015: TIH W/WHIPSTOCK 440-5933. TIH 5933-8424. TOP OF WHIPSTOCK @ 8203.

12/10/2015: CEMENT WHIPSTOCK: PRESS TEST LINES TO 500PSI LOW/4000PSI HIGH. PMP 23 BBLS CHEM WASH, 150 SX 17.5PPG TAIL CMT. FULL RTRNS. STING OUT.

12/11/2015: SLIDE & ROTATE. 8100-9328'.

12/15/2015: MAKE UP 7 5/8" LINER. TAG BTM @ 9328. FC @ 9324. LANDING COLLAR @ 9185.

CEMENT WITH 193 SX LEAD 1 CMT @ 11.5PPG, & 88 SX LEAD 2 CMT @ 12.5PPG. DISPL W/294 BBLS BRINE.

12/16/2015: RIG RELEASED @ 18:00 HRS.

01/10/2016: RIG UP. TEST BOPE TO 250PSI LOW/5000PSI HIGH.

01/12/2016: DRILL 6 3/4" LATERAL HOLE 9334-9581, 9808, 10043, 10620, 10872, 11173, 11476, 11944, 12219, 12500, 12794, 12847, 12867, 12941, 13067, 13281, 13445, 13843, 13927, 14012, 14330, 14484, 14616, 14865, 15169, 15525, 15816, 15928, 16196, 16467 TD. (01/19/2016)

01/22/2016: RAN 5", 18#, P-110, TENARIS WEDGE 521 CSG SET @ 16452'.

SHOE DEPTH: 16452, TOP OF MARKER JT - 8712, TOP OF LANDING COLLAR - 16353, TOP OF RSI TOOL - 16284. TAG BTM @ 16467. CENTRALIZERS: 1-10' ABOVE FS, 1-10' ABOVE FC, 1-LANDING COLLAR, EVERY OTHER JT FR 16231-15269, EVERY 3RD JT 15269-9549, EVERY 4TH JT 9549-8852, EVERY 4TH JT 8852-3885. (SEE CONTINUATION ON ATTACHED)

CONTINUATION OF DRILLING OPERATIONS

SALADO DRAW 29 26 33 FED COM #001H

01/23/2016: CEMENT 5" PRODUCTION CASING: 232 SX 1ST LEAD POZ H CMT @ 11.5PPG, 575 SX 2ND LEAD (TXI) CMT @ 12.5PPG, & 100 SX TAIL CL H CMT @ 15.0PPG. DISPL W/20 BBLS ACID & 271 BBLS FW. NO CMT TO SURFACE. FULL RTRNS THROUGHOUT JOB.

01/24/2016: RIG RELEASED.

ATTACHMENTS: CASING & CEMENTING SUMMARY & DIRECTIONAL DRILL SURVEY



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H		Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation		Mud Line Elevation (ft)	Water Depth (ft)

Wellbore Name Original Hole		Parent Wellbore Original Hole		Min Kick Off Depth (ftKB)		Vertical Section Direction (°) 186.61	
Northing (Y) (ft) 364,688.09		Easting (X) (ft) 726,971.04		UTM Grid Zone			
Date 11/15/2015	Definitive? Y	Description MWD			Planned? N		
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)		Azimuth Tie In (°)		NSTie In (ft)	EWTie in (ft)

Survey Data

MD (ft)	Incl (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Magn MWD	Phoenix Directional	0.00	0.00	0.00	N
185	0.93	185.10	184.99	-1.45	0.39	1.40	0.50	Magn MWD	Phoenix Directional	0.50	1.50	89.24	N
310	1.03	174.22	309.97	-3.55	0.76	3.44	0.15	Magn MWD	Phoenix Directional	0.08	3.63	7.30	N
499	0.97	172.30	498.94	-6.82	1.15	6.65	0.04	Magn MWD	Phoenix Directional	-0.03	6.92	-1.02	N
684	0.90	174.63	683.92	-9.82	1.49	9.59	0.04	Magn MWD	Phoenix Directional	-0.04	9.94	1.26	N
806	0.83	177.17	805.91	-11.66	1.62	11.39	0.07	Magn MWD	Phoenix Directional	-0.06	11.77	2.08	N
948	0.96	176.47	947.89	-13.87	1.75	13.58	0.09	Magn MWD	Phoenix Directional	0.09	13.98	-0.49	N
1,125	0.76	183.66	1,124.87	-16.53	1.76	16.21	0.13	Magn MWD	Phoenix Directional	-0.11	16.62	4.06	N
1,302	0.48	155.53	1,301.86	-18.37	2.00	18.02	0.23	Magn MWD	Phoenix Directional	-0.16	18.48	-15.89	N
1,480	0.52	286.87	1,479.86	-18.82	1.53	18.51	0.51	Magn MWD	Phoenix Directional	0.02	18.86	73.79	N
1,657	1.99	289.04	1,656.81	-17.58	-2.14	17.71	0.83	Magn MWD	Phoenix Directional	0.83	17.71	1.23	N
1,834	2.27	288.16	1,833.69	-15.49	-8.38	16.35	0.16	Magn MWD	Phoenix Directional	0.16	17.61	-0.50	N
2,011	2.46	299.00	2,010.54	-12.55	-15.03	14.20	0.27	Magn MWD	Phoenix Directional	0.11	19.58	6.12	N
2,188	2.19	294.76	2,187.39	-9.29	-21.42	11.70	0.18	Magn MWD	Phoenix Directional	-0.15	23.35	-2.40	N
2,365	1.73	300.47	2,364.29	-6.52	-26.80	9.56	0.28	Magn MWD	Phoenix Directional	-0.26	27.58	3.23	N
2,543	3.31	291.79	2,542.11	-3.25	-33.88	7.13	0.91	Magn MWD	Phoenix Directional	0.89	34.04	-4.88	N
2,720	1.60	300.53	2,718.94	-0.10	-40.76	4.79	0.99	Magn MWD	Phoenix Directional	-0.97	40.76	4.94	N
2,898	1.91	304.44	2,896.86	2.84	-45.35	2.40	0.19	Magn MWD	Phoenix Directional	0.17	45.43	2.20	N
3,075	2.04	284.73	3,073.75	5.31	-50.83	0.58	0.39	Magn MWD	Phoenix Directional	0.07	51.10	-11.14	N
3,252	2.10	274.66	3,250.64	6.37	-57.10	0.24	0.21	Magn MWD	Phoenix Directional	0.03	57.46	-5.69	N
3,429	1.94	275.46	3,427.53	6.92	-63.32	0.41	0.09	Magn MWD	Phoenix Directional	-0.09	63.70	0.45	N
3,607	2.74	281.57	3,605.38	8.06	-70.49	0.10	0.47	Magn MWD	Phoenix Directional	0.45	70.95	3.43	N
3,784	4.11	288.51	3,782.06	10.93	-80.65	-1.57	0.81	Magn MWD	Phoenix Directional	0.77	81.38	3.92	N
3,962	5.61	285.22	3,959.42	15.23	-95.09	-4.19	0.86	Magn MWD	Phoenix Directional	0.84	96.30	-1.85	N
4,139	6.32	285.32	4,135.46	20.08	-112.84	-6.96	0.40	Magn MWD	Phoenix Directional	0.40	114.61	0.06	N
4,316	6.78	280.36	4,311.30	24.53	-132.51	-9.12	0.41	Magn MWD	Phoenix Directional	0.26	134.78	-2.80	N
4,493	6.93	278.29	4,487.04	27.95	-153.35	-10.11	0.16	Magn MWD	Phoenix Directional	0.08	155.88	-1.17	N



Directional Survey

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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
4,671	6.93	277.19	4,663.74	30.84	-174.63	-10.54	0.07	Magn MWD	Phoenix Directional	0.00	177.34	-0.62	N
4,742	6.96	276.75	4,734.21	31.89	-183.16	-10.59	0.09	Magn MWD	Phoenix Directional	0.04	185.91	-0.62	N
4,863	6.40	275.70	4,854.39	33.42	-197.15	-10.50	0.47	Magn MWD	Phoenix Directional	-0.46	199.96	-0.67	N
5,040	7.80	269.40	5,030.03	34.27	-218.97	-8.84	0.90	Magn MWD	Phoenix Directional	0.79	221.64	-3.56	N
5,218	7.50	268.40	5,206.45	33.82	-242.66	-5.66	0.18	Magn MWD	Phoenix Directional	-0.17	245.01	-0.56	N
5,395	8.60	267.20	5,381.70	32.85	-267.43	-1.85	0.63	Magn MWD	Phoenix Directional	0.62	269.44	-0.68	N
5,572	10.00	272.80	5,556.38	32.96	-296.00	1.34	0.94	Magn MWD	Phoenix Directional	0.79	297.83	3.16	N
5,749	9.50	271.80	5,730.82	34.17	-325.95	3.58	0.30	Magn MWD	Phoenix Directional	-0.28	327.73	-0.56	N
5,927	9.60	273.10	5,906.35	35.43	-355.45	5.72	0.13	Magn MWD	Phoenix Directional	0.06	357.21	0.73	N
6,104	9.60	280.10	6,080.88	38.82	-384.72	5.73	0.66	Magn MWD	Phoenix Directional	0.00	386.67	3.95	N
6,281	10.60	279.60	6,255.13	44.12	-415.30	3.98	0.57	Magn MWD	Phoenix Directional	0.56	417.64	-0.28	N
6,459	10.10	278.00	6,430.24	49.02	-446.90	2.75	0.32	Magn MWD	Phoenix Directional	-0.28	449.58	-0.90	N
6,636	9.30	275.00	6,604.71	52.43	-476.52	2.77	0.53	Magn MWD	Phoenix Directional	-0.45	479.39	-1.69	N
6,813	8.60	271.70	6,779.55	54.07	-504.00	4.31	0.49	Magn MWD	Phoenix Directional	-0.40	506.89	-1.86	N
6,991	9.40	275.10	6,955.36	55.75	-531.78	5.83	0.54	Magn MWD	Phoenix Directional	0.45	534.69	1.91	N
7,169	9.50	271.90	7,130.95	57.53	-560.94	7.42	0.30	Magn MWD	Phoenix Directional	0.06	563.88	-1.80	N
7,346	9.30	272.90	7,305.57	58.74	-589.82	9.54	0.15	Magn MWD	Phoenix Directional	-0.11	592.74	0.58	N
7,524	9.70	297.80	7,481.27	51.47	-616.90	19.88	3.21	Magn MWD	Phoenix Directional	0.22	619.04	-19.72	N
7,701	10.00	269.30	7,655.79	43.33	-644.90	31.19	3.01	Magn MWD	Phoenix Directional	0.17	646.35	17.80	N
7,878	10.20	272.00	7,830.05	43.69	-675.93	34.41	0.29	Magn MWD	Phoenix Directional	0.11	677.34	1.53	N
8,056	10.50	274.00	8,005.15	45.37	-707.86	36.41	0.26	Magn MWD	Phoenix Directional	0.17	709.31	1.12	N
8,233	10.80	277.30	8,179.10	48.61	-740.40	36.95	0.38	Magn MWD	Phoenix Directional	0.17	741.99	1.86	N
8,410	9.40	275.30	8,353.36	52.05	-771.24	37.08	0.82	Magn MWD	Phoenix Directional	-0.79	773.00	-1.13	N
8,587	10.60	269.80	8,527.67	53.33	-801.91	39.34	0.87	Magn MWD	Phoenix Directional	0.68	803.69	-3.11	N
8,686	9.30	270.60	8,625.18	53.38	-819.02	41.25	1.32	Magn MWD	Phoenix Directional	-1.31	820.76	0.81	N
8,743	9.10	267.80	8,681.44	53.25	-828.13	42.43	0.86	Magn MWD	Phoenix Directional	-0.35	829.84	-4.91	N
8,787	13.30	245.30	8,724.62	51.00	-836.21	45.59	13.61	Magn MWD	Phoenix Directional	9.55	837.77	-51.14	N
8,832	18.60	233.40	8,767.88	44.55	-846.69	53.20	13.78	Magn MWD	Phoenix Directional	11.78	847.86	-26.44	N
8,876	24.80	224.30	8,808.75	33.75	-858.78	65.33	15.99	Magn MWD	Phoenix Directional	14.09	859.44	-20.68	N
8,920	29.00	214.70	8,848.00	18.37	-871.31	82.05	13.70	Magn MWD	Phoenix Directional	9.55	871.50	-21.82	N



Directional Survey

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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
8.965	32.20	202.00	8.886.77	-1.75	-882.02	103.26	15.99	Magn MWD	Phoenix Directional	7.11	882.03	-28.22	N
9.009	36.40	193.60	8.923.13	-25.33	-889.49	127.55	14.36	Magn MWD	Phoenix Directional	9.55	889.85	-19.09	N
9.053	42.40	187.50	8.957.13	-52.76	-894.51	155.36	16.22	Magn MWD	Phoenix Directional	13.64	896.06	-13.86	N
9.098	48.40	183.60	8.988.72	-84.63	-897.55	187.38	14.69	Magn MWD	Phoenix Directional	13.33	901.53	-8.67	N
9.142	53.00	182.70	9.016.58	-118.62	-899.41	221.36	10.57	Magn MWD	Phoenix Directional	10.45	907.20	-2.05	N
9.186	57.50	182.90	9.041.65	-154.72	-901.17	257.42	10.23	Magn MWD	Phoenix Directional	10.23	914.36	0.45	N
9.231	61.90	183.20	9.064.35	-193.51	-903.24	296.19	9.79	Magn MWD	Phoenix Directional	9.78	923.74	0.67	N
9.275	65.40	183.40	9.083.88	-232.86	-905.51	335.55	7.96	Magn MWD	Phoenix Directional	7.95	934.98	0.45	N
9.319	69.70	182.00	9.100.68	-273.47	-907.42	376.11	10.21	Magn MWD	Phoenix Directional	9.77	947.73	-3.18	N
9.364	73.20	179.90	9.114.99	-316.12	-908.12	418.55	8.95	Magn MWD	Phoenix Directional	7.78	961.57	-4.67	N
9.406	77.10	177.10	9.125.76	-356.69	-907.05	458.73	11.30	Magn MWD	Phoenix Directional	9.29	974.66	-6.67	N
9.452	80.60	177.20	9.134.65	-401.76	-904.81	503.24	7.61	Magn MWD	Phoenix Directional	7.61	989.99	0.22	N
9.496	83.40	178.50	9.140.77	-445.30	-903.17	546.30	7.00	Magn MWD	Phoenix Directional	6.36	1,008. 98	2.95	N
9.566	86.60	182.10	9.146.88	-515.01	-908.54	615.59	6.87	Magn MWD	Phoenix Directional	4.57	1,040. 01	5.14	N
9.655	85.60	182.10	9.152.93	-603.74	-906.80	704.11	1.12	Magn MWD	Phoenix Directional	-1.12	1,089. 40	0.00	N
9.743	87.30	181.40	9.158.38	-691.53	-909.48	791.62	2.09	Magn MWD	Phoenix Directional	1.93	1,142. 52	-0.80	N
9.832	89.80	180.40	9.160.63	-780.48	-910.88	880.14	3.03	Magn MWD	Phoenix Directional	2.81	1,199. 52	-1.12	N
9.921	88.80	178.30	9.161.72	-869.46	-909.87	968.42	2.61	Magn MWD	Phoenix Directional	-1.12	1,258. 50	-2.36	N
10.010	90.20	179.90	9.162.50	-958.44	-908.47	1,056.64	2.39	Magn MWD	Phoenix Directional	1.57	1,320. 58	1.80	N
10.098	89.40	179.90	9.162.80	-1,046.44	-908.31	1,144.04	0.91	Magn MWD	Phoenix Directional	-0.91	1,385. 67	0.00	N
10.187	89.30	181.90	9.163.81	-1,135.42	-909.71	1,232.59	2.25	Magn MWD	Phoenix Directional	-0.11	1,454. 91	2.25	N
10.276	87.60	177.40	9.166.22	-1,224.36	-909.17	1,320.87	5.40	Magn MWD	Phoenix Directional	-1.91	1,525. 01	-5.06	N
10.364	90.20	176.40	9.167.91	-1,312.20	-904.41	1,407.59	3.17	Magn MWD	Phoenix Directional	2.95	1,593. 69	-1.14	N
10.453	91.00	175.70	9.166.98	-1,400.99	-898.28	1,495.08	1.19	Magn MWD	Phoenix Directional	0.90	1,664. 23	-0.79	N
10.542	89.50	175.40	9.166.59	-1,489.72	-891.38	1,582.42	1.72	Magn MWD	Phoenix Directional	-1.69	1,736. 03	-0.34	N
10.630	88.30	175.70	9.168.28	-1,577.43	-884.55	1,668.77	1.41	Magn MWD	Phoenix Directional	-1.36	1,808. 51	0.34	N
10.719	89.50	176.60	9.169.99	-1,666.21	-878.58	1,756.27	1.69	Magn MWD	Phoenix Directional	1.35	1,883. 66	1.01	N
10.807	89.40	180.00	9.170.83	-1,754.16	-875.97	1,843.33	3.87	Magn MWD	Phoenix Directional	-0.11	1,960. 71	3.86	N
10.896	88.40	181.40	9.172.54	-1,843.13	-877.05	1,931.84	1.93	Magn MWD	Phoenix Directional	-1.12	2,041. 16	1.57	N
10.985	92.70	182.60	9.171.69	-1,932.05	-880.16	2,020.52	5.02	Magn MWD	Phoenix Directional	4.83	2,123. 09	1.35	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 081H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	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)	Depth (ft)	Turn (°/100ft)	Unuse d data
11.073	92.00	181.20	9,168.08	-2,019.92	-883.07	2,108.15	1.78	Magn MWD	Phoenix Directional	-0.80	2,204. 52	-1.59	N
11.162	90.70	180.40	9,165.98	-2,108.89	-884.31	2,196.66	1.71	Magn MWD	Phoenix Directional	-1.46	2,286. 79	-0.90	N
11.250	89.50	180.00	9,165.83	-2,196.89	-884.62	2,284.11	1.44	Magn MWD	Phoenix Directional	-1.36	2,368. 30	-0.45	N
11.339	88.10	180.00	9,167.69	-2,285.86	-884.82	2,372.50	1.57	Magn MWD	Phoenix Directional	-1.57	2,451. 07	0.00	N
11.427	89.40	182.20	9,169.61	-2,373.82	-886.31	2,460.06	2.90	Magn MWD	Phoenix Directional	1.48	2,533. 88	2.50	N
11.516	92.40	183.50	9,168.21	-2,462.69	-890.73	2,548.85	3.67	Magn MWD	Phoenix Directional	3.37	2,618. 82	1.46	N
11.604	91.00	181.70	9,165.60	-2,550.55	-894.72	2,636.59	2.59	Magn MWD	Phoenix Directional	-1.59	2,702. 93	-2.05	N
11.693	91.40	181.70	9,163.74	-2,639.49	-897.36	2,725.24	0.45	Magn MWD	Phoenix Directional	0.45	2,787. 86	0.00	N
11.781	92.50	182.20	9,160.74	-2,727.39	-900.36	2,812.90	1.37	Magn MWD	Phoenix Directional	1.25	2,872. 16	0.57	N
11.870	91.10	179.70	9,157.95	-2,816.32	-901.83	2,901.41	3.22	Magn MWD	Phoenix Directional	-1.57	2,957. 19	-2.81	N
11.959	89.50	178.70	9,157.48	-2,905.31	-900.59	2,989.66	2.12	Magn MWD	Phoenix Directional	-1.80	3,041. 69	-1.12	N
12.047	88.00	177.80	9,159.40	-2,993.24	-897.90	3,076.71	1.99	Magn MWD	Phoenix Directional	-1.70	3,125. 02	-1.02	N
12.136	87.60	178.20	9,162.82	-3,082.12	-894.80	3,164.64	0.64	Magn MWD	Phoenix Directional	-0.45	3,209. 38	0.45	N
12.224	88.20	178.90	9,166.04	-3,170.04	-892.57	3,251.71	1.05	Magn MWD	Phoenix Directional	0.68	3,293. 30	0.80	N
12.313	88.80	177.30	9,168.37	-3,258.95	-889.62	3,339.69	1.92	Magn MWD	Phoenix Directional	0.67	3,378. 20	-1.80	N
12.402	89.20	175.20	9,169.93	-3,347.74	-883.80	3,427.23	2.40	Magn MWD	Phoenix Directional	0.45	3,462. 44	-2.36	N
12.490	88.40	174.60	9,171.77	-3,435.38	-875.98	3,513.37	1.14	Magn MWD	Phoenix Directional	-0.91	3,545. 30	-0.68	N
12.579	88.30	177.40	9,174.33	-3,524.11	-869.78	3,600.81	3.15	Magn MWD	Phoenix Directional	-0.11	3,629. 86	3.15	N
12.667	86.40	178.70	9,178.40	-3,611.96	-866.78	3,687.73	2.62	Magn MWD	Phoenix Directional	-2.16	3,714. 51	1.48	N
12.756	86.30	181.50	9,184.07	-3,700.77	-866.94	3,775.97	3.14	Magn MWD	Phoenix Directional	-0.11	3,800. 96	3.15	N
12.845	86.90	183.70	9,187.80	-3,789.59	-870.97	3,864.66	3.83	Magn MWD	Phoenix Directional	2.92	3,888. 39	2.47	N
12.934	90.90	184.50	9,187.95	-3,878.36	-877.34	3,953.57	2.42	Magn MWD	Phoenix Directional	2.25	3,976. 35	0.90	N
13.023	92.30	182.90	9,185.47	-3,967.13	-883.08	4,042.41	2.39	Magn MWD	Phoenix Directional	1.57	4,064. 23	-1.80	N
13.111	91.00	180.20	9,182.93	-4,055.05	-885.46	4,130.02	3.40	Magn MWD	Phoenix Directional	-1.48	4,150. 60	-3.07	N
13.200	90.30	179.40	9,181.92	-4,144.04	-885.15	4,218.39	1.19	Magn MWD	Phoenix Directional	-0.79	4,237. 52	-0.90	N
13.289	91.00	178.50	9,180.91	-4,233.02	-883.52	4,306.59	1.28	Magn MWD	Phoenix Directional	0.79	4,324. 24	-1.01	N
13.378	91.80	177.50	9,178.74	-4,321.94	-880.41	4,394.56	1.44	Magn MWD	Phoenix Directional	0.90	4,410. 70	-1.12	N
13.467	91.00	177.90	9,176.56	-4,410.84	-876.84	4,482.45	1.00	Magn MWD	Phoenix Directional	-0.90	4,497. 15	0.45	N
13.555	89.00	178.50	9,176.56	-4,498.79	-874.08	4,569.50	2.37	Magn MWD	Phoenix Directional	-2.27	4,582. 92	0.68	N
13.644	86.70	178.50	9,179.90	-4,587.69	-871.75	4,657.55	2.58	Magn MWD	Phoenix Directional	-2.58	4,669. 78	0.00	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	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	Buid (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
13,732	87.10	179.00	9,184.66	-4,675.54	-869.83	4,744.59	0.73	Magn MWD	Phoenix Directional	0.45	4,755. 77	0.57	N
13,821	86.90	178.90	9,189.32	-4,764.41	-868.20	4,832.88	0.25	Magn MWD	Phoenix Directional	-0.22	4,842. 87	-0.11	N
13,909	88.40	179.40	9,192.93	-4,862.32	-866.90	4,919.85	1.80	Magn MWD	Phoenix Directional	1.70	4,929. 15	0.57	N
13,998	88.30	179.60	9,195.49	-4,941.28	-866.12	5,008.13	0.25	Magn MWD	Phoenix Directional	-0.11	5,016. 61	0.22	N
14,087	91.00	181.30	9,196.03	-5,030.26	-866.82	5,096.61	3.58	Magn MWD	Phoenix Directional	3.03	5,104. 40	1.91	N
14,175	90.00	179.30	9,195.27	-5,118.25	-867.28	5,184.06	2.54	Magn MWD	Phoenix Directional	-1.14	5,191. 21	-2.27	N
14,264	89.30	178.00	9,195.81	-5,207.22	-865.19	5,272.20	1.66	Magn MWD	Phoenix Directional	-0.79	5,278. 61	-1.46	N
14,352	88.90	175.60	9,197.19	-5,295.07	-860.27	5,358.90	2.76	Magn MWD	Phoenix Directional	-0.45	5,364. 50	-2.73	N
14,441	87.80	173.80	9,199.75	-5,383.65	-852.06	5,445.94	2.37	Magn MWD	Phoenix Directional	-1.24	5,450. 66	-2.02	N
14,529	89.30	176.40	9,201.98	-5,471.29	-844.54	5,532.13	3.41	Magn MWD	Phoenix Directional	1.70	5,536. 09	2.95	N
14,618	90.10	177.80	9,202.45	-5,560.17	-840.04	5,619.91	1.81	Magn MWD	Phoenix Directional	0.90	5,623. 27	1.57	N
14,707	91.00	178.90	9,201.59	-5,649.13	-837.48	5,707.98	1.60	Magn MWD	Phoenix Directional	1.01	5,710. 87	1.24	N
14,796	91.60	177.80	9,199.57	-5,738.07	-834.92	5,796.03	1.41	Magn MWD	Phoenix Directional	0.67	5,798. 49	-1.24	N
14,884	89.40	177.90	9,198.81	-5,825.99	-831.62	5,883.00	2.50	Magn MWD	Phoenix Directional	-2.50	5,885. 05	0.11	N
14,973	88.40	180.80	9,200.52	-5,914.96	-830.45	5,971.24	3.23	Magn MWD	Phoenix Directional	-1.12	5,972. 97	3.03	N
15,061	90.20	182.20	9,201.59	-6,002.92	-832.60	6,058.86	2.74	Magn MWD	Phoenix Directional	2.05	6,060. 39	1.82	N
15,150	90.20	180.40	9,201.28	-6,091.89	-834.62	6,147.47	2.02	Magn MWD	Phoenix Directional	0.00	6,148. 80	-2.02	N
15,239	91.00	181.20	9,200.35	-6,180.88	-835.86	6,236.01	1.27	Magn MWD	Phoenix Directional	0.90	6,237. 14	0.90	N
15,327	91.50	181.40	9,198.43	-6,268.84	-837.86	6,323.61	0.61	Magn MWD	Phoenix Directional	0.57	6,324. 58	0.23	N
15,416	92.00	181.20	9,195.71	-6,357.77	-839.88	6,412.19	0.61	Magn MWD	Phoenix Directional	0.56	6,413. 01	-0.22	N
15,504	87.30	179.70	9,196.25	-6,445.74	-840.57	6,499.65	5.61	Magn MWD	Phoenix Directional	-5.34	6,500. 32	-1.70	N
15,593	88.20	181.50	9,199.74	-6,534.66	-841.50	6,588.09	2.26	Magn MWD	Phoenix Directional	1.01	6,588. 62	2.02	N
15,681	89.20	182.00	9,201.74	-6,622.60	-844.19	6,675.75	1.27	Magn MWD	Phoenix Directional	1.14	6,676. 18	0.57	N
15,770	90.20	182.90	9,202.20	-6,711.51	-847.99	6,764.51	1.51	Magn MWD	Phoenix Directional	1.12	6,764. 87	1.01	N
15,859	89.70	182.40	9,202.28	-6,800.42	-852.11	6,853.30	0.79	Magn MWD	Phoenix Directional	-0.56	6,853. 59	-0.56	N
15,947	89.20	181.40	9,203.13	-6,888.36	-855.02	6,941.00	1.27	Magn MWD	Phoenix Directional	-0.57	6,941. 22	-1.14	N
16,036	91.30	183.00	9,202.74	-6,977.29	-858.44	7,029.72	2.97	Magn MWD	Phoenix Directional	2.36	7,029. 90	1.80	N
16,125	89.10	181.00	9,202.43	-7,066.22	-861.55	7,118.42	3.34	Magn MWD	Phoenix Directional	-2.47	7,118. 55	-2.25	N
16,214	90.90	185.80	9,202.43	-7,155.04	-866.82	7,207.26	5.76	Magn MWD	Phoenix Directional	2.02	7,207. 35	5.39	N
16,303	89.90	183.70	9,201.81	-7,243.72	-874.19	7,296.20	2.61	Magn MWD	Phoenix Directional	-1.12	7,296. 28	-2.36	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	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
16,391	88.90	182.00	9,202.73	-7,331.60	-878.57	7,384.00	2.24	Magn MWD	Phoenix Directional	-1.14	7,384. 06	-1.93	N
16,487	87.70	180.00	9,205.58	-7,427.54	-880.24	7,479.49	2.43	Magn MWD	Phoenix Directional	-1.25	7,479. 52	-2.08	N
16,545	87.70	180.00	9,207.90	-7,485.49	-880.24	7,537.06	0.00	Extrap.	Phoenix Directional	0.00	7,537. 07	0.00	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Wellbore Name ST1	Parent Wellbore Original Hole	Min Kick Off Depth (RKB) 9,328.0	Vertical Section Direction (°) 185.47
Northing (Y) (ft)	Easting (X) (ft)	UTM Grid Zone	

Date 12/11/2015	Definitive? Y	Description MWD	Planned? N
MD Tie In (RKB) 8,161.00	TVD Tie In (RKB) 8,108.27	Inclination Tie In (°) 9.60	Azimuth Tie In (°) 274.80
		NST Tie In (ft) 64.70	EW Tie In (ft) 730.61

Survey Data

MD (RKB)	Incl (°)	Azm (°)	TVD (RKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unuse d data
8,161	9.60	274.80	8,108.27	64.70	730.61	-134.05	0.00	Magn MWD	Phoenix Directional	0.00	733.47	0.00	N
8,261	13.00	254.30	8,206.36	62.35	711.46	-129.89	5.21	Magn MWD	Phoenix Directional	3.40	714.19	-20.50	N
8,338	13.70	244.30	8,281.28	56.05	694.90	-122.04	3.13	Magn MWD	Phoenix Directional	0.91	697.16	-12.99	N
8,427	15.80	231.90	8,367.37	44.00	675.86	-108.23	4.25	Magn MWD	Phoenix Directional	2.36	677.30	-13.93	N
8,516	14.80	222.70	8,453.23	28.17	658.62	-90.82	2.95	Magn MWD	Phoenix Directional	-1.12	659.22	-10.34	N
8,604	15.20	208.90	8,538.25	9.80	645.42	-71.28	4.07	Magn MWD	Phoenix Directional	0.45	645.49	-15.68	N
8,693	13.90	195.60	8,624.42	-10.71	636.90	-50.05	4.02	Magn MWD	Phoenix Directional	-1.46	636.99	-14.94	N
8,781	13.30	183.20	8,709.97	-31.01	633.49	-29.52	3.38	Magn MWD	Phoenix Directional	-0.68	634.25	-14.09	N
8,826	13.40	182.60	8,753.76	-41.38	632.97	-19.14	0.38	Magn MWD	Phoenix Directional	0.22	634.32	-1.33	N
8,870	16.60	179.90	8,796.25	-52.76	632.75	-7.79	7.44	Magn MWD	Phoenix Directional	7.27	634.94	-6.14	N
8,914	21.20	176.50	8,837.87	-67.00	633.24	6.33	10.75	Magn MWD	Phoenix Directional	10.45	636.78	-7.73	N
8,959	24.80	172.20	8,879.29	-84.48	635.02	23.56	8.82	Magn MWD	Phoenix Directional	8.00	640.62	-9.56	N
9,003	28.90	169.90	8,918.54	-104.10	638.14	42.79	9.61	Magn MWD	Phoenix Directional	9.32	646.57	-5.23	N
9,050	33.20	169.10	8,958.80	-127.92	642.57	66.09	9.19	Magn MWD	Phoenix Directional	9.15	655.18	-1.70	N
9,094	38.30	170.90	8,994.49	-153.23	647.00	90.86	11.83	Magn MWD	Phoenix Directional	11.59	664.90	4.09	N
9,138	43.90	173.10	9,027.64	-181.87	651.00	118.98	13.14	Magn MWD	Phoenix Directional	12.73	675.92	5.00	N
9,183	50.30	174.50	9,058.26	-214.62	654.53	151.25	14.40	Magn MWD	Phoenix Directional	14.22	686.82	3.11	N
9,227	56.10	176.00	9,084.60	-249.72	657.43	185.91	13.46	Magn MWD	Phoenix Directional	13.18	703.26	3.41	N
9,271	63.20	178.00	9,106.82	-287.61	659.39	223.44	16.61	Magn MWD	Phoenix Directional	16.14	719.39	4.55	N
9,332	70.30	178.40	9,130.89	-343.59	661.15	279.00	11.65	Magn MWD	Phoenix Directional	11.64	745.10	0.66	N
9,363	74.40	177.10	9,140.28	-373.10	662.31	308.27	13.82	Magn MWD	Phoenix Directional	13.23	760.17	-4.19	N
9,395	79.50	175.80	9,147.51	-404.20	664.24	339.05	16.42	Magn MWD	Phoenix Directional	15.94	777.56	-4.06	N
9,426	83.70	175.00	9,152.04	-434.77	666.71	369.23	13.79	Magn MWD	Phoenix Directional	13.55	795.94	-2.58	N
9,521	91.70	177.00	9,155.85	-529.38	673.32	462.78	8.68	Magn MWD	Phoenix Directional	8.42	856.50	2.11	N
9,615	90.60	178.20	9,153.96	-623.27	677.25	555.88	1.73	Magn MWD	Phoenix Directional	-1.17	920.40	1.28	N
9,710	90.60	178.50	9,152.96	-718.23	679.99	650.14	0.32	Magn MWD	Phoenix Directional	0.00	989.06	0.32	N
9,804	90.20	177.70	9,152.31	-812.17	683.10	743.36	0.95	Magn MWD	Phoenix Directional	-0.43	1,061 25	-0.85	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Survey Data

MD (ft)	Incl (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depth (ft)	Turn (°/100ft)	Unused data
9,899	90.40	178.00	9,151.81	-907.10	686.67	837.52	0.38	Magn MWD	Phoenix Directional	0.21	1,137.70	0.32	N
9,993	89.20	178.60	9,152.14	-1,001.06	689.46	930.78	1.43	Magn MWD	Phoenix Directional	-1.28	1,215.51	0.64	N
10,087	89.40	178.70	9,153.29	-1,095.03	691.67	1,024.11	0.24	Magn MWD	Phoenix Directional	0.21	1,295.18	0.11	N
10,182	90.50	178.00	9,153.37	-1,189.99	694.41	1,118.37	1.37	Magn MWD	Phoenix Directional	1.16	1,377.78	-0.74	N
10,276	89.20	178.50	9,153.62	-1,283.94	697.28	1,211.63	1.48	Magn MWD	Phoenix Directional	-1.38	1,461.08	0.53	N
10,371	88.10	179.30	9,155.85	-1,378.89	699.10	1,305.97	1.43	Magn MWD	Phoenix Directional	-1.16	1,546.99	0.84	N
10,465	89.10	178.70	9,158.15	-1,472.85	700.74	1,399.34	1.24	Magn MWD	Phoenix Directional	1.06	1,631.05	-0.64	N
10,560	90.70	179.30	9,158.32	-1,567.83	702.40	1,493.74	1.80	Magn MWD	Phoenix Directional	1.68	1,717.98	0.63	N
10,655	89.50	179.90	9,158.15	-1,662.83	703.06	1,588.24	1.41	Magn MWD	Phoenix Directional	-1.26	1,805.35	0.63	N
10,749	87.80	178.20	9,160.37	-1,756.78	704.62	1,681.61	2.56	Magn MWD	Phoenix Directional	-1.81	1,892.82	-1.81	N
10,844	90.50	179.30	9,161.77	-1,851.74	706.69	1,775.94	3.07	Magn MWD	Phoenix Directional	2.84	1,982.00	1.16	N
10,938	90.80	178.50	9,160.71	-1,945.71	708.49	1,869.32	0.91	Magn MWD	Phoenix Directional	0.32	2,070.69	-0.85	N
11,033	89.60	179.70	9,160.38	-2,040.70	709.99	1,963.73	1.79	Magn MWD	Phoenix Directional	-1.26	2,160.68	1.26	N
11,128	89.00	180.10	9,161.54	-2,135.69	710.15	2,058.27	0.76	Magn MWD	Phoenix Directional	-0.63	2,250.66	0.42	N
11,222	89.70	180.30	9,162.60	-2,229.68	709.82	2,151.87	0.77	Magn MWD	Phoenix Directional	0.74	2,339.94	0.21	N
11,317	88.80	180.00	9,163.85	-2,324.67	709.58	2,246.45	1.00	Magn MWD	Phoenix Directional	-0.95	2,430.58	-0.32	N
11,412	90.00	180.20	9,164.84	-2,419.67	709.41	2,341.02	1.28	Magn MWD	Phoenix Directional	1.28	2,521.52	0.21	N
11,506	89.20	178.40	9,165.50	-2,513.65	710.58	2,434.47	2.10	Magn MWD	Phoenix Directional	-0.85	2,612.15	-1.91	N
11,601	89.50	178.40	9,166.58	-2,608.61	713.21	2,528.74	0.32	Magn MWD	Phoenix Directional	0.32	2,704.35	0.00	N
11,695	88.70	179.50	9,168.05	-2,702.58	714.93	2,622.12	1.45	Magn MWD	Phoenix Directional	-0.85	2,795.54	1.17	N
11,790	89.10	179.10	9,169.88	-2,797.55	716.09	2,716.55	0.60	Magn MWD	Phoenix Directional	0.42	2,887.75	-0.42	N
11,884	90.30	178.20	9,170.37	-2,891.52	718.31	2,809.88	1.60	Magn MWD	Phoenix Directional	1.28	2,979.41	-0.96	N
11,978	90.80	179.30	9,169.47	-2,985.50	720.36	2,903.23	1.29	Magn MWD	Phoenix Directional	0.53	3,071.17	1.17	N
12,073	90.40	180.40	9,168.47	-3,080.49	720.61	2,997.77	1.23	Magn MWD	Phoenix Directional	-0.42	3,163.65	1.16	N
12,167	89.20	180.70	9,168.80	-3,174.48	719.70	3,091.42	1.32	Magn MWD	Phoenix Directional	-1.28	3,255.04	0.32	N
12,262	88.80	180.70	9,170.46	-3,269.46	718.54	3,186.08	0.42	Magn MWD	Phoenix Directional	-0.42	3,347.49	0.00	N
12,356	89.20	180.60	9,172.10	-3,363.44	717.48	3,279.73	0.44	Magn MWD	Phoenix Directional	0.43	3,439.11	-0.11	N
12,451	88.60	180.10	9,173.92	-3,458.42	716.90	3,374.33	0.82	Magn MWD	Phoenix Directional	-0.63	3,531.94	-0.53	N
12,545	89.00	178.90	9,175.89	-3,552.39	717.72	3,467.80	1.35	Magn MWD	Phoenix Directional	0.43	3,624.17	-1.28	N
12,640	91.60	177.80	9,175.39	-3,647.34	720.45	3,562.06	2.97	Magn MWD	Phoenix Directional	2.74	3,717.82	-1.16	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	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
12,734	96.20	179.30	9,169.00	-3,741.07	722.83	3,655.13	5.15	Magn MWD	Phoenix Directional	4.89	3,810. 26	1.60	N
12,828	100.50	182.90	9,155.35	-3,834.02	721.06	3,747.82	5.94	Magn MWD	Phoenix Directional	4.57	3,901. 23	3.83	N
12,922	97.40	180.40	9,140.72	-3,926.81	718.40	3,840.45	4.22	Magn MWD	Phoenix Directional	-3.30	3,991. 99	-2.66	N
13,017	96.00	180.60	9,129.64	-4,021.16	717.57	3,934.45	1.49	Magn MWD	Phoenix Directional	-1.47	4,084. 68	0.21	N
13,111	92.50	180.40	9,122.68	-4,114.88	716.75	4,027.82	3.73	Magn MWD	Phoenix Directional	-3.72	4,176. 84	-0.21	N
13,206	90.80	180.30	9,119.94	-4,209.84	716.17	4,122.40	1.79	Magn MWD	Phoenix Directional	-1.79	4,270. 32	-0.11	N
13,300	89.80	181.70	9,119.45	-4,303.82	714.53	4,216.11	1.83	Magn MWD	Phoenix Directional	-1.06	4,362. 73	1.49	N
13,395	87.80	180.60	9,121.44	-4,398.77	712.63	4,310.81	2.40	Magn MWD	Phoenix Directional	-2.11	4,456. 12	-1.16	N
13,489	87.70	180.70	9,125.13	-4,492.69	711.56	4,404.41	0.15	Magn MWD	Phoenix Directional	-0.11	4,548. 69	0.11	N
13,584	85.60	180.80	9,130.68	-4,587.52	710.32	4,498.92	2.21	Magn MWD	Phoenix Directional	-2.21	4,642. 18	0.11	N
13,678	85.50	180.60	9,137.97	-4,681.23	709.18	4,592.31	0.24	Magn MWD	Phoenix Directional	-0.11	4,734. 64	-0.21	N
13,773	87.90	180.60	9,143.44	-4,776.06	708.18	4,686.80	2.53	Magn MWD	Phoenix Directional	2.53	4,828. 28	0.00	N
13,867	88.00	180.70	9,146.80	-4,869.99	707.12	4,780.41	0.15	Magn MWD	Phoenix Directional	0.11	4,921. 06	0.11	N
13,962	85.80	178.50	9,151.94	-4,964.84	707.78	4,874.76	3.27	Magn MWD	Phoenix Directional	-2.32	5,015. 03	-2.32	N
14,056	87.00	177.70	9,157.84	-5,058.60	710.89	4,967.80	1.53	Magn MWD	Phoenix Directional	1.28	5,108. 31	-0.85	N
14,151	87.70	177.60	9,162.24	-5,153.42	714.78	5,061.81	0.74	Magn MWD	Phoenix Directional	0.74	5,202. 75	-0.11	N
14,246	86.60	176.30	9,166.96	-5,248.16	719.83	5,155.65	1.79	Magn MWD	Phoenix Directional	-1.16	5,297. 30	-1.37	N
14,340	90.00	176.80	9,169.75	-5,341.94	725.48	5,248.45	3.66	Magn MWD	Phoenix Directional	3.62	5,390. 97	0.53	N
14,435	91.50	178.50	9,168.50	-5,436.84	729.37	5,342.56	2.39	Magn MWD	Phoenix Directional	1.58	5,485. 55	1.79	N
14,529	91.80	179.40	9,165.80	-5,530.79	731.10	5,435.91	1.01	Magn MWD	Phoenix Directional	0.32	5,578. 90	0.96	N
14,624	91.50	178.90	9,163.06	-5,625.74	732.51	5,530.29	0.61	Magn MWD	Phoenix Directional	-0.32	5,673. 22	-0.53	N
14,719	89.20	179.30	9,162.48	-5,720.72	734.00	5,624.70	2.46	Magn MWD	Phoenix Directional	-2.42	5,767. 61	0.42	N
14,814	90.20	179.30	9,162.98	-5,815.71	735.16	5,719.14	1.05	Magn MWD	Phoenix Directional	1.05	5,861. 99	0.00	N
14,908	88.00	179.70	9,164.46	-5,909.69	735.98	5,812.62	2.38	Magn MWD	Phoenix Directional	-2.34	5,955. 34	0.43	N
15,003	89.80	179.50	9,166.28	-6,004.66	736.64	5,907.10	1.91	Magn MWD	Phoenix Directional	1.89	6,049. 68	-0.21	N
15,097	88.20	178.50	9,167.92	-6,098.63	738.28	6,000.48	2.01	Magn MWD	Phoenix Directional	-1.70	6,143. 15	-1.06	N
15,191	87.50	178.10	9,171.45	-6,192.52	741.07	6,093.68	0.86	Magn MWD	Phoenix Directional	-0.74	6,236. 71	-0.43	N
15,286	90.40	179.00	9,173.19	-6,287.46	743.47	6,187.96	3.20	Magn MWD	Phoenix Directional	3.05	6,331. 27	0.95	N
15,381	91.60	178.70	9,171.53	-6,382.43	745.38	6,282.31	1.30	Magn MWD	Phoenix Directional	1.26	6,425. 80	-0.32	N
15,475	93.20	179.80	9,167.59	-6,476.33	746.61	6,375.67	2.06	Magn MWD	Phoenix Directional	1.70	6,519. 23	1.17	N



Directional Survey

Well Name SALADO DRAW 29-26-33 FED COM 001H		Lease Salado Draw 29-26-33 Fed		Field Name WILDCAT (HOBBS)		Business Unit Mid-Continent	
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation			Mud Line Elevation (ft)	Water Depth (ft)	

Survey Data

MD (ft)	Incl (°)	Azm (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depth (ft)	Turn (°/100ft)	Unuse d data
15,569	88.80	178.80	9,165.95	-6,570.29	747.78	6,469.09	4.80	Magn MWD	Phoenix Directional	-4.68	6,612 70	-1.06	N
15,664	89.30	178.70	9,167.53	-6,665.25	749.83	6,563.42	0.54	Magn MWD	Phoenix Directional	0.53	6,707 30	-0.11	N
15,758	90.50	178.50	9,167.69	-6,759.22	752.12	6,656.75	1.29	Magn MWD	Phoenix Directional	1.28	6,800 94	-0.21	N
15,853	92.40	180.30	9,165.29	-6,854.18	753.12	6,751.17	2.75	Magn MWD	Phoenix Directional	2.00	6,895 43	1.89	N
15,947	87.60	178.50	9,165.29	-6,948.14	754.10	6,844.62	5.45	Magn MWD	Phoenix Directional	-5.11	6,988 94	-1.91	N
16,042	89.20	180.00	9,167.94	-7,043.09	755.35	6,939.01	2.31	Magn MWD	Phoenix Directional	1.68	7,083 48	1.58	N
16,136	89.90	178.90	9,168.68	-7,137.08	756.25	7,032.49	1.39	Magn MWD	Phoenix Directional	0.74	7,177 03	-1.17	N
16,231	89.90	179.10	9,168.84	-7,232.07	757.91	7,126.89	0.21	Magn MWD	Phoenix Directional	0.00	7,271 67	0.21	N
16,325	91.90	178.30	9,167.37	-7,328.02	760.04	7,220.21	2.29	Magn MWD	Phoenix Directional	2.13	7,365 34	-0.85	N
16,417	87.60	175.00	9,167.77	-7,417.83	765.41	7,311.09	5.89	Magn MWD	Phoenix Directional	-4.67	7,457 22	-3.59	N
16,467	87.60	175.00	9,169.86	-7,467.60	769.77	7,360.21	0.00	Magn MWD	Phoenix Directional	0.00	7,507 17	0.00	N



Casing Summary

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Surface, Planned?N, 860ftKB

Set Depth (MD) (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
860				13 3/8		12.563		10			
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Joint	13 3/8	12.715	48.00	H-40	ST&C	32	32	0.00		740.0
1	Wellhead	13 3/8	12.715	48.00	H-40	ST&C	32	37	4.63		740.0
1	Pup Joint	13 3/8	12.715	48.00	H-40	ST&C	37	41	4.11		740.0
1	Casing Joint	13 3/8	12.715	48.00	H-40	ST&C	41	80	39.07		740.0
1	Casing Joint	13 3/8	12.715	48.00	H-40	ST&C	80	118	37.88		740.0
18	Casing Joint	13 3/8	12.715	48.00	H-40	ST&C	118	820	702.16		740.0
1	Float Collar	13 3/8	12.715	48.00	H-40	ST&C	820	822	1.37		740.0
1	Casing Joint	13 3/8	12.715	48.00	H-40	ST&C	822	858	36.95		740.0
1	Float Shoe	13 3/8	12.719	48.00	H-40		858	860	1.54	1,730.0	740.0

Intermediate Casing 1, Planned?N, 4,791ftKB

Set Depth (MD) (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
4,791				9 5/8		8.688		33			
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	33	33	0.00	3,950.0	4,230.0
1	Landing jt	9 5/8	8.844	40.00	HCK-55	LT&C	33	33	0.00	3,950.0	4,230.0
1	Hanger + pup	9 5/8	8.844	40.00	HCK-55	LT&C	33	38	4.33	3,950.0	4,230.0
2	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	38	109	70.84	3,950.0	4,230.0
11	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	109	4,635	4,526.09	3,950.0	4,230.0
6											
2	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	4,635	4,713	78.11	3,950.0	4,230.0
1	Float Collar	9 5/8	8.844	40.00	HCK-55	LT&C	4,713	4,714	1.22	3,950.0	4,230.0
2	Casing Joint	9 5/8	8.844	40.00	HCK-55	LT&C	4,714	4,789	75.34	3,950.0	4,230.0
1	Float Shoe	9 5/8	8.884	40.00	HCK-55	LT&C	4,789	4,791	1.64		

Drilling Liner 1, Planned?N, 9,318ftKB

Set Depth (MD) (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
9,318				7 5/8		6.750		0			
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Joint	7 5/8	6.875	29.70	P-110	TSH513	4,474	4,474	0.00	9,470.0	5,350.0
1	50 Sids 5"DP	5	3.500	19.50	S-135		4,474	4,474	0.00	9,470.0	5,350.0
1	Hanger Assm	7 5/8	6.875	29.70	P-110	TSH513	4,474	4,505	30.41	9,470.0	5,350.0
10	Casing Joint	7 5/8	6.875	29.70	P-110	TSH513	4,505	9,176	4,670.92	9,470.0	5,350.0
9											
1	Landing Collar	7 5/8	6.875	29.70	P-110	TSH513	9,176	9,178	2.40	9,470.0	5,350.0
1	Casing Joint	7 5/8	6.875	29.70	P-110	TSH513	9,178	9,225	46.31	9,470.0	5,350.0
1	Float Collar	7 5/8	6.875	29.70	P-110	TSH513	9,225	9,226	1.67	9,470.0	5,350.0
2	Casing Joint	7 5/8	6.875	29.70	P-110	TSH513	9,226	9,316	89.33	9,470.0	5,350.0
1	Guide Shoe	7 5/8	6.800	29.70	P-110	TSH513	9,316	9,318	2.48		

Production Casing, Planned?N, 16,452ftKB

Set Depth (MD) (ftKB)		Set Tension (kips)		String Nominal OD (in)		String Min Drift (in)		Centralizers		Scratchers	
16,452				5		4.156		85			
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)
2	Marker Joint	5	4.276	18.00	P-110	Tenaris 521	-683	-664	19.08	13,940.0	13,450.0
16	Casing Joint	5	4.276	18.00	P-110	Tenaris 521	-664	33	696.84	13,940.0	13,450.0
1	Hanger	5 1/2	4.276		P-110	Tenaris	33	33	0.25	13,940.0	13,450.0
1	Pup Joint	5 1/2	4.276	20.00	P-110	Tenaris 521	33	37	4.35	13,940.0	13,450.0
1	XO	5 1/2	4.276	18.00	P-110	Tenaris 521	37	39	1.84	13,940.0	13,450.0
20	Casing Joint	5	4.276	18.00	P-110	Tenaris 521	39	8,712	8,672.91	13,940.0	13,450.0
0											
1	Marker Joint	5	4.276	18.00	P-110	Tenaris 521	8,712	8,721	9.61	13,940.0	13,450.0
17	Casing Joint	5	4.276	18.00	P-110	Tenaris 521	8,721	16,274	7,552.64	13,940.0	13,450.0
4											
1	Pup Jt	5	4.276	18.00	P-110	Tenaris 521	16,274	16,284	9.66	13,940.0	13,450.0
1	RSI Tool	5	4.276	18.00	P-110	Tenaris 521	16,284	16,290	6.48	13,940.0	13,450.0
1	Pup Jt	5	4.276	18.00	P-110	Tenaris 521	16,290	16,300	9.60	13,940.0	13,450.0



Casing Summary

Well Name SALADO DRAW 29-26-33 FED COM 001H		Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	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 Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Joint	5	4.276	18.00	P-110	Tenaris 521	16,300	16,343	43.18	13,940.0	13,450.0
1	Pup Jt	5	4.276	18.00	P-110	Tenaris 521	16,343	16,353	9.68	13,940.0	13,450.0
1	Landing collar	5	4.276	18.00	P-110	Tenaris 521	16,353	16,354	1.40	13,940.0	13,450.0
1	Casing Joint	5	4.276	18.00	P-110	Tenaris 521	16,354	16,400	45.59	13,940.0	13,450.0
1	Float collar	5	4.276	18.00	P-110	Tenaris 521	16,400	16,402	1.96	13,940.0	13,450.0
1	XRV Vibrator Sub	5	4.276	18.00	P-110	Tenaris 521	16,402	16,404	2.36	13,940.0	13,450.0
1	Casing Joint	5	4.276	18.00	P-110	Tenaris 521	16,404	16,450	45.60	13,940.0	13,450.0
1	Float shoe	5	4.276	18.00	P-110	Tenaris 521	16,450	16,452	2.36	13,940.0	13,450.0



Cement Summary

Production Casing Cement

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	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 Vertical	Min Kick Off Depth (RKB) 186.61	Vertical Section Direction (*) 186.61
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
17 1/2	32.6	870.0	
12 1/4	870.0	4,801.0	
8 3/4	4,801.0	9,328.0	

ST1

Wellbore Name ST1	Directional Type Horizontal	Min Kick Off Depth (RKB) 9,328.0	Vertical Section Direction (*) 185.47
Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)	
8 3/4	8,214.0	9,328.0	
6 3/4	9,328.0	16,467.0	

VG-Horizontal, Vetco Grey on 12/19/2014 03:30

Sub-Type VG-Horizontal	Install Date 12/19/2014				
Des	Make	Model	WP (psi)	Service	SN

Surface, Planned? -N, 860ftKB

Casing Description Surface	Wellbore Original Hole	Run Date 11/16/2015	Set Depth (MD) (ftKB) 860	Stick Up (ftKB) -32.3	Set Tension (kips)
Centralizers 10	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	13 3/8	12.715	48.00	H-40		ST&C	0.00	32	32
1	Wellhead	13 3/8	12.715	48.00	H-40		ST&C	4.63	32	37
1	Pup Joint	13 3/8	12.715	48.00	H-40		ST&C	4.11	37	41
1	Casing Joint	13 3/8	12.715	48.00	H-40		ST&C	39.07	41	80
1	Casing Joint	13 3/8	12.715	48.00	H-40		ST&C	37.88	80	118
18	Casing Joint	13 3/8	12.715	48.00	H-40		ST&C	702.16	118	820
1	Float Collar	13 3/8	12.715	48.00	H-40		ST&C	1.37	820	822
1	Casing Joint	13 3/8	12.715	48.00	H-40		ST&C	36.95	822	858
1	Float Shoe	13 3/8	12.719	48.00	H-40			1.54	858	860

Intermediate Casing 1, Planned? -N, 4,791ftKB

Casing Description Intermediate Casing 1	Wellbore Original Hole	Run Date 11/21/2015	Set Depth (MD) (ftKB) 4,791	Stick Up (ftKB) -33.4	Set Tension (kips)
Centralizers 33	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	0.00	33	33
1	Landing jt	9 5/8	8.844	40.00	HCK-55		LT&C	0.00	33	33
1	Hanger + pup	9 5/8	8.844	40.00	HCK-55		LT&C	4.33	33	38
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	70.84	38	109
116	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	4,526.09	109	4,635
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	78.11	4,635	4,713
1	Float Collar	9 5/8	8.844	40.00	HCK-55		LT&C	1.22	4,713	4,714
2	Casing Joint	9 5/8	8.844	40.00	HCK-55		LT&C	75.34	4,714	4,789
1	Float Shoe	9 5/8	8.884	40.00	HCK-55		LT&C	1.64	4,789	4,791

Drilling Liner 1, Planned? -N, 9,318ftKB

Casing Description Drilling Liner 1	Wellbore ST1	Run Date 12/15/2015	Set Depth (MD) (ftKB) 9,318	Stick Up (ftKB) -4,474.5	Set Tension (kips)
Centralizers 0	Scratchers				

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	7 5/8	6.875	29.70	P-110		TSH513	0.00	4,474	4,474
1	50 Stds 5" DP	5	3.500	19.50	S-135			0.00	4,474	4,474
1	Hanger Assm	7 5/8	6.875	29.70	P-110		TSH513	30.41	4,474	4,505
109	Casing Joint	7 5/8	6.875	29.70	P-110		TSH513	4,670.92	4,505	9,176
1	Landing Collar	7 5/8	6.875	29.70	P-110		TSH513	2.40	9,176	9,178
1	Casing Joint	7 5/8	6.875	29.70	P-110		TSH513	46.31	9,178	9,225
1	Float Collar	7 5/8	6.875	29.70	P-110		TSH513	1.67	9,225	9,226
2	Casing Joint	7 5/8	6.875	29.70	P-110		TSH513	89.33	9,226	9,316



Cement Summary

Production Casing Cement

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	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	Guide Shoe	7 5/8	6.800	29.70	P-110		TSH513	2.48	9,316	9,318

Production Casing, Planned? - N, 16,452ftKB

Casing Description Production Casing	Wellbore ST1	Run Date 1/22/2016	Set Depth (MD) (ftKB) 16,452	Slick Up (ftKB) 683.4	Set Tension (kips)
Centralizers 85	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)
2	Marker Joint	5	4.276	18.00	P-110		Tenaris 521	19.08	-683	-664
16	Casing Joint	5	4.276	18.00	P-110		Tenaris 521	696.84	-664	33
1	Hanger	5 1/2	4.276		P-110		Tenaris	0.25	33	33
1	Pup Joint	5 1/2	4.276	20.00	P-110		Tenaris 521	4.35	33	37
1	XO	5 1/2	4.276	18.00	P-110		Tenaris 521	1.84	37	39
200	Casing Joint	5	4.276	18.00	P-110		Tenaris 521	8,672.91	39	8,712
1	Marker Joint	5	4.276	18.00	P-110		Tenaris 521	9.61	8,712	8,721
174	Casing Joint	5	4.276	18.00	P-110		Tenaris 521	7,552.64	8,721	16,274
1	Pup Jt	5	4.276	18.00	P-110		Tenaris 521	9.66	16,274	16,284
1	RSI Tool	5	4.276	18.00	P-110		Tenaris 521	6.48	16,284	16,290
1	Pup Jt	5	4.276	18.00	P-110		Tenaris 521	9.60	16,290	16,300
1	Casing Joint	5	4.276	18.00	P-110		Tenaris 521	43.18	16,300	16,343
1	Pup Jt	5	4.276	18.00	P-110		Tenaris 521	9.68	16,343	16,353
1	Landing collar	5	4.276	18.00	P-110		Tenaris 521	1.40	16,353	16,354
1	Casing Joint	5	4.276	18.00	P-110		Tenaris 521	45.59	16,354	16,400
1	Float collar	5	4.276	18.00	P-110		Tenaris 521	1.96	16,400	16,402
1	XRV Vibrator Sub	5	4.276	18.00	P-110		Tenaris 521	2.36	16,402	16,404
1	Casing Joint	5	4.276	18.00	P-110		Tenaris 521	45.60	16,404	16,450
1	Float shoe	5	4.276	18.00	P-110		Tenaris 521	2.36	16,450	16,452

Production Casing Cement, Casing, 1/23/2016 03:00

Cementing Start Date 1/23/2016	Cementing End Date 1/23/2016	Wellbore Original Hole
Evaluation Method Lift Pressure	Cement Evaluation Results Good returns. Bumped plug at calculated displacement	
Comment		

1, 9,328.0-16,467.0ftKB

Top Depth (ftKB) 9,328.0	Bottom Depth (ftKB) 16,467.0	Full Return? N	Vol Cement Ret (bbl) Y	Top Plug? Y	Bottom Plug? Y
Initial Pump Rate (bbl/min) 4.5	Final Pump Rate (bbl/min) 6.5	Avg Pump Rate (bbl/min) 5.5	Final Pump Pressure (psi) 2,008.0	Plug Bump Pressure (psi) 2,450.0	
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	



Cement Summary

Production Casing Cement

Well Name SALADO DRAW 29-26-33 FED COM 001H	Lease Salado Draw 29-26-33 Fed	Field Name WILDCAT (HOBBS)	Business Unit Mid-Continent
Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft) Water Depth (ft)

Spacer				
Fluid Type Spacer	Fluid Description MPE spacer	Quantity (sacks)	Class	Volume Pumped (bbl) 30.0
Estimated Top (ftKB) 3,513.0	Estimated Bottom Depth (ftKB) 3,950.0	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 Poz:H	Quantity (sacks) 232	Class H	Volume Pumped (bbl) 111.0
Estimated Top (ftKB) 3,950.0	Estimated Bottom Depth (ftKB) 8,843.0	Percent Excess Pumped (%) 0.0	Yield (ft ³ /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	Quantity (sacks) 575	Class H	Volume Pumped (bbl) 166.0
Estimated Top (ftKB) 8,843.0	Estimated Bottom Depth (ftKB) 15,449.0	Percent Excess Pumped (%) 30.0	Yield (ft ³ /sack) 1.62	Fluid Mix Ratio (gal/sack) 8.71
Free Water (%)	Density (lb/gal) 12.50	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

Tail				
Fluid Type Tail	Fluid Description Class H	Quantity (sacks) 100	Class H	Volume Pumped (bbl) 39.0
Estimated Top (ftKB) 15,449.0	Estimated Bottom Depth (ftKB) 16,467.0	Percent Excess Pumped (%) 30.0	Yield (ft ³ /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	Quantity (sacks)	Class	Volume Pumped (bbl) 291.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc