HOBBS OCD

NMOCD Hobbs

DEC 0 2 2016

RECEIVED

Form 3160-4 (August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. NMNM118722

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

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

8. Lease Name and Well No.: SD WE 14 FEDERAL P7 3H

3. Address: 1616 W. BENDER BLVD, HOBBS, NM 88240
3a. Phone No. (include area code): Ph: 432-687-7375

9. API Well No.: 30-025-43086-00-S1

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface: SESE 215FSL 698FEL

At top prod interval reported below: NENE 117FNL 1017FEL

At total depth: NENE 117FNL 1017FEL

10. Field and Pool, or Exploratory: JENNINGS-UPPER BONE SPRING SHA

11. Sec., T., R., M., or Block and Survey or Area: Sec 14 T26S R32E Mer NMP

12. County or Parish: LEA

13. State: NM

14. Date Spudded: 04/16/2016

15. Date T.D. Reached: 06/06/2016

16. Date Completed ☐ D & A ☒ Ready to Prod.: 08/01/2016

17. Elevations (DF, KB, RT, GL)*: 3165 GL

18. Total Depth: MD 13803 TVD 9065

19. Plug Back T.D.: MD 13741 TVD 9065

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each): CBL

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J-55	54.5	0	828		960		0	
12.250	9.625 HCK-55	40.0	0	4570		1517		0	
8.750	5.500 HCP-110	20.0	0	13788		1651		3118	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	8524	8502						

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	BONE SPRINGS UPPER SHAL	9459	13599	9459 TO 13599			PRODUCING *** SEE DETAILED F
B)							
C)							
D)							

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
9459 TO 13599	FRAC W/TOTAL SAND (100 MESH & 40/70) = 5,747,400 LBS

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
08/01/2016	09/13/2016	24	→	1000.0	1997.0	1513.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
36/64	731	220.0	→	1000	1997	1513	1997	POW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

ACCEPTED FOR RECORD
/S/ DAVID R. GLASS
NOV 07 2016

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #353384 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

DAVID R. GLASS
PETROLEUM ENGINEER

RECLAMATION DUE:
FEB 01 2017

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
CASTILE	2840	4584	ANHYDRITE	CASTILE	2840
DELAWARE	4585	4659	LIMESTONE	DELAWARE	4585
BELL CANYON	4660	5684	SANDSTONE	BELL CANYON	4660
CHERRY CANYON	5685	7284	SANDSTONE	CHERRY CANYON	5685
BRUSHY CANYON	7285	8824	SANDSTONE	BRUSHY CANYON	7285
BONE SPRING LIME	8825	8869	LIMESTONE	BONE SPRING LIME	8825
BONE SPRINGS UPPER SHAL	8870	13803	SHALE	BONE SPRINGS UPPER SHAL	8870

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #353384 Verified by the BLM Well Information System.
For CHEVRON USA INC, sent to the Hobbs
Committed to AFMSS for processing by DEBORAH HAM on 10/26/2016 (17DMH0010SE)

Name *(please print)* DENISE PINKERTON Title PERMITTING SPECIALIST

Signature (Electronic Submission) Date 10/03/2016

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 fradulent statements or representations as to any matter within its jurisdiction.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

Phoenix Technology Services
SURVEY DATA CERTIFICATION

PHOENIX TECHNOLOGY SERVICES

PHOENIX JOB NUMBER	60046	OPERATOR	Chevron
WELL NAME	SD WE 14 Fed P7 3H	COUNTY & STATE	Lea County, New Mexico
API WELL NUMBER	30-025-43086	PROPOSED DIRECTION	356.27

TIE-IN DATA

MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
813.00 ft	812.96 ft	0.9°	300.0°	5.10 N	4.04 W	Teledrift

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
28-May-16	948 ft	1.1°	315.4°

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
1-Jun-16	8,499 ft	.5	160.1

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
1-Jun-16	8,556 ft	.5	160.1

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.60
DECLINATION OR GRID	GRID

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

Lance Mosby

PRINT YOUR NAME ABOVE

Lance Mosby

SIGN YOUR NAME ABOVE

06/01/16

TODAY'S DATE

MWD SUPERVISOR 1	Robert Brewer	DIRECTIONAL DRILLER 1	Casey Tubbe
MWD SUPERVISOR 2	Lance Mosby	DIRECTIONAL DRILLER 2	Monte Gordon

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

Chevron

Lea County, NM (NAD27 NME)
SD WE 14 Fed
P7 3H

OH / Job 60046

Survey: Phoenix MWD Surveys

Standard Survey Report

02 June, 2016

PHOENIX
TECHNOLOGY SERVICES

Phoenix Technology Services
Survey Report

Company:	Chevron	**Local Co-ordinate Reference:**	Well P7 3H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3198.00usft (Pace X30)
Site:	SD WE 14 Fed	**MD Reference:**	RKB @ 3198.00usft (Pace X30)
Well:	P7 3H	**North Reference:**	Grid
Wellbore:	OH / Job 60046	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Pace X30)	**Database:**	Compass 5000 GCR

Project Lea County, NM (NAD27 NME)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site SD WE 14 Fed

Site Position:		**Northing:**	377,311.00 usft	**Latitude:**	32° 2' 7.83756 N
From:	Map	**Easting:**	711,217.00 usft	**Longitude:**	103° 39' 6.19467 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.36 °

Well P7 3H

Well Position	**+N/-S**	0.00 usft	**Northing:**	377,548.00 usft	**Latitude:**	32° 2' 9.93036 N
	+E/-W	0.00 usft	**Easting:**	715,223.00 usft	**Longitude:**	103° 38' 19.64032 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,165.00 usft

Wellbore OH / Job 60046

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/18/2016	6.97	59.75	48,036

Design Surveys (Pace X30)

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	356.27

Survey Program **Date** 6/2/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
135.97	813.00	Teledrift MWD Surveys (OH / Job 60046)	MWD	MWD - Standard
948.00	8,556.00	Phoenix MWD Surveys (OH / Job 60046)	PHX+MWD+HDGM	PHX+OWSG MWD + HDGM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
813.00	0.90	300.00	812.96	5.10	-4.04	5.35	0.00	0.00	0.00
813.01	0.90	300.00	812.97	5.10	-4.04	5.35	0.00	0.00	0.00
Tie-in to Teledrift Surveys									
948.00	1.10	315.40	947.94	6.55	-5.87	6.92	0.25	0.15	11.41
First Phoenix MWD Survey									
1,126.00	1.90	273.70	1,125.88	7.96	-10.02	8.59	0.73	0.45	-23.43
1,303.00	4.80	264.00	1,302.56	7.37	-20.31	8.68	1.66	1.64	-5.48
1,480.00	6.50	265.40	1,478.70	5.79	-37.67	8.23	0.96	0.96	0.79
1,658.00	6.60	266.00	1,655.54	4.27	-57.91	8.03	0.07	0.06	0.34

Company:	Chevron	**Local Co-ordinate Reference:**	Well P7 3H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3198.00usft (Pace X30)
Site:	SD WE 14 Fed	**MD Reference:**	RKB @ 3198.00usft (Pace X30)
Well:	P7 3H	**North Reference:**	Grid
Wellbore:	OH / Job 60046	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Pace X30)	**Database:**	Compass 5000 GCR

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,836.00	6.00	264.40	1,832.46	2.65	-77.38	7.68	0.35	-0.34	-0.90
2,013.00	6.20	265.40	2,008.46	0.98	-96.11	7.23	0.13	0.11	0.56
2,190.00	6.70	263.40	2,184.34	-0.97	-115.89	6.56	0.31	0.28	-1.13
2,368.00	4.80	261.60	2,361.43	-3.25	-133.58	5.44	1.07	-1.07	-1.01
2,546.00	4.90	260.60	2,538.80	-5.58	-148.45	4.08	0.07	0.06	-0.56
2,723.00	5.20	263.00	2,715.11	-7.79	-163.86	2.87	0.21	0.17	1.36
2,900.00	5.20	265.40	2,891.38	-9.42	-179.82	2.29	0.12	0.00	1.36
3,078.00	5.30	264.50	3,068.63	-10.85	-196.04	1.92	0.07	0.06	-0.51
3,254.00	4.50	272.70	3,243.99	-11.30	-211.03	2.44	0.60	-0.45	4.66
3,431.00	4.30	280.90	3,420.47	-9.72	-224.48	4.89	0.37	-0.11	4.63
3,609.00	3.80	283.50	3,598.03	-7.08	-236.77	8.32	0.30	-0.28	1.46
3,786.00	3.90	280.10	3,774.63	-4.66	-248.40	11.50	0.14	0.06	-1.92
3,964.00	2.90	277.60	3,952.31	-3.00	-258.82	13.83	0.57	-0.56	-1.40
4,141.00	2.20	274.70	4,129.14	-2.13	-266.65	15.21	0.40	-0.40	-1.64
4,319.00	1.50	242.20	4,307.05	-2.94	-272.12	14.76	0.69	-0.39	-18.26
4,496.00	1.40	208.50	4,483.99	-5.92	-275.20	11.98	0.48	-0.06	-19.04
4,522.00	1.40	207.50	4,509.99	-6.48	-275.49	11.44	0.09	0.00	-3.85
4,685.00	1.70	202.30	4,672.93	-10.48	-277.33	7.57	0.20	0.18	-3.19
4,862.00	1.20	310.10	4,849.89	-11.72	-279.75	6.49	1.33	-0.28	60.90
5,040.00	1.60	313.70	5,027.84	-8.80	-282.97	9.61	0.23	0.22	2.02
5,217.00	1.90	316.60	5,204.76	-4.96	-286.77	13.69	0.18	0.17	1.64
5,395.00	0.90	308.00	5,382.70	-1.96	-289.90	16.89	0.57	-0.56	-4.83
5,573.00	0.80	305.80	5,560.68	-0.37	-292.01	18.61	0.06	-0.06	-1.24
5,751.00	1.10	297.20	5,738.66	1.14	-294.54	20.28	0.19	0.17	-4.83
5,929.00	1.10	295.10	5,916.62	2.64	-297.60	21.98	0.02	0.00	-1.18
6,106.00	1.50	297.60	6,093.58	4.44	-301.20	24.01	0.23	0.23	1.41
6,283.00	1.10	320.30	6,270.53	6.82	-304.33	26.59	0.36	-0.23	12.82
6,461.00	0.80	319.30	6,448.51	9.08	-306.24	28.96	0.17	-0.17	-0.56
6,638.00	0.60	294.90	6,625.50	10.40	-307.88	30.39	0.20	-0.11	-13.79
6,816.00	1.00	261.80	6,803.48	10.57	-310.26	30.72	0.33	0.22	-18.60
6,993.00	1.10	249.50	6,980.45	9.76	-313.38	30.11	0.14	0.06	-6.95
7,170.00	0.40	146.00	7,157.44	8.65	-314.63	29.09	0.71	-0.40	-58.47
7,347.00	0.10	97.80	7,334.44	8.12	-314.13	28.52	0.19	-0.17	-27.23
7,525.00	0.20	333.50	7,512.44	8.37	-314.12	28.78	0.15	0.06	-69.83
7,702.00	0.90	114.50	7,689.43	8.07	-312.99	28.40	0.60	0.40	79.66
7,879.00	0.80	133.80	7,866.41	6.64	-310.83	26.83	0.17	-0.06	10.90
8,056.00	1.00	156.50	8,043.39	4.37	-309.32	24.47	0.23	0.11	12.82
8,234.00	0.70	111.00	8,221.37	2.56	-307.69	22.55	0.40	-0.17	-25.56
8,411.00	0.60	137.30	8,398.36	1.49	-306.05	21.38	0.18	-0.06	14.86
8,499.00	0.50	160.10	8,486.36	0.79	-305.61	20.65	0.27	-0.11	25.91
Final Phoenix MWD Survey									
8,556.00	0.50	160.10	8,543.35	0.32	-305.44	20.18	0.00	0.00	0.00
Projection to TD									

Company:	Chevron	**Local Co-ordinate Reference:**	Well P7 3H
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Site:	SD WE 14 Fed	**MD Reference:**	RKB @ 3198.00usft (Pace X30)
Well:	P7 3H	**North Reference:**	Grid
Wellbore:	OH / Job 60046	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Pace X30)	**Database:**	Compass 5000 GCR

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
813.01	812.97	5.10	-4.04	Tie-in to Teledrift Surveys
948.00	947.94	6.55	-5.87	First Phoenix MWD Survey
8,499.00	8,486.36	0.79	-305.61	Final Phoenix MWD Survey
8,556.00	8,543.35	0.32	-305.44	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 14 FED P7 003H		JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Wellbore Name	Parent Wellbore	Min Kick Off Depth (ftKB)	Vertical Section Direction (°)
Original Hole	Original Hole	8,556.0	356.27

Northing (Y) (ft)	Easting (X) (ft)	UTM Grid Zone

Date	Definitive?	Description	Planned?
4/16/2016	Y	MWD	N

MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NS Tie In (ft)	EW Tie In (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)	Unused data
136	0.60	319.17	136.00	0.54	-0.47	0.57	0.44	Magn MWD		0.44	0.71	234.68	N
316	0.70	8.70	315.99	2.34	-0.92	2.39	0.31	Magn MWD		0.06	2.51	-172.48	N
436	0.40	326.70	435.98	3.41	-1.03	3.47	0.40	Magn MWD		-0.25	3.57	265.00	N
532	0.30	321.70	531.98	3.89	-1.37	3.97	0.11	Magn MWD		-0.10	4.13	-5.21	N
625	0.40	271.70	624.98	4.09	-1.85	4.20	0.33	Magn MWD		0.11	4.49	-53.76	N
717	0.80	292.70	716.97	4.35	-2.76	4.52	0.49	Magn MWD		0.43	5.15	22.83	N
810	1.00	302.70	809.96	5.04	-4.05	5.29	0.27	Magn MWD		0.22	6.46	10.75	N
813	0.90	299.70	812.96	5.06	-4.09	5.32	3.72	Magn MWD		-3.33	6.51	-100.00	N
838	0.90	299.70	837.96	5.26	-4.43	5.54	0.00	Extrap		0.00	6.87	0.00	N
948	1.10	315.40	947.94	6.44	-5.92	6.81	0.31	Magn MWD		0.18	8.75	14.27	N
1,126	1.90	273.70	1,125.88	7.85	-10.06	8.48	0.73	Magn MWD		0.45	12.76	-23.43	N
1,303	4.80	264.00	1,302.56	7.26	-20.36	8.57	1.66	Magn MWD		1.64	21.62	-5.48	N
1,480	6.50	265.40	1,478.70	5.68	-37.71	8.12	0.96	Magn MWD		0.96	38.14	0.79	N
1,658	6.60	266.00	1,655.54	4.16	-57.96	7.92	0.07	Magn MWD		0.06	58.11	0.34	N
1,836	6.00	264.40	1,832.46	2.54	-77.42	7.57	0.35	Magn MWD		-0.34	77.46	-0.90	N
2,013	6.20	265.40	2,008.46	0.87	-96.16	7.12	0.13	Magn MWD		0.11	96.16	0.56	N
2,190	6.70	263.40	2,184.34	-1.08	-115.94	6.46	0.31	Magn MWD		0.28	115.95	-1.13	N
2,368	4.80	261.60	2,361.43	-3.36	-133.63	5.34	1.07	Magn MWD		-1.07	133.67	-1.01	N
2,546	4.90	260.60	2,538.80	-5.69	-148.49	3.98	0.07	Magn MWD		0.06	148.60	-0.56	N
2,723	5.20	263.00	2,715.11	-7.91	-163.91	2.77	0.21	Magn MWD		0.17	164.10	1.36	N
2,900	5.20	265.40	2,891.38	-9.53	-179.87	2.19	0.12	Magn MWD		0.00	180.12	1.36	N
3,078	5.30	264.50	3,068.63	-10.96	-196.09	1.82	0.07	Magn MWD		0.06	196.40	-0.51	N
3,254	4.50	272.70	3,243.99	-11.42	-211.08	2.34	0.60	Magn MWD		-0.45	211.39	4.66	N
3,431	4.30	280.90	3,420.47	-9.83	-224.53	4.79	0.37	Magn MWD		-0.11	224.75	4.63	N
3,609	3.80	283.50	3,598.03	-7.20	-236.82	8.23	0.30	Magn MWD		-0.28	236.93	1.46	N
3,786	3.90	280.10	3,774.63	-4.77	-248.45	11.40	0.14	Magn MWD		0.06	248.50	-1.92	N
3,964	2.90	277.60	3,952.31	-3.11	-258.87	13.73	0.57	Magn MWD		-0.56	258.89	-1.40	N

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Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 14 FED P7 003H		JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

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)	Unused data
4,141	2.20	274.70	4,129.14	-2.24	-266.70	15.11	0.40	Magn MWD		-0.40	266.71	-1.64	N
4,319	1.50	242.20	4,307.05	-3.05	-272.16	14.66	0.69	Magn MWD		-0.39	272.18	-18.26	N
4,496	1.40	208.50	4,483.99	-6.03	-275.24	11.89	0.48	Magn MWD		-0.06	275.31	-19.04	N
4,522	1.40	207.50	4,509.99	-6.59	-275.54	11.35	0.09	Magn MWD		0.00	275.62	-3.85	N
4,580	1.40	207.50	4,567.97	-7.85	-276.20	10.14	0.00	Magn MWD		0.00	276.31	0.00	N
4,685	1.70	202.30	4,672.93	-10.43	-277.38	7.64	0.32	Magn MWD		0.29	277.58	-4.95	N
4,862	1.20	310.10	4,849.90	-11.66	-279.79	6.56	1.33	Magn MWD		-0.28	280.04	60.90	N
5,040	1.60	313.70	5,027.84	-8.74	-283.02	9.69	0.23	Magn MWD		0.22	283.15	2.02	N
5,217	1.90	316.60	5,204.76	-4.91	-286.82	13.76	0.18	Magn MWD		0.17	286.86	1.64	N
5,395	0.90	308.00	5,382.71	-1.90	-289.95	16.97	0.57	Magn MWD		-0.56	289.95	-4.83	N
5,573	0.80	305.80	5,560.69	-0.31	-292.06	18.69	0.06	Magn MWD		-0.06	292.06	-1.24	N
5,751	1.10	297.20	5,738.66	1.19	-294.58	20.36	0.19	Magn MWD		0.17	294.59	-4.83	N
5,929	1.10	295.10	5,916.63	2.70	-297.65	22.06	0.02	Magn MWD		0.00	297.66	-1.18	N
6,106	1.50	297.60	6,093.58	4.49	-301.24	24.08	0.23	Magn MWD		0.23	301.28	1.41	N
6,283	1.10	320.30	6,270.54	6.88	-304.38	26.66	0.36	Magn MWD		-0.23	304.46	12.82	N
6,461	0.80	319.30	6,448.51	9.13	-306.28	29.04	0.17	Magn MWD		-0.17	306.42	-0.56	N
6,638	0.60	294.90	6,625.50	10.46	-307.93	30.47	0.20	Magn MWD		-0.11	308.11	-13.79	N
6,816	1.00	261.80	6,803.48	10.63	-310.31	30.79	0.33	Magn MWD		0.22	310.49	-18.60	N
7,170	0.40	146.00	7,157.47	9.16	-312.68	29.49	0.35	Magn MWD		-0.17	312.81	-32.71	N
7,347	0.10	97.80	7,334.46	8.63	-312.18	28.92	0.19	Magn MWD		-0.17	312.30	-27.23	N
7,525	0.20	333.50	7,512.46	8.89	-312.17	29.18	0.15	Magn MWD		0.06	312.29	132.42	N
7,702	0.90	114.50	7,689.46	8.59	-311.04	28.80	0.60	Magn MWD		0.40	311.16	-123.73	N
7,879	0.80	133.80	7,866.44	7.16	-308.88	27.24	0.17	Magn MWD		-0.06	308.96	10.90	N
8,056	1.00	156.50	8,043.42	4.88	-307.37	24.87	0.23	Magn MWD		0.11	307.41	12.82	N
8,234	0.70	111.00	8,221.40	3.07	-305.74	22.95	0.40	Magn MWD		-0.17	305.75	-25.56	N
8,411	0.60	137.30	8,398.39	2.00	-304.10	21.78	0.18	Magn MWD		-0.06	304.11	14.86	N
8,499	0.50	160.10	8,486.38	1.30	-303.66	21.05	0.27	Magn MWD		-0.11	303.66	25.91	N
8,556	0.50	160.10	8,543.38	0.83	-303.49	20.58	0.00	Magn MWD		0.00	303.49	0.00	N
8,559	0.28	182.51	8,546.38	0.82	-303.48	20.56	8.79	Magn MWD		-7.33	303.49	747.00	N
8,647	11.04	359.83	8,633.85	9.05	-303.52	28.78	12.86	Magn MWD		12.23	303.65	201.50	N

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Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 14 FED P7 003H		JENNINGS	Mid-Continent

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3,165.00	3,197.60	3,197.60, 3/28/2016		

Survey Data

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8,736	23.18	359.44	8,718.75	35.19	-303.72	54.87	13.64	Magn MWD		13.64	305.75	-0.44	N
8,825	33.67	349.63	8,796.96	77.11	-308.34	97.01	12.87	Magn MWD		11.79	317.84	-11.02	N
8,913	40.35	348.69	8,867.19	129.10	-318.33	149.54	7.62	Magn MWD		7.59	343.52	-1.07	N
9,002	45.43	358.12	8,932.44	189.14	-325.04	209.88	9.19	Magn MWD		5.71	376.06	10.60	N
9,090	53.75	1.78	8,989.45	256.06	-324.96	276.66	9.97	Magn MWD		9.45	413.73	-404.93	N
9,179	66.20	0.83	9,033.90	332.95	-323.25	353.27	14.02	Magn MWD		13.99	464.05	-1.07	N
9,267	80.60	359.75	9,058.97	417.06	-322.85	437.18	16.41	Magn MWD		16.36	527.42	407.86	N
9,356	91.88	3.58	9,064.80	505.67	-320.26	525.43	13.38	Magn MWD		12.67	598.55	-400.19	N
9,533	92.00	6.58	9,058.81	681.85	-304.60	700.22	1.70	Magn MWD		0.07	746.79	1.69	N
9,621	91.88	5.60	9,055.83	769.30	-295.27	786.88	1.12	Magn MWD		-0.14	824.02	-1.11	N
9,710	92.00	3.07	9,052.81	857.99	-288.54	874.94	2.84	Magn MWD		0.13	905.21	-2.84	N
9,799	92.00	3.44	9,049.71	946.79	-283.49	963.23	0.42	Magn MWD		0.00	988.32	0.42	N
9,888	92.09	2.52	9,046.53	1,035.62	-278.87	1,051.56	1.04	Magn MWD		0.10	1,072.51	-1.03	N
9,977	92.03	359.20	9,043.33	1,124.54	-277.53	1,140.21	3.73	Magn MWD		-0.07	1,158.28	400.76	N
10,065	91.91	356.86	9,040.31	1,212.43	-280.56	1,228.11	2.66	Magn MWD		-0.14	1,244.46	-2.66	N
10,154	91.54	356.42	9,037.63	1,301.23	-285.77	1,317.07	0.65	Magn MWD		-0.42	1,332.24	-0.49	N
10,243	89.85	357.10	9,036.55	1,390.08	-290.80	1,406.05	2.05	Magn MWD		-1.90	1,420.17	0.76	N
10,332	89.85	358.22	9,036.78	1,479.00	-294.44	1,495.02	1.26	Magn MWD		0.00	1,508.03	1.26	N
10,420	89.68	0.33	9,036.99	1,566.99	-295.55	1,582.90	2.40	Magn MWD		0.03	1,594.62	-406.69	N
10,509	89.85	359.35	9,037.20	1,655.99	-295.80	1,671.72	1.10	Magn MWD		-0.03	1,682.20	403.39	N
10,598	89.88	359.79	9,037.41	1,744.99	-296.46	1,760.58	0.50	Magn MWD		0.03	1,769.99	0.49	N
10,687	89.78	1.84	9,037.67	1,833.97	-295.20	1,849.29	2.31	Magn MWD		-0.11	1,857.58	-402.19	N
10,776	89.82	3.04	9,037.98	1,922.89	-291.41	1,937.77	1.35	Magn MWD		0.04	1,944.85	1.35	N
10,864	90.12	0.92	9,038.03	2,010.83	-288.37	2,025.33	2.43	Magn MWD		0.34	2,031.40	-2.41	N
10,953	90.12	359.31	9,037.84	2,099.83	-288.19	2,114.13	1.81	Magn MWD		0.00	2,119.51	402.69	N
11,041	90.00	0.22	9,037.75	2,187.83	-288.55	2,201.96	1.04	Magn MWD		-0.14	2,206.77	-408.06	N
11,130	90.25	0.20	9,037.56	2,276.83	-288.23	2,290.75	0.28	Magn MWD		0.28	2,295.00	-0.02	N
11,219	90.06	0.42	9,037.31	2,365.82	-287.74	2,379.53	0.33	Magn MWD		-0.21	2,383.26	0.25	N
11,308	90.12	359.86	9,037.17	2,454.82	-287.53	2,468.33	0.63	Magn MWD		0.07	2,471.60	403.87	N
11,397	90.15	358.54	9,036.97	2,543.81	-288.77	2,557.21	1.48	Magn MWD		0.03	2,560.15	-1.48	N

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11,575	90.03	356.36	9,036.69	2,721.62	-296.69	2,735.16	1.23	Magn MWD		-0.07	2,737.75	-1.22	N
11,663	90.12	357.87	9,036.57	2,809.51	-301.12	2,823.15	1.72	Magn MWD		0.10	2,825.60	1.72	N
11,753	90.15	359.04	9,036.36	2,899.48	-303.54	2,913.08	1.30	Magn MWD		0.03	2,915.32	1.30	N
11,841	89.75	0.94	9,036.43	2,987.47	-303.56	3,000.89	2.21	Magn MWD		-0.45	3,002.85	-406.93	N
11,930	89.78	358.92	9,036.60	3,076.47	-303.67	3,089.70	2.27	Magn MWD		0.03	3,091.42	402.22	N
12,019	89.69	358.99	9,037.21	3,165.45	-305.29	3,178.61	0.13	Magn MWD		-0.10	3,180.14	0.08	N
12,107	89.78	357.90	9,037.62	3,253.42	-307.68	3,266.54	1.24	Magn MWD		0.10	3,267.93	-1.24	N
12,196	89.66	358.52	9,038.05	3,342.37	-310.46	3,355.49	0.71	Magn MWD		-0.13	3,356.76	0.70	N
12,285	89.82	1.62	9,038.46	3,431.36	-310.35	3,444.28	3.49	Magn MWD		0.18	3,445.37	-401.01	N
12,373	89.54	3.53	9,038.95	3,519.26	-306.40	3,531.74	2.19	Magn MWD		-0.32	3,532.58	2.17	N
12,462	89.82	2.32	9,039.45	3,608.15	-301.86	3,620.14	1.40	Magn MWD		0.31	3,620.75	-1.36	N
12,550	89.94	359.91	9,039.63	3,696.12	-300.14	3,707.82	2.74	Magn MWD		0.14	3,708.29	406.35	N
12,639	89.88	359.44	9,039.77	3,785.12	-300.65	3,796.66	0.53	Magn MWD		-0.07	3,797.04	-0.53	N
12,727	89.85	2.55	9,039.98	3,873.10	-299.12	3,884.35	3.53	Magn MWD		-0.03	3,884.63	-405.56	N
12,817	90.03	0.82	9,040.07	3,963.05	-296.47	3,973.95	1.93	Magn MWD		0.20	3,974.13	-1.92	N
12,905	90.31	3.02	9,039.81	4,051.00	-293.53	4,061.51	2.52	Magn MWD		0.32	4,061.62	2.50	N
12,994	90.25	1.53	9,039.38	4,139.92	-289.99	4,150.02	1.68	Magn MWD		-0.07	4,150.07	-1.67	N
13,083	90.31	359.17	9,038.94	4,228.92	-289.45	4,238.79	2.65	Magn MWD		0.07	4,238.81	401.84	N
13,172	90.22	358.66	9,038.53	4,317.90	-291.13	4,327.69	0.58	Magn MWD		-0.10	4,327.70	-0.57	N
13,261	90.31	358.21	9,038.12	4,406.86	-293.57	4,416.63	0.52	Magn MWD		0.10	4,416.63	-0.51	N
13,349	90.28	358.91	9,037.66	4,494.83	-295.78	4,504.56	0.80	Magn MWD		-0.03	4,504.56	0.80	N
13,438	90.25	356.24	9,037.25	4,583.75	-299.54	4,593.52	3.00	Magn MWD		-0.03	4,593.52	-3.00	N
13,526	90.25	354.85	9,036.87	4,671.48	-306.38	4,681.51	1.58	Magn MWD		0.00	4,681.51	-1.58	N
13,615	90.30	356.90	9,036.44	4,760.24	-312.78	4,770.51	2.30	Magn MWD		0.06	4,770.51	2.30	N
13,704	90.30	357.80	9,035.98	4,849.14	-316.89	4,859.49	1.01	Magn MWD		0.00	4,859.49	1.01	N
13,778	90.20	358.90	9,035.65	4,923.11	-319.02	4,933.44	1.49	Magn MWD		-0.14	4,933.44	1.49	N
13,803	90.20	358.90	9,035.57	4,948.11	-319.50	4,958.41	0.00	Extrap		0.00	4,958.41	0.00	N

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SD WE 14 FED P7 #003H

PERF & FRAC INFORMATION

STAGE 1: 13599, 13539, 13479, 13419, 13359
6 spf, .41 dia hole. Total bbls pumped: 1056 bbls. Max pressure: 8376psi
PUMP STAGE 1:
Sand in formation 419,808 lbs 100% Prime up & test lines to 9500psi.
Equalize/open well @ 1200 psi. Avg Rate 86.0 bpm. Avg press:5486 psi.
Max Rate: 86.2 bpm Max Press:9092 psi. ISIP:1874 psi
Pump Time 120 mins Total clean fluid 9082 bbls Total slurry volume 9540 bbls
Sand pumped: Sand 100 – 33,132 lbs Sand 40/70 – 388,745 lbs TOTAL:421,877 lbs

STAGE 2: 13299, 13239, 13179, 13119
6 jspf, .41 dia hole. Total bbls pmpd: 284 bbls, max pressure 2519 psi
PUMP STAGE 2:
Sand in formation 419,808 lbs: 100% Test lines to 9500 psi.
Equalize/open well @ 1453 psi. Avg Rate: 86.0 bpm Avg Pressure 5861 psi
Max rate: 86.0 bpm Max Pressure 8325 psi ISIP 2495 psi
Pump Time: 123 mins. Total clean fluid:8917 bbls Total Slurry volume:9373 bbls
Sand pumped: Sand 100 – 32,490 lbs, Sand 40/70: 387,382 lbs TOTAL: 419,872 lbs

STAGE 3: 12999, 12939, 12879, 12821, 12759
6 jspf, .41 dia hole. Total bbls pmpd: 217 bbls. Max pressure: 3460 psi
PUMP STAGE 3
Sand in formation 419,808 lbs, 100% Prime up & test lines to 9500psi.
Equalize/open well @ 1541 psi. Ave Rate: 91.1 bpm Ave Pressure: 6062 psi
Max Rate:91.4 bpm, Max Pressure: 8760 psi. ISIP: 2266 psi.
Pump Time: 118 mins. Total clean fluid: 9116 bbls. Total slurry volume:9569 bbls
Sand Pumped: Sand 100 –33,201 lbs, Sand 40/70:388,171 lbs. TOTAL: 421,372 lbs

STAGE 4: 12699, 12639, 12579, 12159, 12459
6 JSPF, .41 dia hole. . Max press of 2555 psi w/263 bbls pumped.
PUMP STAGE 4:
Sand in formation 419,808 lbs, 100% Prime up & test lines to 9500 psi.
Equalize/open well @ 1519 psi. Avg Rate: 86.0 bpm, Avg Pressure: 5939 psi.
Max Rate: 86.0 bpm, Max Pressure: 8365 psi. ISIP:2361 psi.
Pump Time: 121 mins. Total clean fluid: 8882 bbls, Total slurry volume: 9334 bbls
Sand pumped: Sand 100: 32,359 lbs, Sand 40/70L 387,608 lbs, TOTAL: 419,967 lbs

STAGE 5: 12396, 12339, 12279, 12219, 12163
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. . Max pressure of 2709psi w/222 bbls pumped.
PUMP STAGE 5:
Sand in formation: 419,808 lbs, 100%, Prime up & test lines to 9500psi.
Equalize/open well @1483 psi. Ave Rate: 90.0 bpm, Avg pressure:5845 psi
Max Rate:91.0 bpm, Max Pressure: 8252 psi. ISIP: 2326 psi.
Pump Time: 116mins. Total clean fluid:8896 bbls, Total Slurry volume:9349 bbls
Sand pumped: Sand 100:32,577 lbs, Sand 40/70:388,374 lbs, TOTAL: 420,951 lbs

STAGE 6: 12099, 12039, 11979, 11919, 11859
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. Max Pressure of 2471 psi w/230 bbls pumped.
PUMP STAGE 6:
Sand in formation: 419,808 lbs, 100%. Prime up & test lines to 9500 psi.
Equalize/open well @ 1440 psi. Ave Rate:89.3 bpm, Ave Pressure: 5864 psi.
Max rate:89.7 bpm, Max Pressure:8466 psi. ISIP:2295 psi.
Pump time:118 mins. Total clean fluid: 8989 bbls, Total Slurry volume:9438 bbls
Sand pumped: sand 100:32,264 lbs, sand 40/70:384,635 lbs. TOTAL:416,899 lbs

STAGE 7: 11799, 11737, 11679, 11619, 11559
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. . Max pressure of 2530 psi w/161 bbls pumped.
PUMP STAGE 7:
Sand in formation: 419,808 lbs,68 %, Prime up & test lines to 9500 psi.
Equalize/open hole @1487 psi. Ave rate:84.0 bpm, Ave Pressure:6176 psi
Max rate: 86.0 bpm, Max Pressure:9171 psi. ISIP: 3392 psi.
Pump time:114 mins. Total clean fluid:7775 bbls, Total slurry volume:8083 bbls.
Sand Pumped: Sand 100:32,582 lbs, Sand 40/70: 253,695 lbs, TOTAL:286,277 lbs

STAGE 8: 11499, 11439, 11379, 11319, 11259
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. Max pressure of 5336 psi w/181 bbls pumped.
PUMP STAGE 8:
Sand in formation: 419,808 lbs, 100%, Prime up & test lines to 9500 psi.
Equalize/open hole @ 1502 psi. Ave Rate: 89.5 bpm, Ave pressure: 5897 psi
Max Rate: 93.8 bpm, Max pressure: 9218 psi. ISIP: 2209 psi.
Pump time: 121 mins. Total clean fluid: 9235 bbls, Total slurry volume: 9688 bbls
Sand pumped: Sand 100: 32,292 lbs, Sand 40/70: 388,127 lbs. TOTAL 420,419 lbs

STAGE 9: 11199, 11139, 11079, 11019, 10959
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. Max pressure of 3011 psi w/130 bbls pumped.
PUMP STAGE 9:
Sand in Formation: 419,808 lbs, 100% Prime up & test lines to 9500 psi.
Equalize/open well @ 1439 psi. Ave Rate: 85.8 bpm, Ave Pressure: 5743 psi.
Max rate: 89.4 bpm, Max pressure: 8394 psi. ISIP: 2185 psi.
Pump time: 118 mins. Total Clean fluid: 8872 bbls, Total slurry volume: 9324 bbls
Sand pumped: Sand 100: 33,444 lbs, Sand 40/70: 387,2125 lbs. TOTAL: 419,656 lbs

STAGE 10: 10899, 10839, 10779, 10719, 10659
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. Max press of 3106 psi w/113 bbls pumped.
PUMP STAGE 10:
Sand in formation: 419,808 lbs, 100% Prime up and test lines to 9500 psi.
Equalize/open well @ 1430 psi. Ave Rate: 90.0 bpm, Ave Pressure: 5904 psi.
Max Rate: 92.0 bpm, Max pressure: 8311 psi. ISIP: 2140 psi.
Pump time: 115 mins. Total clean fluid: 8860 bbls, Total slurry volume: 9313 bbls
Sand pumped: Sand 100: 32,491 lbs, Sand 40/70: 388,352 lbs. TOTAL 420,843 lbs

STAGE 11: 10599, 10542, 10479, 10419, 10359
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. Max Press 2412 psi w/112 bbls pumped.
PUMP STAGE 11:
Sand in formation: 419,808 lbs, 100%, Prime up and test lines to 9500 psi.
Equalize/open well @ 1510 psi. Ave Rate: 89.6 bpm. Ave Pressure: 5828 psi.
Max rate: 91.0 bpm, Max pressure: 8171 psi. ISIP: 2168 psi.
Pump time: 121 mins. Total clean fluid: 9039 bbls, total slurry volume 9490 bbls.
Sand pumped: Sand 100: 33,020 lbs, Sand 40/70: 386,019 lbs, TOTAL: 419,039 lbs

STAGE 12: 10299, 10239, 10179, 10119, 10059
6 JSPF, .41 dia hole. Pump dn @ 12 bpm. Max Pressure of 2432 psi w/84 bbls pmped.
PUMP STAGE 12:
Sand in formation: 419,808 lbs, 100% Prime up and test lines to 9500 psi.
Equalize/open well @ 1480 psi. Ave Rate: 89.2 bpm, Ave pressure: 6038 psi
Max rate: 89.5 bpm, Max pressure: 8575 psi, ISIP: 2253 psi.
Pump time: 116 mins, Total clean fluid: 9037 bbls, Total slurry volume: 9490 bbls.
Sand pumped: Sand 100: 33,129 lbs, Sand 40/70: 387,423 lbs, TOTAL: 420,552 lbs.

STAGE 13: 9999, 9939, 9879, 9819, 9759
6 JSPF, .41 dia holle. Pump dn @ 12 bpm. Max pressure of 2725 psi w/82 bbls pumped.
PUMP STAGE 13:
Sand in formation: 419,808 lbs, 100%, Prime up & test lines to 9500 psi.
Equalize/open well @ 1491 psi. Ave Rate: 85.0 bpm, Ave Pressure: 6083 psi.
Max Rate: 85.0 bpm, Max Pressure: 8444 psi. ISIP: 2231 psi.
Pump time: 247 mins. Total clean fluid: 9491 bbls, Total slurry volume: 9943 bbls.
Sand pumped: Sand 100: 32,529 lbs, Sand 40/70: 387,220 lbs TOTAL: 419,749 lbs

STAGE 14: 9699, 9639, 9579, 9519, 9459
6 JSPF, .41 dia hole. Pump down @ 15 bpm. Max press of 3187 psi w/65 bbls pumped.
PUMP STAGE 14:
Sand in formation: 419,808lbs 100%. Prime up & test lines to 9500 psi.
Equalize/open hole W 1487 psi. Ave rate: 85.0 bpm, Ave Press: 5271 psi
Max Rate: 87.0 bpm, Max pressure: 7959 psi. ISIP: 2379 psi.
Pump time: 589 mins. Total clean fluid: 10092 bbls, Total slurry volume: 10,544 bbls.
Sand pumped: Sand 100: 32,488 lbs, Sand 40/70: 387,539 lbs, TOTAL 420,027 lbs.