APD ID: 10400032892 **Submission Date:** 08/08/2018

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: JAYHAWK 7 FED **Well Number:** 16H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	---	3315	0	0	OTHER : Surface	NONE	No
2	RUSTLER	2424	891	891	SANDSTONE	NONE	No
3	TOP SALT	2064	1251	1251	SALT	NONE	No
4	BASE OF SALT	-1646	4961	4961	LIMESTONE	NONE	No
5	BELL CANYON	-1646	4961	4961	SANDSTONE	NATURAL GAS,OIL	No
6	CHERRY CANYON	-2986	6301	6301	SANDSTONE	NATURAL GAS,OIL	No
7	BRUSHY CANYON	-4616	7931	7931	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRING	-6126	9441	9441	SHALE	NATURAL GAS,OIL	No
9	BONE SPRING 1ST	-7066	10381	10381	SANDSTONE	NATURAL GAS,OIL	No
10	BONE SPRING 2ND	-7606	10921	10921	SANDSTONE	NATURAL GAS,OIL	No
11	BONE SPRING 3RD	-8756	12071	12071	SANDSTONE	NATURAL GAS,OIL	Yes
12	WOLFCAMP	-9176	12491	12491	SHALE	NATURAL GAS,OIL	No

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 12445

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: JAYHAWK 7 FED **Well Number:** 16H

Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Choke Diagram Attachment:

Jayhawk_7_Fed_16H_10M_BOPE_CHK_20180808091629.pdf

BOP Diagram Attachment:

Jayhawk_7_Fed_16H_10M_BOPE_CHK_20180808091637.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 5000

Equipment: BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.
Testing Procedure: A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Choke Diagram Attachment:

Jayhawk_7_Fed_16H_5M_BOPE__CK_20180808093301.pdf

BOP Diagram Attachment:

Jayhawk_7_Fed_16H_5M_BOPE__CK_20180808093318.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	900	0	900			900	J-55	40.5	STC	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5000	0	5000			5000	J-55	40	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	PRODUCTION	8.75	5.5	NEW	API	N	0	17200	0	12445			17200	P-110	17	OTHER - BTC	1.125	1.25	BUOY	1.6	BUOY	1.6

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: JAYHAWK 7 FED **Well Number:** 16H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Jayhawk_7_Fed_16H_Surf_Csg_Ass_20180808092338.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Jayhawk_7_Fed_16H_Int_Csg_Ass_20180808092355.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Jayhawk_7_Fed_16H_Prod_Csg_Ass_20180808092428.pdf

Section 4 - Cement

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: JAYHAWK 7 FED **Well Number:** 16H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	900	699	1.34	14.8	937	50	CLASS C	1% Calcium Chloride
INTERMEDIATE	Lead		0	4500	990	1.85	12.9	1832	30	CLASS C	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sks Poly-E-Flake
INTERMEDIATE	Tail		4500	5000	153	1.33	14.8	204	30	CLASS C	0.125 lbs/sack Poly-F-Flake
PRODUCTION	Lead		4800	11884	684	3.27	9	2237	25	TUNED	TUNED LITE
PRODUCTION	Tail		11884	17200	1399	1.2	14.5	1679	25	CLASS H	(50:50) Clas H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Operator Name: DEVON ENERGY PRODUCTION COMPANY LP

Well Name: JAYHAWK 7 FED **Well Number:** 16H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	900	SPUD MUD	8.34	8.6				2			
900	5000	SALT SATURATED	9	10				2			
5000	17200	WATER-BASED MUD	8.4	11				12			

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Will run GRMWD from TD to from KOP. Cement bond logs will be run in vertical to determine top of cement. Stated logs run will be in the Completion Report and submitted to the BLM.

List of open and cased hole logs run in the well:

CALIPER,CBL,DS,GR,MUDLOG

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6850 **Anticipated Surface Pressure:** 4112.1

Anticipated Bottom Hole Temperature(F): 175

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Jayhawk_7_Fed_16H_H2S_Plan_20180808092624.pdf