U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

01/16/2023

Well Name: Blue Krait 23 Fed

Well Location:

County or Parish/State:

Well Number: 34H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMLC0063798

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002549690

Well Status: Drilling Well

Operator: DEVON ENERGY PRODUCTION COMPANY LP

Notice of Intent

Sundry ID: 2703478

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/16/2022

Time Sundry Submitted: 04:26

Date proposed operation will begin: 11/16/2022

Procedure Description: Devon Energy Production Co., L.P. (Devon) respectfully requests to change the well name, break test variance, BHL and depth on the subject well. Please see attached revised C102, Drill plan, Directional plan, and break test variance. Current Well name per OCD: Blue Krait 23-14 Fed 34H Proposed Well name: Blue Krait 23 Fed 34H Permitted BHL: NENE, 20 FNL & 380 FEL, 23-24S-33E Proposed BHL: NENE, 20 FNL & 980 FEL, 23-24S-33E Permitted TVD/MD: 12525/17268 Proposed TVD/MD: 10500/15586

NOI Attachments

Procedure Description

5.5_17lb_P110_BTC_20221116162440.pdf

break_test_variance_BOP_20221116162441.pdf

9.625_40lb_J_55_20221116162440.pdf

13.375_48lb_H40_20221116162440.pdf

Blue_Krait_23_Fed_34H_Directional_Plan_10_13_22_20221116162321.pdf

WA017315284_BLUE_KRAIT_23_FED_34H_WL_R4_20221116162322.pdf

Blue_Krait_23_Fed_34H_20221116162321.pdf

Well Name: Blue Krait 23 Fed

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Allottee or Tribe Name:

Lease Number: NMLC0063798

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002549690

Well Status: Drilling Well

Operator: DEVON ENERGY PRODUCTION COMPANY LP

Conditions of Approval

Additional

Blue_Krait_23_Fed_34H_Dr_COA_Sundry_ID_2703478_20221219073253.pdf

23_24_33_P_Sundry_ID_2703478_Blue_Krait_23_Fed_34H_LV_20221219073253.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CHELSEY GREEN

Signed on: DEC 02, 2022 04:19 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Professional

Street Address: 333 West Sheridan Avenue

City: Oklahoma City **State:** OK

Phone: (405) 228-8595

Email address: Chelsey.Green@dvn.com

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 01/06/2023

Signature: Chris Walls

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-49690	96434	RED HILLS;BONE SPRING, NORTH

Property Code	Property Name	Well Number
316705	BLUE KRAIT 23 FED	34H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3560.1'

Surface Location

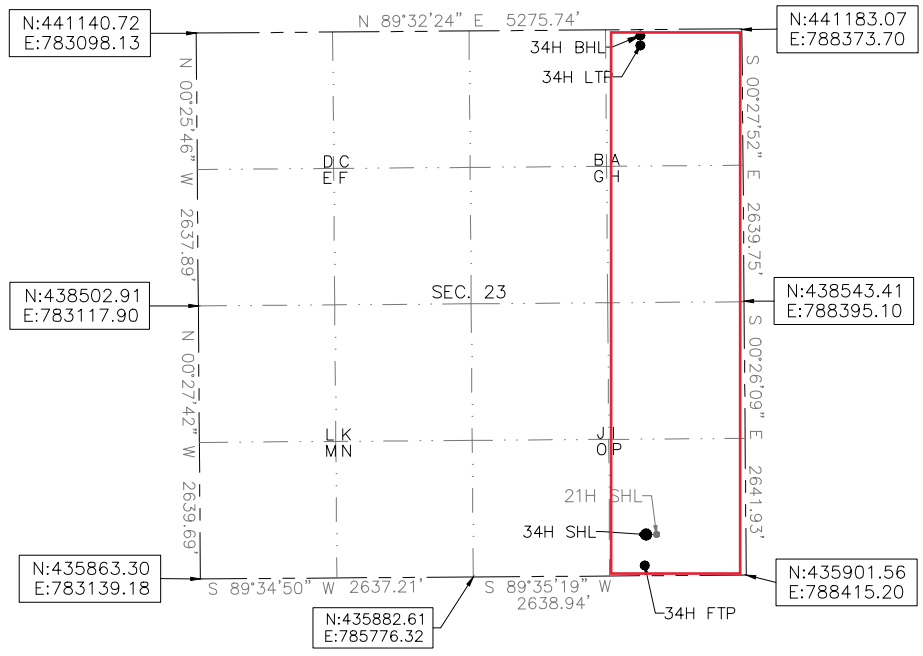
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	23	24-S	33-E		398	SOUTH	964	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	24-S	33-E		20	NORTH	980	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



BLUE KRAIT 23 FED 34H
EL:3560.1'
LAT:32.196943
LON:103.537703
N:436292.62
E:787448.19

FIRST TAKE POINT
100' FSL 980' FEL SEC. 23
LAT:32.196124
LON:103.537755
N:435994.52
E:787434.46

LAST TAKE POINT
100' FNL 980' FEL SEC. 23
LAT:32.210089
LON:103.537762
N:441075.20
E:787394.54

BOTTOM OF HOLE
LAT:32.210309
LON:103.537762
N:441155.20
E:787393.90

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83,New Mexico East Zone 3001, US Survey Feet, all distances are grid.

OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Chelsey Green 10/31/22
Signature Date

Chelsey Green
Printed Name

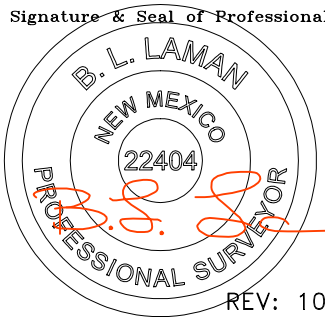
chelsey.green@dvn.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

10/19/21
Date of Survey

Signature & Seal of Professional Surveyor



REV: 10/12/22

Certificate No. 22404 B.L. LAMAN

DRAWN BY: CM

Intent [X] As Drilled [ ]

API #
30-025-49690

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, LP.	BLUE KRAIT 23 FED	34H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	23	24S	33E		57	SOUTH	980	EAST	LEA

Latitude	Longitude	NAD
32.1959	103.5378	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	23	24-S	33-E		100	SOUTH	980	EAST	LEA

Latitude	Longitude	NAD
32.196124	103.537755	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	23	24-S	33-E		100	NORTH	980	EAST	LEA

Latitude	Longitude	NAD
32.210089	103.537762	83

Is this well the defining well for the Horizontal Spacing Unit? [N]

Is this well an infill well? [Y]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #
30-025-43239

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, LP	BLUE KRAIT 23 FED	6H

KZ 06/29/2018

Blue Krait 23 Fed 34H

1. Geologic Formations

TVD of target	10502	Pilot hole depth	N/A
MD at TD:	15587	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	1280		
Salt	1801		
Base of Salt	5224		
Delaware	5224		
1st Bone Spring Lime	9134		
Leonard	9243		
Bone Spring 1st	10155		
Bone Spring 2nd	10406		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
17 1/2	13 3/8	48	H40	BTC	0	1305	0	1305
12 1/4	9 5/8	40	J-55	BTC	0	5324	0	5324
8 3/4	5 1/2	17	P110	BTC	0	15587	0	10502

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	983	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	588	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	588	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	500' above shoe	13.2	1.4	Tail: Class H / C + additives
Production	446	500' tieback	9.0	3.3	Lead: Class H /C + additives
	1068	KOP	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	50%
Intermediate	30%
Production	10%

Blue Krait 23 Fed 34H

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-58"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing	
X	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and sbumitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain.
	Coring? If yes, explain.

Additional logs planned		Interval
	Resistivity	
	Density	
X	CBL	Production casing
X	Mud log	KOP to TD
	PEX	

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	4915
Abnormal temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogren Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

8. Other facets of operation

Is this a walking operation? Potentially

1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1 Spudder rig will move in and batch drill surface hole.
    a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7 Drilling operations will be performed with drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

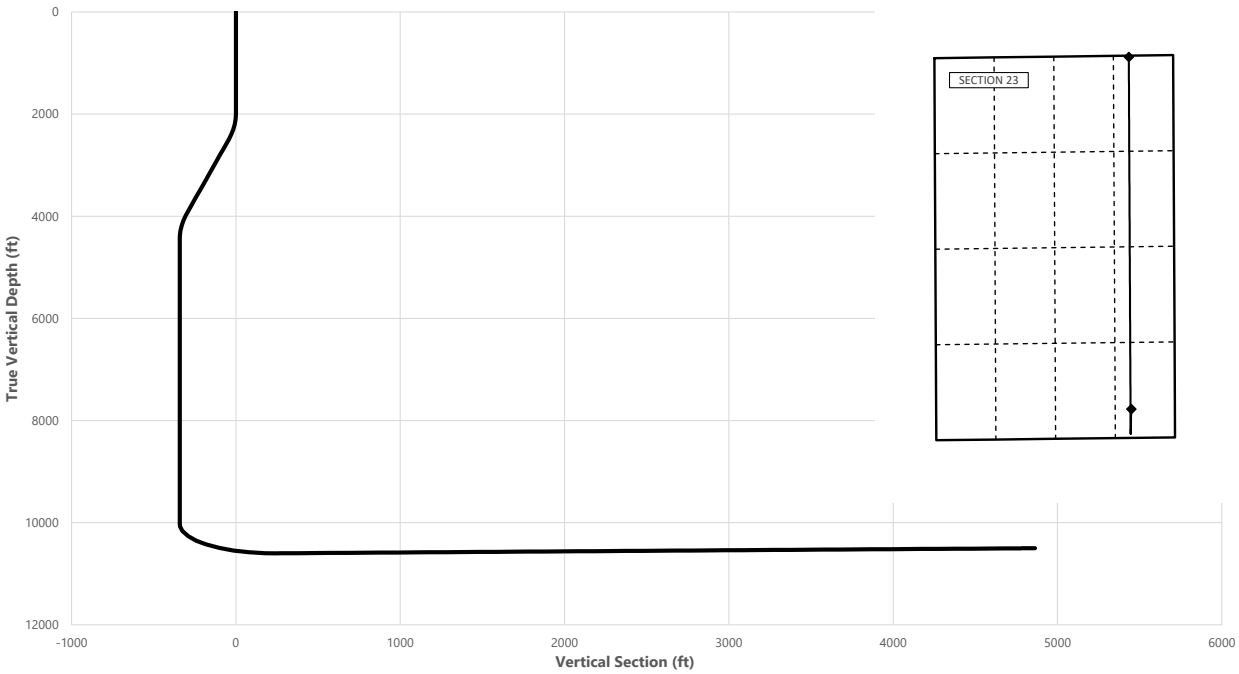
Attachments

X Directional Plan
_____ Other, describe

Well: Blue Krait 23 Fed 34H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	182.25	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	182.25	2497.47	-43.49	-1.71	-43.47	2.00	Hold Tangent
3967.24	10.00	182.25	3942.41	-298.08	-11.71	-297.93	0.00	Drop to Vertical
4467.24	0.00	182.25	4439.88	-341.56	-13.42	-341.39	2.00	Hold Vertical
10054.54	0.00	359.55	10027.18	-341.56	-13.42	-341.39	0.00	KOP
10966.94	91.24	359.55	10600.00	243.78	-18.02	243.96	10.00	Landing Point
15586.96	91.24	359.55	10500.00	4862.58	-54.29	4862.88	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	1280.00	1280.00
Salt	1801.00	1801.00
Base of Salt	5251.36	5224.00
Delaware	5251.36	5224.00
1st Bone Spring Lime	9161.36	9134.00
Leonard	9270.36	9243.00
Bone Spring 1st	10183.44	10155.00
Bone Spring 2nd / Point of Penetrati	10468.43	10406.00
exit	15506.96	10501.74

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.1968	-103.5378	398' FSL, 964' FEL of Sec 23 in T24S, R33E
KOP	10054.54	10027.18	32.1959	-103.5378	57' FSL, 980' FEL of Sec 23 in T24S, R33E
Point of Penetration	10468.43	10406.00	32.1961	-103.5378	100' FSL, 980' FEL of Sec 23 in T24S, R33E
Exit	15506.96	10501.74	32.2101	-103.5378	100' FNL, 980' FEL of Sec 23 in T24S, R33E
BHL	15586.96	10500.00	32.2102	-103.5378	20' FNL, 980' FEL of Sec 23 in T24S, R33E

devon

Well: Blue Krait 23 Fed 34H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	182.25	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	182.25	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	182.25	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	182.25	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	182.25	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	182.25	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	182.25	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	182.25	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	182.25	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	182.25	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	182.25	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	182.25	1200.00	0.00	0.00	0.00	0.00	
1280.00	0.00	182.25	1280.00	0.00	0.00	0.00	0.00	Rustler
1300.00	0.00	182.25	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	182.25	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	182.25	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	182.25	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	182.25	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	182.25	1800.00	0.00	0.00	0.00	0.00	
1801.00	0.00	182.25	1801.00	0.00	0.00	0.00	0.00	Salt
1900.00	0.00	182.25	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	182.25	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	182.25	2099.98	-1.74	-0.07	-1.74	2.00	
2200.00	4.00	182.25	2199.84	-6.97	-0.27	-6.97	2.00	
2300.00	6.00	182.25	2299.45	-15.68	-0.62	-15.67	2.00	
2400.00	8.00	182.25	2398.70	-27.86	-1.09	-27.84	2.00	
2500.00	10.00	182.25	2497.47	-43.49	-1.71	-43.47	2.00	Hold Tangent
2600.00	10.00	182.25	2595.95	-60.84	-2.39	-60.81	0.00	
2700.00	10.00	182.25	2694.43	-78.19	-3.07	-78.15	0.00	
2800.00	10.00	182.25	2792.91	-95.54	-3.75	-95.50	0.00	
2900.00	10.00	182.25	2891.39	-112.89	-4.44	-112.84	0.00	
3000.00	10.00	182.25	2989.87	-130.25	-5.12	-130.18	0.00	
3100.00	10.00	182.25	3088.35	-147.60	-5.80	-147.52	0.00	
3200.00	10.00	182.25	3186.83	-164.95	-6.48	-164.87	0.00	
3300.00	10.00	182.25	3285.31	-182.30	-7.16	-182.21	0.00	
3400.00	10.00	182.25	3383.79	-199.65	-7.84	-199.55	0.00	
3500.00	10.00	182.25	3482.27	-217.00	-8.53	-216.89	0.00	
3600.00	10.00	182.25	3580.75	-234.35	-9.21	-234.24	0.00	
3700.00	10.00	182.25	3679.23	-251.71	-9.89	-251.58	0.00	
3800.00	10.00	182.25	3777.72	-269.06	-10.57	-268.92	0.00	
3900.00	10.00	182.25	3876.20	-286.41	-11.25	-286.27	0.00	
3967.24	10.00	182.25	3942.41	-298.08	-11.71	-297.93	0.00	Drop to Vertical
4000.00	9.34	182.25	3974.71	-303.58	-11.93	-303.42	2.00	
4100.00	7.34	182.25	4073.65	-318.08	-12.50	-317.92	2.00	
4200.00	5.34	182.25	4173.03	-329.12	-12.93	-328.95	2.00	
4300.00	3.34	182.25	4272.74	-336.69	-13.23	-336.52	2.00	
4400.00	1.34	182.25	4372.65	-340.78	-13.39	-340.61	2.00	
4467.24	0.00	182.25	4439.88	-341.56	-13.42	-341.39	2.00	Hold Vertical
4500.00	0.00	359.55	4472.64	-341.56	-13.42	-341.39	0.00	
4600.00	0.00	359.55	4572.64	-341.56	-13.42	-341.39	0.00	
4700.00	0.00	359.55	4672.64	-341.56	-13.42	-341.39	0.00	
4800.00	0.00	359.55	4772.64	-341.56	-13.42	-341.39	0.00	
4900.00	0.00	359.55	4872.64	-341.56	-13.42	-341.39	0.00	
5000.00	0.00	359.55	4972.64	-341.56	-13.42	-341.39	0.00	
5100.00	0.00	359.55	5072.64	-341.56	-13.42	-341.39	0.00	
5200.00	0.00	359.55	5172.64	-341.56	-13.42	-341.39	0.00	
5251.36	0.00	359.55	5224.00	-341.56	-13.42	-341.39	0.00	Base of Salt, Delaware
5300.00	0.00	359.55	5272.64	-341.56	-13.42	-341.39	0.00	
5400.00	0.00	359.55	5372.64	-341.56	-13.42	-341.39	0.00	
5500.00	0.00	359.55	5472.64	-341.56	-13.42	-341.39	0.00	
5600.00	0.00	359.55	5572.64	-341.56	-13.42	-341.39	0.00	
5700.00	0.00	359.55	5672.64	-341.56	-13.42	-341.39	0.00	
5800.00	0.00	359.55	5772.64	-341.56	-13.42	-341.39	0.00	
5900.00	0.00	359.55	5872.64	-341.56	-13.42	-341.39	0.00	
6000.00	0.00	359.55	5972.64	-341.56	-13.42	-341.39	0.00	
6100.00	0.00	359.55	6072.64	-341.56	-13.42	-341.39	0.00	
6200.00	0.00	359.55	6172.64	-341.56	-13.42	-341.39	0.00	
6300.00	0.00	359.55	6272.64	-341.56	-13.42	-341.39	0.00	
6400.00	0.00	359.55	6372.64	-341.56	-13.42	-341.39	0.00	

devon

Well: Blue Krait 23 Fed 34H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6500.00	0.00	359.55	6472.64	-341.56	-13.42	-341.39	0.00	
6600.00	0.00	359.55	6572.64	-341.56	-13.42	-341.39	0.00	
6700.00	0.00	359.55	6672.64	-341.56	-13.42	-341.39	0.00	
6800.00	0.00	359.55	6772.64	-341.56	-13.42	-341.39	0.00	
6900.00	0.00	359.55	6872.64	-341.56	-13.42	-341.39	0.00	
7000.00	0.00	359.55	6972.64	-341.56	-13.42	-341.39	0.00	
7100.00	0.00	359.55	7072.64	-341.56	-13.42	-341.39	0.00	
7200.00	0.00	359.55	7172.64	-341.56	-13.42	-341.39	0.00	
7300.00	0.00	359.55	7272.64	-341.56	-13.42	-341.39	0.00	
7400.00	0.00	359.55	7372.64	-341.56	-13.42	-341.39	0.00	
7500.00	0.00	359.55	7472.64	-341.56	-13.42	-341.39	0.00	
7600.00	0.00	359.55	7572.64	-341.56	-13.42	-341.39	0.00	
7700.00	0.00	359.55	7672.64	-341.56	-13.42	-341.39	0.00	
7800.00	0.00	359.55	7772.64	-341.56	-13.42	-341.39	0.00	
7900.00	0.00	359.55	7872.64	-341.56	-13.42	-341.39	0.00	
8000.00	0.00	359.55	7972.64	-341.56	-13.42	-341.39	0.00	
8100.00	0.00	359.55	8072.64	-341.56	-13.42	-341.39	0.00	
8200.00	0.00	359.55	8172.64	-341.56	-13.42	-341.39	0.00	
8300.00	0.00	359.55	8272.64	-341.56	-13.42	-341.39	0.00	
8400.00	0.00	359.55	8372.64	-341.56	-13.42	-341.39	0.00	
8500.00	0.00	359.55	8472.64	-341.56	-13.42	-341.39	0.00	
8600.00	0.00	359.55	8572.64	-341.56	-13.42	-341.39	0.00	
8700.00	0.00	359.55	8672.64	-341.56	-13.42	-341.39	0.00	
8800.00	0.00	359.55	8772.64	-341.56	-13.42	-341.39	0.00	
8900.00	0.00	359.55	8872.64	-341.56	-13.42	-341.39	0.00	
9000.00	0.00	359.55	8972.64	-341.56	-13.42	-341.39	0.00	
9100.00	0.00	359.55	9072.64	-341.56	-13.42	-341.39	0.00	
9161.36	0.00	359.55	9134.00	-341.56	-13.42	-341.39	0.00	1st Bone Spring Lime
9200.00	0.00	359.55	9172.64	-341.56	-13.42	-341.39	0.00	
9270.36	0.00	359.55	9243.00	-341.56	-13.42	-341.39	0.00	Leonard
9300.00	0.00	359.55	9272.64	-341.56	-13.42	-341.39	0.00	
9400.00	0.00	359.55	9372.64	-341.56	-13.42	-341.39	0.00	
9500.00	0.00	359.55	9472.64	-341.56	-13.42	-341.39	0.00	
9600.00	0.00	359.55	9572.64	-341.56	-13.42	-341.39	0.00	
9700.00	0.00	359.55	9672.64	-341.56	-13.42	-341.39	0.00	
9800.00	0.00	359.55	9772.64	-341.56	-13.42	-341.39	0.00	
9900.00	0.00	359.55	9872.64	-341.56	-13.42	-341.39	0.00	
10000.00	0.00	359.55	9972.64	-341.56	-13.42	-341.39	0.00	
10054.54	0.00	359.55	10027.18	-341.56	-13.42	-341.39	0.00	KOP
10100.00	4.55	359.55	10072.59	-339.76	-13.43	-339.59	10.00	
10183.44	12.89	359.55	10155.00	-327.12	-13.53	-326.95	10.00	Bone Spring 1st
10200.00	14.55	359.55	10171.08	-323.20	-13.56	-323.03	10.00	
10300.00	24.55	359.55	10265.20	-289.79	-13.83	-289.61	10.00	
10400.00	34.55	359.55	10352.09	-240.54	-14.21	-240.36	10.00	
10468.43	41.39	359.55	10406.00	-198.46	-14.54	-198.29	10.00	Bone Spring 2nd / Point of Penetration
10500.00	44.55	359.55	10429.10	-176.95	-14.71	-176.77	10.00	
10600.00	54.55	359.55	10493.90	-100.95	-15.31	-100.78	10.00	
10700.00	64.55	359.55	10544.52	-14.86	-15.99	-14.68	10.00	
10800.00	74.55	359.55	10579.42	78.71	-16.72	78.89	10.00	
10900.00	84.55	359.55	10597.54	176.92	-17.50	177.11	10.00	
10966.94	91.24	359.55	10600.00	243.78	-18.02	243.96	10.00	Landing Point
11000.00	91.24	359.55	10599.28	276.83	-18.28	277.02	0.00	
11100.00	91.24	359.55	10597.12	376.80	-19.06	376.99	0.00	
11200.00	91.24	359.55	10594.96	476.78	-19.85	476.97	0.00	
11300.00	91.24	359.55	10592.79	576.75	-20.63	576.94	0.00	
11400.00	91.24	359.55	10590.63	676.72	-21.42	676.92	0.00	
11500.00	91.24	359.55	10588.46	776.70	-22.21	776.90	0.00	
11600.00	91.24	359.55	10586.30	876.67	-22.99	876.87	0.00	
11700.00	91.24	359.55	10584.13	976.64	-23.78	976.85	0.00	
11800.00	91.24	359.55	10581.97	1076.62	-24.56	1076.82	0.00	
11900.00	91.24	359.55	10579.81	1176.59	-25.35	1176.80	0.00	
12000.00	91.24	359.55	10577.64	1276.56	-26.13	1276.78	0.00	
12100.00	91.24	359.55	10575.48	1376.54	-26.92	1376.75	0.00	
12200.00	91.24	359.55	10573.31	1476.51	-27.71	1476.73	0.00	
12300.00	91.24	359.55	10571.15	1576.49	-28.49	1576.71	0.00	
12400.00	91.24	359.55	10568.98	1676.46	-29.28	1676.68	0.00	
12500.00	91.24	359.55	10566.82	1776.43	-30.06	1776.66	0.00	
12600.00	91.24	359.55	10564.65	1876.41	-30.85	1876.63	0.00	
12700.00	91.24	359.55	10562.49	1976.38	-31.63	1976.61	0.00	
12800.00	91.24	359.55	10560.33	2076.35	-32.42	2076.59	0.00	

devon

Well: Blue Krait 23 Fed 34H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12900.00	91.24	359.55	10558.16	2176.33	-33.21	2176.56	0.00	
13000.00	91.24	359.55	10556.00	2276.30	-33.99	2276.54	0.00	
13100.00	91.24	359.55	10553.83	2376.27	-34.78	2376.51	0.00	
13200.00	91.24	359.55	10551.67	2476.25	-35.56	2476.49	0.00	
13300.00	91.24	359.55	10549.50	2576.22	-36.35	2576.47	0.00	
13400.00	91.24	359.55	10547.34	2676.19	-37.13	2676.44	0.00	
13500.00	91.24	359.55	10545.18	2776.17	-37.92	2776.42	0.00	
13600.00	91.24	359.55	10543.01	2876.14	-38.71	2876.39	0.00	
13700.00	91.24	359.55	10540.85	2976.11	-39.49	2976.37	0.00	
13800.00	91.24	359.55	10538.68	3076.09	-40.28	3076.35	0.00	
13900.00	91.24	359.55	10536.52	3176.06	-41.06	3176.32	0.00	
14000.00	91.24	359.55	10534.35	3276.03	-41.85	3276.30	0.00	
14100.00	91.24	359.55	10532.19	3376.01	-42.64	3376.27	0.00	
14200.00	91.24	359.55	10530.03	3475.98	-43.42	3476.25	0.00	
14300.00	91.24	359.55	10527.86	3575.95	-44.21	3576.23	0.00	
14400.00	91.24	359.55	10525.70	3675.93	-44.99	3676.20	0.00	
14500.00	91.24	359.55	10523.53	3775.90	-45.78	3776.18	0.00	
14600.00	91.24	359.55	10521.37	3875.88	-46.56	3876.15	0.00	
14700.00	91.24	359.55	10519.20	3975.85	-47.35	3976.13	0.00	
14800.00	91.24	359.55	10517.04	4075.82	-48.14	4076.11	0.00	
14900.00	91.24	359.55	10514.87	4175.80	-48.92	4176.08	0.00	
15000.00	91.24	359.55	10512.71	4275.77	-49.71	4276.06	0.00	
15100.00	91.24	359.55	10510.55	4375.74	-50.49	4376.03	0.00	
15200.00	91.24	359.55	10508.38	4475.72	-51.28	4476.01	0.00	
15300.00	91.24	359.55	10506.22	4575.69	-52.06	4575.99	0.00	
15400.00	91.24	359.55	10504.05	4675.66	-52.85	4675.96	0.00	
15500.00	91.24	359.55	10501.89	4775.64	-53.64	4775.94	0.00	
15506.96	91.24	359.55	10501.74	4782.60	-53.69	4782.90	0.00	exit
15586.96	91.24	359.55	10500.00	4862.58	-54.29	4862.88	0.00	BHL

devon

Well: Blue Krait 23 Fed 34H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment

Well: Blue Krait 23 Fed 34H
County: Lea
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
Datum: North American Datum 1927
Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment

Section 2 - Blowout Preventer Testing Procedure

Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow OOGO2.III.A.2.i, and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed OOGO2.III.A.2.i per the following: Devon Energy will perform a full BOP test per OOGO2.III.A.2.i before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

1. Well Control Response:

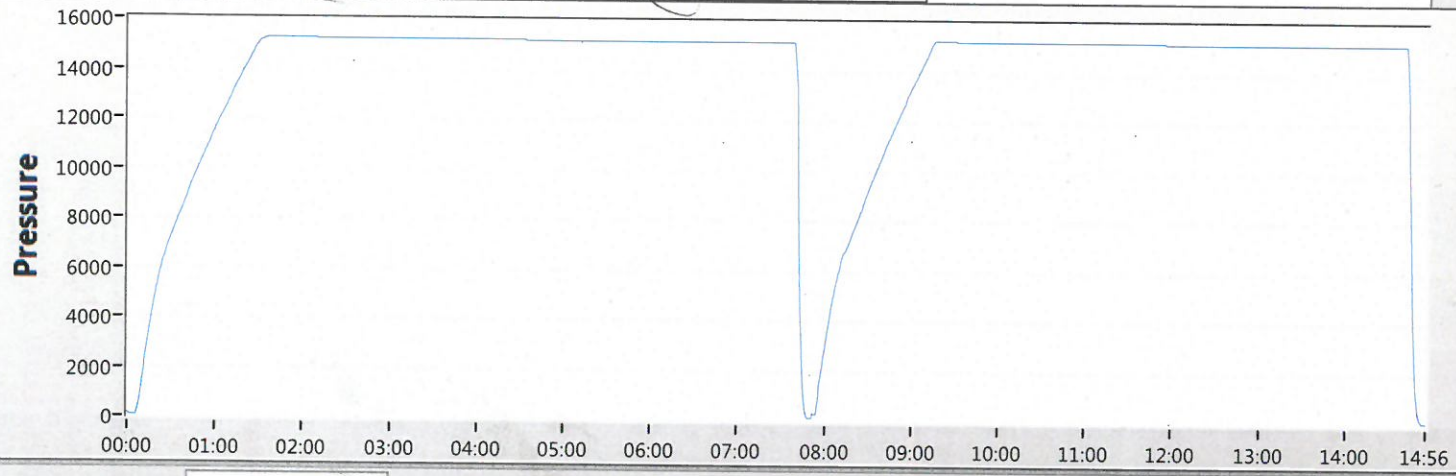
1. Primary barrier remains fluid
2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:
   a) Annular first
   b) If annular were to not hold, Upper pipe rams second (which were tested on the skid BOP test)
   c) If the Upper Pipe Rams were to not hold, Lower Pipe Rams would be third

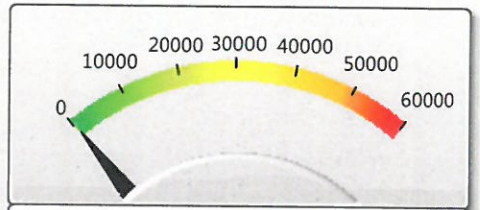
Cactus Wellhead

2-9-17 EBell

80.7 °F

15:49





50

Date 02-09-17

Tested By E.BELL

Transducer bay2

Transducer Serial 181504

Calibration Date 9/6/15

	Job#	Part#	Serial#	Description	Test Pressure
1	TRJ0006341-0007	116966	TRJ6341-7-1	ADPT,DRLG,CW,MBU-3T,13-5/8 10M	15000
2					
3					
4					
5				TRANSDUCER CALIBRATION DUE 03/13/2017	
6					
7					
8					

Start | Stop | Zero | Config | Save | Print | EXIT

U. S. Steel Tubular Products

13.375" 48.00lbs/ft (0.330" Wall) H40

1/8/2019 12:38:52 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	40,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	60,000	--	--	--	psi
DIMENSIONS	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	13.375	--	--	14.375	in.
Wall Thickness	0.330	--	--	--	in.
Inside Diameter	12.715	--	--	12.715	in.
Standard Drift	12.559	12.559	--	12.559	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	48.00	--	--	--	lbs/ft
Plain End Weight	46.02	--	--	--	lbs/ft
PERFORMANCE	**Pipe**	**BTC**	**LTC**	**STC**	
Minimum Collapse Pressure	740	740	--	740	psi
Minimum Internal Yield Pressure	1,730	1,730	--	1,730	psi
Minimum Pipe Body Yield Strength	541	--	--	--	1,000 lbs
Joint Strength	--	--	--	322	1,000 lbs
Reference Length	--	--	--	4,473	ft
MAKE-UP DATA	**Pipe**	**BTC**	**LTC**	**STC**	
Make-Up Loss	--	--	--	3.50	in.
Minimum Make-Up Torque	--	--	--	2,420	ft-lbs
Maximum Make-Up Torque	--	--	--	4,030	ft-lbs

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

1-877-893-9461
connections@uss.com
www.usstubular.com

U. S. Steel Tubular Products

9.625" 40.00lbs/ft (0.395" Wall) J55

1/24/2019 2:45:24 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
DIMENSIONS	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395	--	--	--	in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00	--	--	--	lbs/ft
Plain End Weight	38.97	--	--	--	lbs/ft
PERFORMANCE	**Pipe**	**BTC**	**LTC**	**STC**	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630	--	--	--	1,000 lbs
Joint Strength	--	714	520	452	1,000 lbs
Reference Length	--	11,898	8,665	7,529	ft
MAKE-UP DATA	**Pipe**	**BTC**	**LTC**	**STC**	
Make-Up Loss	--	4.81	4.75	3.38	in.
Minimum Make-Up Torque	--	--	3,900	3,390	ft-lbs
Maximum Make-Up Torque	--	--	6,500	5,650	ft-lbs

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U. S. Steel Tubular Products

5.500" 17.00lbs/ft (0.304" Wall) P110

2/21/2019 8:12:22 AM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	110,000	--	--	--	psi
Maximum Yield Strength	140,000	--	--	--	psi
Minimum Tensile Strength	125,000	--	--	--	psi
DIMENSIONS	**Pipe**	**BTC**	**LTC**	**STC**	
Outside Diameter	5.500	6.050	6.050	--	in.
Wall Thickness	0.304	--	--	--	in.
Inside Diameter	4.892	4.892	4.892	--	in.
Standard Drift	4.767	4.767	4.767	--	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	17.00	--	--	--	lbs/ft
Plain End Weight	16.89	--	--	--	lbs/ft
PERFORMANCE	**Pipe**	**BTC**	**LTC**	**STC**	
Minimum Collapse Pressure	7,480	7,480	7,480	--	psi
Minimum Internal Yield Pressure	10,640	10,640	10,640	--	psi
Minimum Pipe Body Yield Strength	546	--	--	--	1,000 lbs
Joint Strength	--	568	445	--	1,000 lbs
Reference Length	--	22,271	17,449	--	ft
MAKE-UP DATA	**Pipe**	**BTC**	**LTC**	**STC**	
Make-Up Loss	--	4.13	3.50	--	in.
Minimum Make-Up Torque	--	--	3,470	--	ft-lbs
Maximum Make-Up Torque	--	--	5,780	--	ft-lbs

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Blue Krait 23 Fed 34H

13 3/8	surface csg in a	17 1/2	inch hole.		Design Factors				Surface			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	48.00	h 40	btc	8.35	1.22	0.6	1,350	3	1.01	2.30	64,800
"B"			btc				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 622		Tail Cmt	does not	circ to sfc.	Totals:	1,350				64,800

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	983	1376	938	47	9.00	1709	2M	1.56

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.

Site plat (pipe racks S or E) as per O.O.1.III.D.4.i. not found.

9 5/8	casing inside the	13 3/8			Design Factors				Int 1			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	j 55	btc	3.00	0.9	0.8	5,250	1	1.52	1.50	210,000
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 474					Totals:	5,250				210,000
	The cement volume(s) are intended to achieve a top of			0	ft from surface or a		1350				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	742	2156	1730	25	10.50	2600	3M	0.81
D V Tool(s):							sum of sx	Σ CuFt	Σ%excess
t by stage % :		#VALUE!	#VALUE!				742	2156	25

Class 'C' tail cmt yld > 1.35

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.75, b, c, d All > 0.70, OK.

5 1/2	casing inside the	9 5/8			Design Factors				Prod 1			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	17.00	p 110	btc	3.06	1.52	2.17	15,587	2	4.09	2.88	264,979
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 2,310					Totals:	15,587				264,979
	The cement volume(s) are intended to achieve a top of			5050	ft from surface or a		200				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.2526	1514	2967	2663	11	9.00			1.35

Class 'C' tail cmt yld > 1.35

#N/A

0		5 1/2			Design Factors				<Choose Casing>			
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:					Totals:	0				0
	Cmt vol calc below includes this csg, TOC intended			#N/A	ft from surface or a		#N/A				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A				

#N/A Capitan Reef est top XXXX.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LEASE NO.:	**NMLC0063798**
LOCATION:	Section 23, T.24 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	**Blue Krait 23 Fed 34H**
SURFACE HOLE FOOTAGE:	398'/S & 964'/E
BOTTOM HOLE FOOTAGE	20'/N & 980'/E
ATS/API ID:	**30-025-49690**
APD ID:	**N/A**
Sundry ID:	**2703478**

COA

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	◉ Both
Wellhead Variance	○ Diverter		
Other	☐ 4 String	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	☑ Cement Squeeze	☐ EchoMeter	
Special Requirements	☐ Water Disposal	☐ COM	☐ Unit
Special Requirements Variance	☑ Break Testing	☐ Offline Cementing	

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1350 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **5250** is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus after primary cementing stage. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to the BLM.

If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
  Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.

- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-689-5981 Lea County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **14**-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

LVO 12/19/2022

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 177444

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 177444
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	1/19/2023