

Fulton, Crystal

Subject: FW: [EXTERNAL] Re: RKI Exploration & Production, LLC / Tucker Draw Federal Com 9-4 7H
Attachments: Tucker Draw 9-4-7H_8.75_Balanced_Plug.pdf; Tucker Draw Fed COM 9-4 7H - AC v4.pdf; Tucker Draw Fed COM 9-4 7H - Well Plan v4.pdf

From: Stevens, Zota [<mailto:zstevens@blm.gov>]
Sent: Tuesday, December 19, 2017 11:19 AM
To: Barmore, Justin <Justin.Barmore@wpenergy.com>
Subject: [EXTERNAL] Re: RKI Exploration & Production, LLC / Tucker Draw Federal Com 9-4 7H

CAUTION: This email was sent from an EXTERNAL source. Use caution when clicking links or opening attachments.

Dear Justin,
You are approved to go with the balanced plug. Submit Sundry for balanced plug.

Zota Stevens
Petroleum Engineer
Bureau of Land Management
620 E Greene St.
Carlsbad, NM 88220
E-mail: zstevens@blm.gov
Office: (575) 234-2228

Fax: (575) 234-5927

On Tue, Dec 19, 2017 at 8:56 AM, Barmore, Justin <Justin.Barmore@wpenergy.com> wrote:

Charles,

Below is a summary of the events we discussed this morning. Attached is the balanced cement plug procedure and new directional plan we discussed as well. Please let us know if this plan is acceptable.

Thank you,

Justin Barmore

Office: 539-573-2651

Cell: 918-550-1608

WPXENERGY

From: Barmore, Justin
Sent: Monday, December 18, 2017 6:25 PM
To: 'Walls, Christopher' <cwalls@blm.gov>
Cc: Walker, Josh <Josh.Walker@wpxenergy.com>; Knopp, Bryan <bryan.knopp@wpxenergy.com>
Subject: RKI Exploration & Production, LLC / Tucker Draw Federal Com 9-4 7H

Good afternoon Chris,

I left you a voicemail but wanted to follow up with an email. Yesterday morning (12/17) at approximately 0015, we were drilling ahead just below our KOP at 10,599-ft and started experiencing MWD signal issues. After troubleshooting and only receiving intermittent MWD data, the decision was made to trip out of the hole and change out MWD tools. After making it to surface, we realized that we had left approximately 73-ft of the BHA from the gap sub the MWD tool hangs off in down to the bit. We attempted one fishing run this morning that was unsuccessful and are currently attempting another fishing run now.

If this fishing run is unsuccessful, we would like to proceed forward by setting a 500-ft balanced cement plug and sidetracking around the fish. We would then finish drilling our curve and run/cement 7-in casing.

Please let us know if this plan is acceptable. We are currently preparing a procedure for setting the cement plug, new directional plan, and an updated wellbore diagram. We can send these along with any other information you need for approval if the fishing attempt is unsuccessful.

Thank you,

Justin Barmore

Office: 539-573-2651

Cell: 918-550-1608

justin.barmore@wpxenergy.com

8-3/4" Intermediate – Balanced Plug

Objective: The objective is to set a 500' balanced plug to provide a kickoff point above the fish left in the hole @ 10,492' MD.

Procedure

1. P/U muleshoe, 2-7/8" stinger, and 2-7/8" PH6 x 5" S-135 4-1/2" IF XO
 - a. Verify stinger and XO have been drifted before RIH
 - b. Verify muleshoe sub is ported around OD
2. TIH with stinger on 5" drillpipe to 10,460' MD
 - a. Verify kelly down for space-out when we pick up out of pill
3. Circulate at least one bottoms and achieve consistent MW IN/OUT
4. Pump 5 bbls of viscous-weighted pill from slugging pit and displace with 185 bbls of mud
5. P/U out of the pill 50-ft, this will place the bottom of the stinger at 10,410' which is the top of the pill.
6. Rig up cementers, test lines to 5,000 psi, and pump job as follows:
 - a. Pump 30 bbl FW spacer
 - b. Mix and pump 300 sks, 17.5 ppg, 0.97 ft³/sk Class H cement @ 3-4 bpm
 - c. Displace with 2 bbls of FW followed by 166 bbls mud from active @ 3-4 bpm
 - i. NOTE: Slow down pumps to 2 bpm at 161 bbls displaced and pump last 5 bbls of displacement at 2 bpm
 1. The 166 bbls of displacement will under displace the plug by ~2 bbls
 - ii. NOTE: Total displacement is 166 bbls
7. Pull 10 stands at 3 min/stand to place end of stinger at approximately 9,450' (430' above TOC)
8. Circulate at least two bottoms up while slowly rotating and reciprocating pipe verifying drillpipe, stinger, and backside are clear of cement
 - a. Note cement returns seen at surface and record in openwells
 - b. Drop foam wiper ball after getting the first bottoms up
9. POOH and L/D stinger, check for cement rings and note in openwells if observed
10. WOC for at least 9 hours before making up BHA

Tucker Draw Fed Com 9-4-7H
Drilling Program
Eddy County, NM

December 18, 2017

Formation Tops:

Formation	MD	TVD
Rustler		
Salado		
Castile (Top of Salt)		
Bell Canyon (Base of Salt)	3585	3585
Cherry Canyon	4707	4706
Brushy Canyon	5777	5776
Bone Spring	7430	7428
Avalon	7543	7541
1st Bone Spring Sand	8358	8356
2nd Bone Spring Lime	8908	8906
2nd Bone Spring Sand	9088	9086
3rd Bone Spring Lime	9534	9532
3rd Bone Spring Sand	10257	10255
Wolfcamp Top		
Wolfcamp X Sand		
Wolfcamp Y Sand		
Wolfcamp A		
Wolfcamp A2		
Lower WFCMP A Top Target		

Justin Barmore – Drilling Engineer
WPX Energy



WPX Energy

Eddy County, New Mexico (NAD 83)
Tucker Draw Fed COM 9-4
7H

Wellbore #2

Plan: Design #4

Standard Planning Report

19 December, 2017



Database:	EDM Conroe	Local Co-ordinate Reference:	Well 7H
Company:	WPX Energy	TVD Reference:	WELL @ 3128.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 3128.00usft (Orion Phoenix)
Site:	Tucker Draw Fed COM 9-4	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #2		
Design:	Design #4		

Project	Eddy County, New Mexico (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Well	7H			
Well Position	+N/-S	381,930.04 usft	Northing:	381,930.04 usft
	+E/-W	682,182.37 usft	Easting:	682,182.37 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	Ground Level: 3,103.00 usft

Wellbore	Wellbore #2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2017	12/1/2017	7.12	59.81	47,801

Design	Design #4			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	10,151.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.32

Plan Survey Tool Program	Date	12/19/2017		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1 10,151.00	18,808.52	Design #4 (Wellbore #2)	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
10,151.00	0.95	238.65	10,148.75	3.73	-63.78	0.00	0.00	0.00	0.00	
10,200.00	1.14	244.78	10,197.74	3.31	-64.56	0.45	0.39	12.51	33.56	
10,315.23	5.00	12.00	10,312.84	7.74	-64.56	5.00	3.35	110.41	136.26	
10,570.28	5.00	12.00	10,566.92	29.48	-59.93	0.00	0.00	0.00	0.00	
11,421.43	90.00	359.68	11,091.00	600.40	-53.32	10.00	9.99	-1.45	-12.36	
18,808.52	90.00	359.68	11,091.00	7,987.38	-94.27	0.00	0.00	0.00	0.00	PBHL - Tucker Draw

Database:	EDM Conroe	Local Co-ordinate Reference:	Well 7H
Company:	WPX Energy	TVD Reference:	WELL @ 3128.00usft (Orion Phoenix)
Project:	Eddy County, New Mexico (NAD 83)	MD Reference:	WELL @ 3128.00usft (Orion Phoenix)
Site:	Tucker Draw Fed COM 9-4	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #2		
Design:	Design #4		

Planned 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)
10,151.00	0.95	238.65	10,148.75	3.73	-63.78	4.48	0.27	0.15	-15.17
Tie-in to Survey - 10151.00' MD									
10,200.00	1.14	244.78	10,197.74	3.31	-64.56	4.07	0.45	0.39	12.51
SDTRK, 5.00°/100' Build & Turn									
10,300.00	4.25	10.38	10,297.66	6.53	-64.80	7.30	5.00	3.11	125.60
10,315.23	5.00	12.00	10,312.84	7.74	-64.56	8.50	5.00	4.93	10.65
Hold 5.00° Inc, 12.00° Azm									
10,400.00	5.00	12.00	10,397.29	14.97	-63.02	15.71	0.00	0.00	0.00
10,500.00	5.00	12.00	10,496.91	23.49	-61.21	24.21	0.00	0.00	0.00
10,570.28	5.00	12.00	10,566.92	29.48	-59.93	30.19	0.00	0.00	0.00
Begin 10.00°/100' Build & Turn									
10,600.00	7.93	7.38	10,596.45	32.78	-59.40	33.48	10.00	9.85	-15.53
10,650.00	12.90	4.36	10,645.61	41.77	-58.53	42.46	10.00	9.94	-6.05
10,700.00	17.89	3.00	10,693.80	55.02	-57.71	55.69	10.00	9.97	-2.72
10,750.00	22.88	2.22	10,740.66	72.41	-56.93	73.07	10.00	9.99	-1.56
10,800.00	27.88	1.70	10,785.82	93.82	-56.21	94.47	10.00	9.99	-1.03
10,850.00	32.87	1.34	10,828.94	119.08	-55.54	119.73	10.00	9.99	-0.73
10,900.00	37.87	1.06	10,869.70	148.01	-54.94	148.65	10.00	9.99	-0.56
10,950.00	42.87	0.83	10,907.78	180.38	-54.41	181.01	10.00	10.00	-0.45
11,000.00	47.87	0.65	10,942.90	215.95	-53.95	216.57	10.00	10.00	-0.37
11,050.00	52.86	0.49	10,974.78	254.44	-53.57	255.05	10.00	10.00	-0.32
11,100.00	57.86	0.35	11,003.19	295.56	-53.27	296.17	10.00	10.00	-0.28
11,150.00	62.86	0.23	11,027.91	339.01	-53.05	339.61	10.00	10.00	-0.25
11,200.00	67.86	0.12	11,048.75	384.44	-52.91	385.04	10.00	10.00	-0.23
11,250.00	72.86	0.01	11,065.55	431.52	-52.86	432.11	10.00	10.00	-0.21
11,300.00	77.86	359.91	11,078.18	479.88	-52.89	480.47	10.00	10.00	-0.20
11,350.00	82.86	359.82	11,086.55	529.16	-53.01	529.75	10.00	10.00	-0.19
11,400.00	87.86	359.72	11,090.60	578.98	-53.21	579.56	10.00	10.00	-0.19
11,421.43	90.00	359.68	11,091.00	600.40	-53.32	600.99	10.00	10.00	-0.19
Begin 90.00° Lateral									
11,500.00	90.00	359.68	11,091.00	678.97	-53.75	679.56	0.00	0.00	0.00
11,600.00	90.00	359.68	11,091.00	778.97	-54.31	779.56	0.00	0.00	0.00
11,700.00	90.00	359.68	11,091.00	878.97	-54.86	879.55	0.00	0.00	0.00
11,800.00	90.00	359.68	11,091.00	978.97	-55.42	979.55	0.00	0.00	0.00
11,900.00	90.00	359.68	11,091.00	1,078.96	-55.97	1,079.55	0.00	0.00	0.00
12,000.00	90.00	359.68	11,091.00	1,178.96	-56.53	1,179.55	0.00	0.00	0.00
12,100.00	90.00	359.68	11,091.00	1,278.96	-57.08	1,279.55	0.00	0.00	0.00
12,200.00	90.00	359.68	11,091.00	1,378.96	-57.63	1,379.54	0.00	0.00	0.00
12,300.00	90.00	359.68	11,091.00	1,478.96	-58.19	1,479.54	0.00	0.00	0.00
12,400.00	90.00	359.68	11,091.00	1,578.96	-58.74	1,579.54	0.00	0.00	0.00
12,500.00	90.00	359.68	11,091.00	1,678.95	-59.30	1,679.54	0.00	0.00	0.00
12,600.00	90.00	359.68	11,091.00	1,778.95	-59.85	1,779.54	0.00	0.00	0.00
12,700.00	90.00	359.68	11,091.00	1,878.95	-60.41	1,879.53	0.00	0.00	0.00
12,800.00	90.00	359.68	11,091.00	1,978.95	-60.96	1,979.53	0.00	0.00	0.00
12,900.00	90.00	359.68	11,091.00	2,078.95	-61.51	2,079.53	0.00	0.00	0.00
13,000.00	90.00	359.68	11,091.00	2,178.95	-62.07	2,179.53	0.00	0.00	0.00
13,100.00	90.00	359.68	11,091.00	2,278.95	-62.62	2,279.53	0.00	0.00	0.00
13,200.00	90.00	359.68	11,091.00	2,378.94	-63.18	2,379.52	0.00	0.00	0.00
13,300.00	90.00	359.68	11,091.00	2,478.94	-63.73	2,479.52	0.00	0.00	0.00
13,400.00	90.00	359.68	11,091.00	2,578.94	-64.29	2,579.52	0.00	0.00	0.00
13,500.00	90.00	359.68	11,091.00	2,678.94	-64.84	2,679.52	0.00	0.00	0.00
13,600.00	90.00	359.68	11,091.00	2,778.94	-65.40	2,779.52	0.00	0.00	0.00
13,700.00	90.00	359.68	11,091.00	2,878.94	-65.95	2,879.51	0.00	0.00	0.00

Database: EDM Conroe
Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Site: Tucker Draw Fed COM 9-4
Well: 7H
Wellbore: Wellbore #2
Design: Design #4

Local Co-ordinate Reference: Well 7H
TVD Reference: WELL @ 3128.00usft (Orion Phoenix)
MD Reference: WELL @ 3128.00usft (Orion Phoenix)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
13,800.00	90.00	359.68	11,091.00	2,978.93	-66.50	2,979.51	0.00	0.00	0.00
13,900.00	90.00	359.68	11,091.00	3,078.93	-67.06	3,079.51	0.00	0.00	0.00
14,000.00	90.00	359.68	11,091.00	3,178.93	-67.61	3,179.51	0.00	0.00	0.00
14,100.00	90.00	359.68	11,091.00	3,278.93	-68.17	3,279.51	0.00	0.00	0.00
14,200.00	90.00	359.68	11,091.00	3,378.93	-68.72	3,379.50	0.00	0.00	0.00
14,300.00	90.00	359.68	11,091.00	3,478.93	-69.28	3,479.50	0.00	0.00	0.00
14,400.00	90.00	359.68	11,091.00	3,578.93	-69.83	3,579.50	0.00	0.00	0.00
14,500.00	90.00	359.68	11,091.00	3,678.92	-70.38	3,679.50	0.00	0.00	0.00
14,600.00	90.00	359.68	11,091.00	3,778.92	-70.94	3,779.50	0.00	0.00	0.00
14,700.00	90.00	359.68	11,091.00	3,878.92	-71.49	3,879.49	0.00	0.00	0.00
14,800.00	90.00	359.68	11,091.00	3,978.92	-72.05	3,979.49	0.00	0.00	0.00
14,900.00	90.00	359.68	11,091.00	4,078.92	-72.60	4,079.49	0.00	0.00	0.00
15,000.00	90.00	359.68	11,091.00	4,178.92	-73.16	4,179.49	0.00	0.00	0.00
15,100.00	90.00	359.68	11,091.00	4,278.91	-73.71	4,279.49	0.00	0.00	0.00
15,200.00	90.00	359.68	11,091.00	4,378.91	-74.27	4,379.48	0.00	0.00	0.00
15,300.00	90.00	359.68	11,091.00	4,478.91	-74.82	4,479.48	0.00	0.00	0.00
15,400.00	90.00	359.68	11,091.00	4,578.91	-75.37	4,579.48	0.00	0.00	0.00
15,500.00	90.00	359.68	11,091.00	4,678.91	-75.93	4,679.48	0.00	0.00	0.00
15,600.00	90.00	359.68	11,091.00	4,778.91	-76.48	4,779.48	0.00	0.00	0.00
15,700.00	90.00	359.68	11,091.00	4,878.91	-77.04	4,879.48	0.00	0.00	0.00
15,800.00	90.00	359.68	11,091.00	4,978.90	-77.59	4,979.47	0.00	0.00	0.00
15,900.00	90.00	359.68	11,091.00	5,078.90	-78.15	5,079.47	0.00	0.00	0.00
16,000.00	90.00	359.68	11,091.00	5,178.90	-78.70	5,179.47	0.00	0.00	0.00
16,100.00	90.00	359.68	11,091.00	5,278.90	-79.25	5,279.47	0.00	0.00	0.00
16,200.00	90.00	359.68	11,091.00	5,378.90	-79.81	5,379.47	0.00	0.00	0.00
16,300.00	90.00	359.68	11,091.00	5,478.90	-80.36	5,479.46	0.00	0.00	0.00
16,400.00	90.00	359.68	11,091.00	5,578.89	-80.92	5,579.46	0.00	0.00	0.00
16,500.00	90.00	359.68	11,091.00	5,678.89	-81.47	5,679.46	0.00	0.00	0.00
16,600.00	90.00	359.68	11,091.00	5,778.89	-82.03	5,779.46	0.00	0.00	0.00
16,700.00	90.00	359.68	11,091.00	5,878.89	-82.58	5,879.46	0.00	0.00	0.00
16,800.00	90.00	359.68	11,091.00	5,978.89	-83.14	5,979.45	0.00	0.00	0.00
16,900.00	90.00	359.68	11,091.00	6,078.89	-83.69	6,079.45	0.00	0.00	0.00
17,000.00	90.00	359.68	11,091.00	6,178.89	-84.24	6,179.45	0.00	0.00	0.00
17,100.00	90.00	359.68	11,091.00	6,278.88	-84.80	6,279.45	0.00	0.00	0.00
17,200.00	90.00	359.68	11,091.00	6,378.88	-85.35	6,379.45	0.00	0.00	0.00
17,300.00	90.00	359.68	11,091.00	6,478.88	-85.91	6,479.44	0.00	0.00	0.00
17,400.00	90.00	359.68	11,091.00	6,578.88	-86.46	6,579.44	0.00	0.00	0.00
17,500.00	90.00	359.68	11,091.00	6,678.88	-87.02	6,679.44	0.00	0.00	0.00
17,600.00	90.00	359.68	11,091.00	6,778.88	-87.57	6,779.44	0.00	0.00	0.00
17,700.00	90.00	359.68	11,091.00	6,878.87	-88.12	6,879.44	0.00	0.00	0.00
17,800.00	90.00	359.68	11,091.00	6,978.87	-88.68	6,979.43	0.00	0.00	0.00
17,900.00	90.00	359.68	11,091.00	7,078.87	-89.23	7,079.43	0.00	0.00	0.00
18,000.00	90.00	359.68	11,091.00	7,178.87	-89.79	7,179.43	0.00	0.00	0.00
18,100.00	90.00	359.68	11,091.00	7,278.87	-90.34	7,279.43	0.00	0.00	0.00
18,200.00	90.00	359.68	11,091.00	7,378.87	-90.90	7,379.43	0.00	0.00	0.00
18,300.00	90.00	359.68	11,091.00	7,478.87	-91.45	7,479.42	0.00	0.00	0.00
18,400.00	90.00	359.68	11,091.00	7,578.86	-92.01	7,579.42	0.00	0.00	0.00
18,500.00	90.00	359.68	11,091.00	7,678.86	-92.56	7,679.42	0.00	0.00	0.00
18,600.00	90.00	359.68	11,091.00	7,778.86	-93.11	7,779.42	0.00	0.00	0.00
18,700.00	90.00	359.68	11,091.00	7,878.86	-93.67	7,879.42	0.00	0.00	0.00
18,808.52	90.00	359.68	11,091.00	7,987.38	-94.27	7,987.94	0.00	0.00	0.00
PBHL									

Database: EDM Conroe
Company: WPX Energy
Project: Eddy County, New Mexico (NAD 83)
Site: Tucker Draw Fed COM 9-4
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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - Tucker Draw F	0.00	0.00	11,091.00	7,987.38	-94.27	389,917.42	682,088.10	32° 4' 16.133 N	103° 52' 44.157 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,151.00	10,148.75	3.73	-63.78	Tie-in to Survey - 10151.00' MD
10,200.00	10,197.74	3.31	-64.56	SDTRK, 5.00°/100' Build & Turn
10,315.23	10,312.84	7.74	-64.56	Hold 5.00° Inc, 12.00° Azm
10,570.28	10,566.92	29.48	-59.93	Begin 10.00°/100' Build & Turn
11,421.43	11,091.00	600.40	-53.32	Begin 90.00° Lateral
18,808.52	11,091.00	7,987.38	-94.27	PBHL