



1001 17th Street
Suite 1600
Denver, CO 80202

K10 NPR 11C-15 P&A Proposal (05-045-23790)

Project Objective:

This project is to plug and abandon the K10 NPR 11C-15 DUC well.

K10 NPR 11C-15 Procedure

1. Notify the COGCC at least 48 hours before plugging operations commence with a Form 42. Ensure proper ground disturbance forms have been completed, one call for utility identification has been done and proper paperwork is on location.
2. Hold a pre-job safety meeting. Discuss all aspects of the procedure with any involved personnel. Identify and address any safety concerns before the job begins.
3. Record all tubing and casing pressures as found, note in WellView.
4. Perform Bradenhead Test using a Form 17. With gauges monitoring production casing and tubing pressures, open surface casing (bradenhead) valve. Record pressures at five-minute intervals for 30 minutes. Record all pressures and complete Form 17. Return completed Form 17 to Production Engineer.
5. MIRU workover unit. Kill well. ND wellhead, NU BOP.
6. Test and chart BOPs as per regulations. PU and remove tubing hanger.
7. RU wireline. RIH with perf gun to 6,827' and perforate casing with 4 holes. ROH with wireline.
8. TIH with 2 3/8" to 6,827'. Mix and pump balance plug of **277 sacks** of Class G neat cement (15.8 lb/gal, 1.15 cu-ft/sx) to fill casing and annulus with 804' cement plug. Estimated TOC at 6,023' (754' above Williams Fork, 447' above Ohio Creek, and 150' above the damaged casing). TOOH with tubing.
9. RU wireline. RIH with perf gun to 4,560' and perforate casing with 4 holes. ROH with wireline.
10. TIH to with 2 3/8" to 4,560'. Mix and pump balance plug of **53 sacks** of Class G neat cement to fill casing and annulus with 150' cement plug to cover Ft. Union (4,560'). Estimated TOC at 4,410' (150' above Ft. Union). TOOH with 2 3/8" tubing.
11. RU wireline. RIH with perf gun to 3,999' and perforate casing with 4 holes. ROH with wireline.



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12. TIH to with 2 3/8" to 3,999'. Mix and pump balance plug of **53 sacks** of Class G neat cement to fill casing and annulus with 150' cement plug to cover Wasatch G (3,999'). Estimated TOC at 3,849' (150' above Wasatch G). TOOH with 2 3/8" tubing.
13. RU wireline. RIH with perf gun to 1,987' and perforate casing with 4 holes. ROH with wireline.
14. TIH with 2 3/8" tubing to 1,987'. Mix and pump balance plug of **150 sacks** of Class G neat cement to fill casing and annulus with 200' cement plug. Estimated TOC at 1,787' (150' above surface casing shoe at 1,937'). TOOH with 2 3/8" tubing.
15. RU wireline. RIH with perf guns to 75' and perforate casing with 4 holes. ROH with wireline.
16. TIH with tubing to 75'. Mix and pump balance plug of **16 sacks** of Class G neat cement to surface in casing and annulus. Top off if necessary. TOOH with 2 3/8" tubing.
17. RDMO workover unit and ND BOP.
18. Dig down around wellhead and cut off 4 feet below ground level. Top off with cement if needed.
19. Weld information plate to casing stub with 1/4" weep hole, take GPS readings of well information plate for regulatory agencies. Inscribe information plate with:

Caerus Oil and Gas LLC
Sec10 T5S R96W
K10 NPR 11C-15 05-045-23790

20. Back fill hole and release equipment. RDMO



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API: 05-045-23790

Surface Casing:
Hole Size: 9 5/8" OD, 8.92" ID, 36 lb/ft, J-55, set at 1,937'
13 1/2"

Production Casing:
Hole Size: 4 1/2" OD, 4" ID, 11.6 lb/ft, I-80 set at 9,954'
8 3/4"

TOC: 7,030'

Perfs: N/A

Notes: Casing integrity issues from 6,173'-6,379'

Formation Tops:

Williams Fork	6,777'
Ohio Creek	6,470'
Ft. Union	4,560'
Wasatch G	3,999'

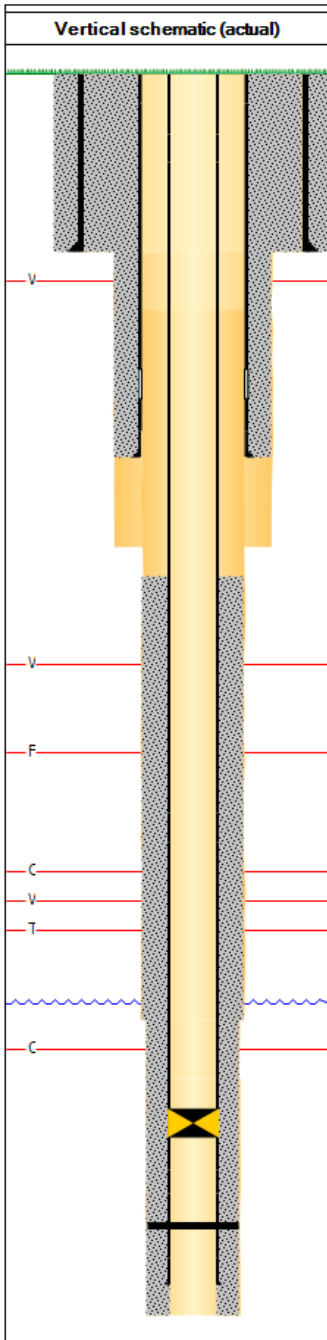
COGCC Field: Parachute



Downhole Well Profile - with Schematic

Well Name: NPR 11C-15

API/UWI 05045237900000	Related POD Pod 2	State CO	County Garfield	Permit Number
Original Spud Date 3/28/2018 13:30	Total Depth (ft/B) 10,002.0	PBTD (All) (ft/B) Original Hole - 9,948.0	Original KB Elevation (ft) 6,733.00	Ground Elevation (ft) 6,709.00



Section Description	Size (in)	Act Top (ft/B)	Act Top (TVD) (ft)	Act Btm (ft/B)	Act Btm (TVD) (ft)
Conductor	20	24.0	24.0	120.0	120.0
Surface	13 1/2	120.0	120.0	2,001.0	1,865.8
Production	8 3/4	1,702.0	1,608.7	8,051.0	7,394.1
Production	7 7/8	8,051.0	7,394.1	9,665.0	9,002.0
Production	7 7/8	9,665.0	9,002.0	10,002.0	

PBTD (Plug Back Total Depth)			
Date	Type	Depth (ft/B)	Method
4/3/2018	FC/Wiper Plug	9,948.0	Casing


Conductor, 120.0ftKB									
Run Date	Set Depth (ft/B)	Centralizers	Scratchers						
3/13/2018	120.0								
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Jts	Len (ft)	Top (ft/B)	Btm (ft/B)
Casing Joints	20	19.00	106.50	J-55		3	96.00	24.0	120.0

Surface, 1,937.0ftKB									
Run Date	Set Depth (ft/B)	Centralizers	Scratchers						
3/29/2018	1,937.0								
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Jts	Len (ft)	Top (ft/B)	Btm (ft/B)
Landing Joint	9 5/8	8.92	36.00	J-55	LT&C	0	0.00	24.0	24.0
Pup Joint	9 5/8	8.92	36.00	J-55	LT&C	1	3.50	24.0	27.5
Casing Joints	9 5/8	8.92	36.00	J-55	LT&C	45	1,864.90	27.5	1,892.4
Float Collar	9 5/8	8.92	36.00	J-55	LT&C	1	1.00	1,892.4	1,893.4
Casing Joints	9 5/8	8.92	36.00	J-55	LT&C	1	42.14	1,893.4	1,935.5
Float Shoe	9 5/8	8.92	36.00	J-55	LT&C	1	1.50	1,935.5	1,937.0

Production, 9,954.0ftKB									
Run Date	Set Depth (ft/B)	Centralizers	Scratchers						
4/4/2018	9,954.0								
Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Jts	Len (ft)	Top (ft/B)	Btm (ft/B)
Landing joint	4 1/2	4.00	11.60	P-110	LT&C	1	26.00	24.0	50.0
Pup joint	4 1/2	4.00	11.60	P-110	LT&C	1	3.50	50.0	53.5
Casing Joints	4 1/2	4.00	11.60	P-110	LT&C	142	6,120.50	53.5	6,174.0
Marker joint	4 1/2	4.00	11.60	P-110	LT&C	1	11.19	6,174.0	6,185.2
Casing Joints	4 1/2	4.00	11.60	P-110	LT&C	86	3,722.76	6,185.2	9,908.0
Float Collar	4 1/2	4.00	11.60	P-110	LT&C	1	1.00	9,908.0	9,909.0
Casing Joints	4 1/2	4.00	11.60	P-110	LT&C	1	43.54	9,909.0	9,952.5
Float Shoe	4 1/2	4.00	11.60	P-110	LT&C	1	1.50	9,952.5	9,954.0

Conductor Cement					
Description	Cementing Company	Start Date	End Date	String	
Conductor Cement	BJ Services Company	3/13/2018 16:30	3/13/2018 17:00	Conductor, 120.0ftKB	
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	24.0	120.0	Lead	24.0	120.0
Amount (sacks)					Class
15					G

Surface Casing Cement					
Description	Cementing Company	Start Date	End Date	String	
Surface Casing Cement	BJ Services Company	3/30/2018 06:00	3/30/2018 06:00	Surface, 1,937.0ftKB	
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	24.0	1,937.0	Lead	24.0	1,937.0
Amount (sacks)					Class
333					G
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	24.0	1,937.0	Tail	1,488.0	1,937.0
Amount (sacks)					Class
118					G
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	24.0	1,937.0	Displacement	24.0	1,937.0
Amount (sacks)					Class

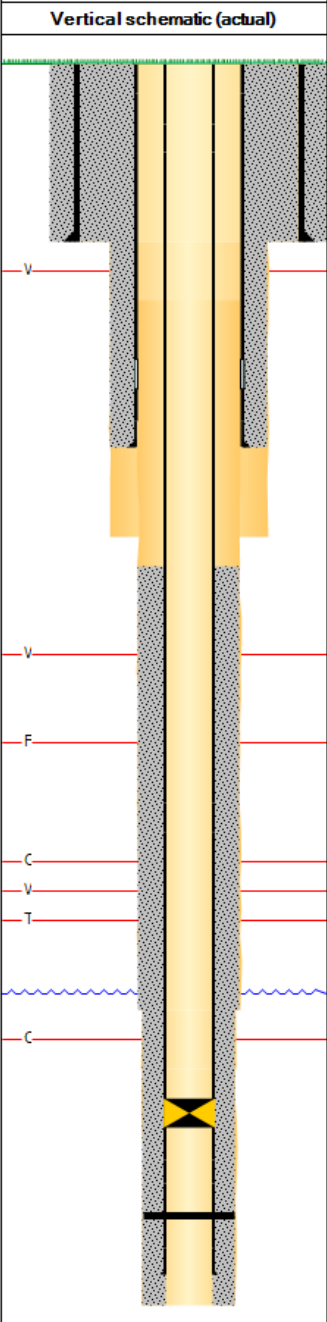


Downhole Well Profile - with Schematic

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Vertical schematic (actual)



Production Casing Cement					
Description Production Casing Cement		Cementing Company BJ Services Company		Start Date 4/3/2018 06:00	End Date 4/3/2018 06:00
String Production, 9,954.0ftKB					
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	3,389.0	10,002.0	Lead	3,389.0	6,954.0
Amount (sacks) 553		Class G			
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	3,389.0	10,002.0	Tail	6,954.0	10,002.0
Amount (sacks) 418		Class G			
Stg #	Top Depth (ft/B)	Btm (ft/B)	Fluid Type	Est Top (ft/B)	Est Btm (ft/B)
1	3,389.0	10,002.0	Displacement	24.0	10,002.0
Amount (sacks)		Class			
Tubing Strings					
Tubing Description			Run Date		Set Depth (ft/B)
Item Des	OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)
Perforations					
Date	Type	Stag#	Top (ft/B)	Btm (ft/B)	
Formations					
Formation Name Wasatch					Final Top MD (ft/B) 1,692.0
Formation Name Wasatch_G					Final Top MD (ft/B) 3,999.0
Formation Name Ft Union					Final Top MD (ft/B) 4,560.0
Formation Name Ohio Creek					Final Top MD (ft/B) 6,470.0
Formation Name Williams Fork					Final Top MD (ft/B) 6,777.0
Formation Name TOG					Final Top MD (ft/B) 6,789.0
Formation Name Cameo					Final Top MD (ft/B) 9,114.0
Formation Name Rollins					Final Top MD (ft/B)
Formation Name TD					Final Top MD (ft/B)