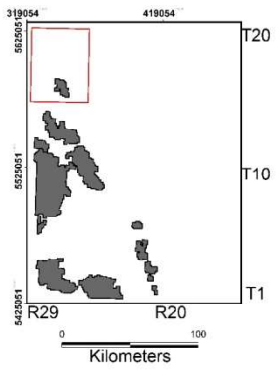
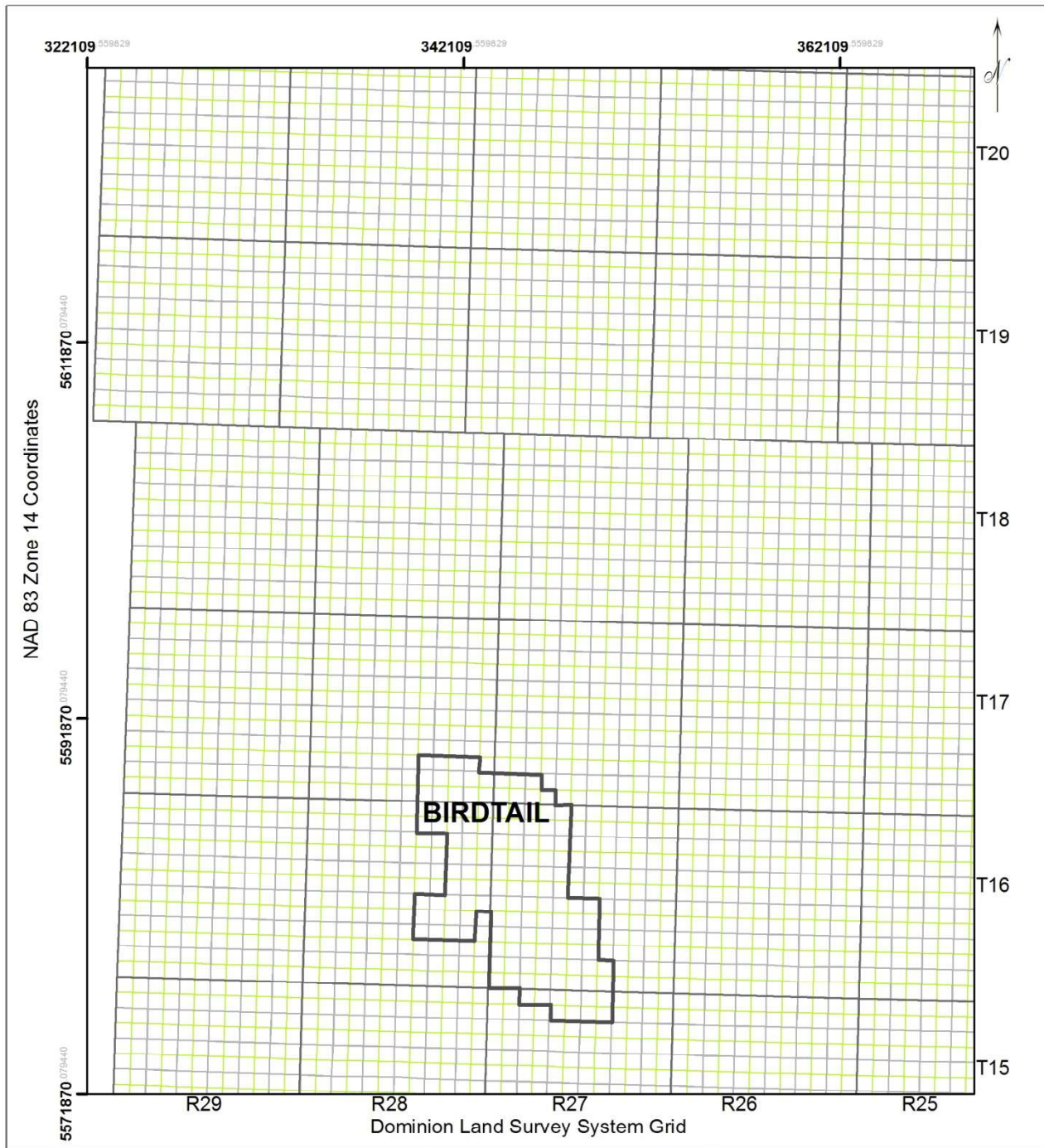


Proposed Birdtail Unit No. 4
Application for Enhanced Oil Recovery Waterflood Project

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Map 1
 Manitoba's Designated Fields & Pools 2016
 Well Information: January 1, 2016.
 Geology by: P. Fulton-Regula
 Petroleum Branch

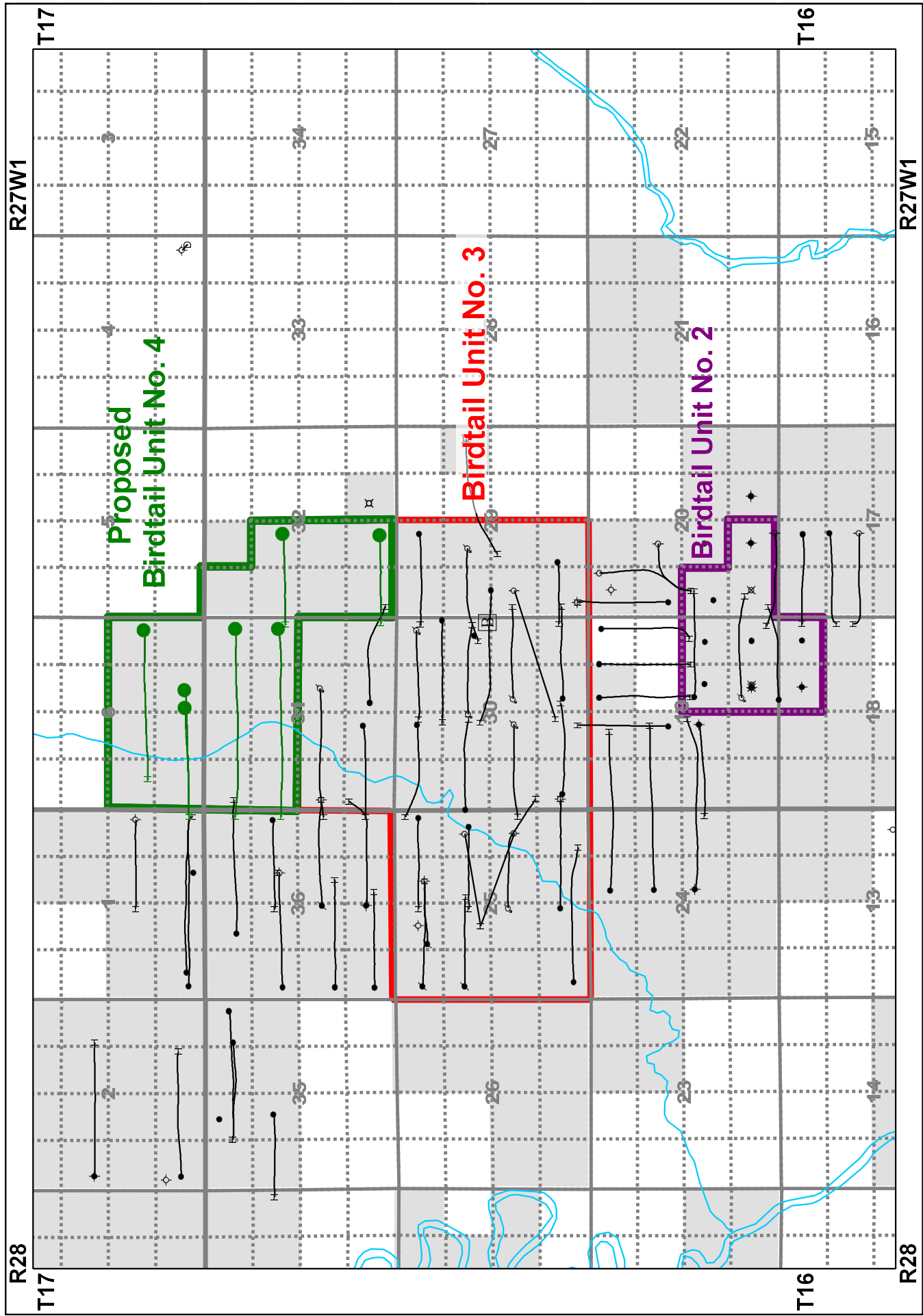
Legend

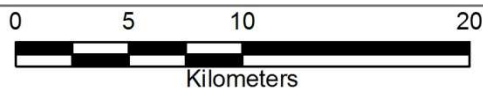
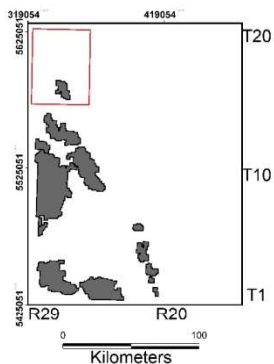
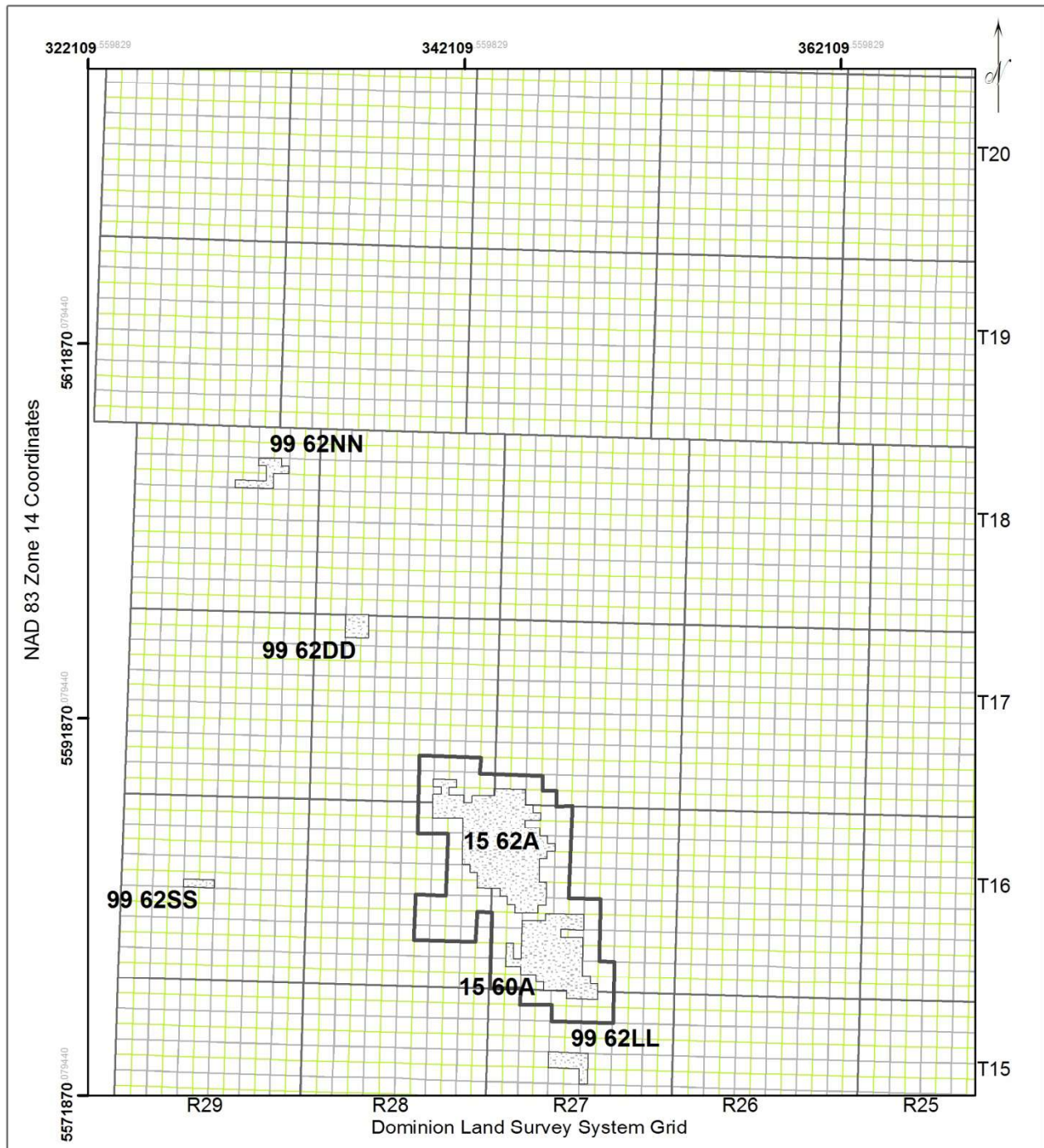
-  2016 Fields
-  Township Grid
-  Section Grid
-  Quarter Section Grid



Figure 1 - Map 1 Birdtail Field

Figure No. 2





Legend

-  2016 Fields
-  Oil Pools
-  Township Grid
-  Section Grid
-  Quarter Section Grid

Map 1

Manitoba's Designated Fields & Pools 2016
 Well Information: January 1, 2016.
 Geology by: P. Fulton-Regula
 Petroleum Branch



Bakken & Bakken Torquay Formation Pools (60 & 62)

Figure No. 4

Production Graph

Group: birdtail unit no. 4.lwell
 # of Wells: 7
 Fluid: Oil
 Mode: Producing

On Prod: 2012-08 to 2018-07
 Prod Form: BAKKEN; THREEFK; BAKKENM
 Field: BIRDTAIL (MB15)
 Pool Code: MB001562A
 Unit Code:

Cum Oil: 31063.4 m3
 Cum Gas: 0.0 E3m3
 Cum Wtr: 52691.2 m3
 Cum Inj Oil: 0.0 m3
 Cum Inj Gas: 0.0 E3m3
 Cum Inj Wtr: 0.0 m3

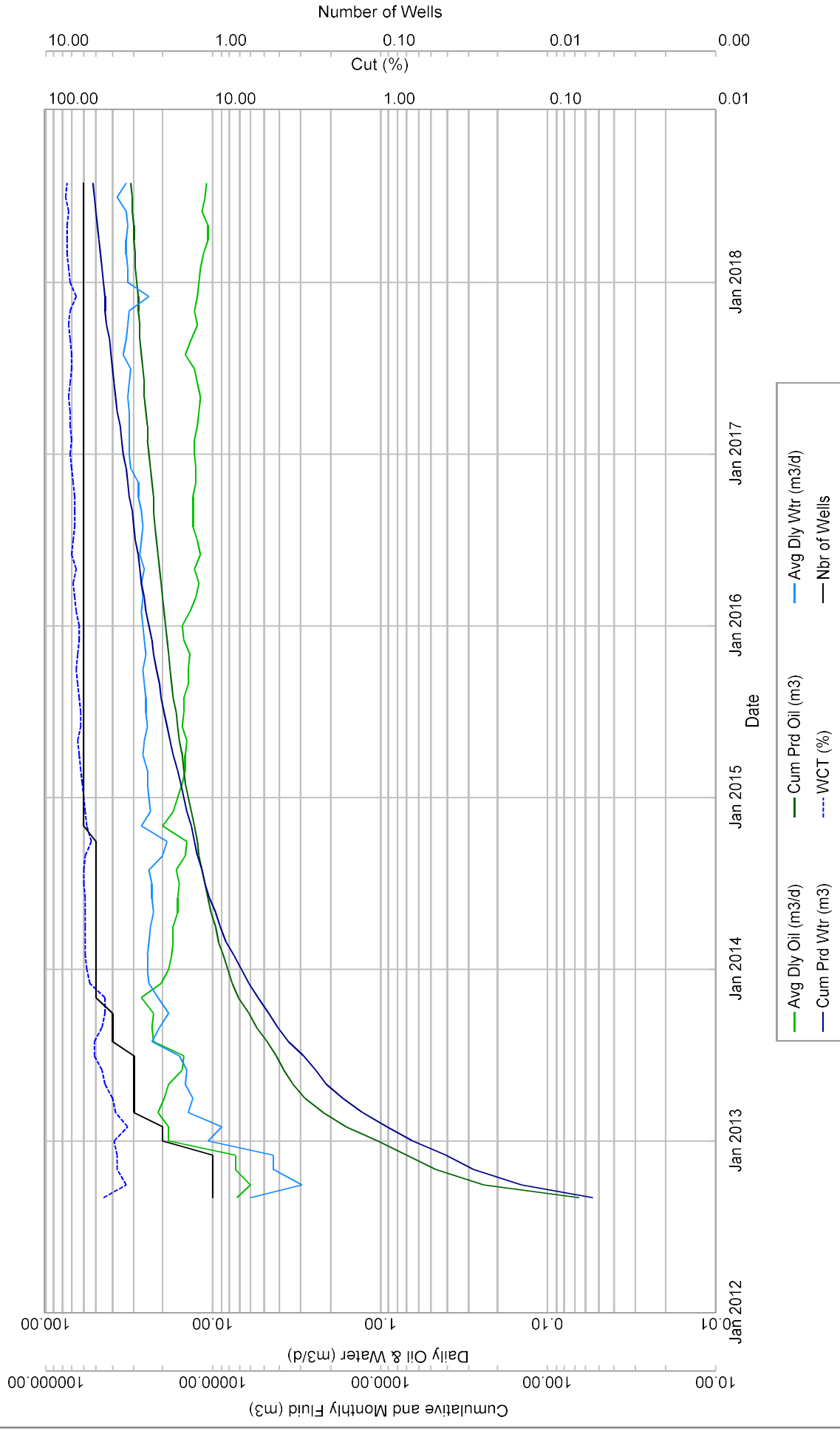


Figure No. 5

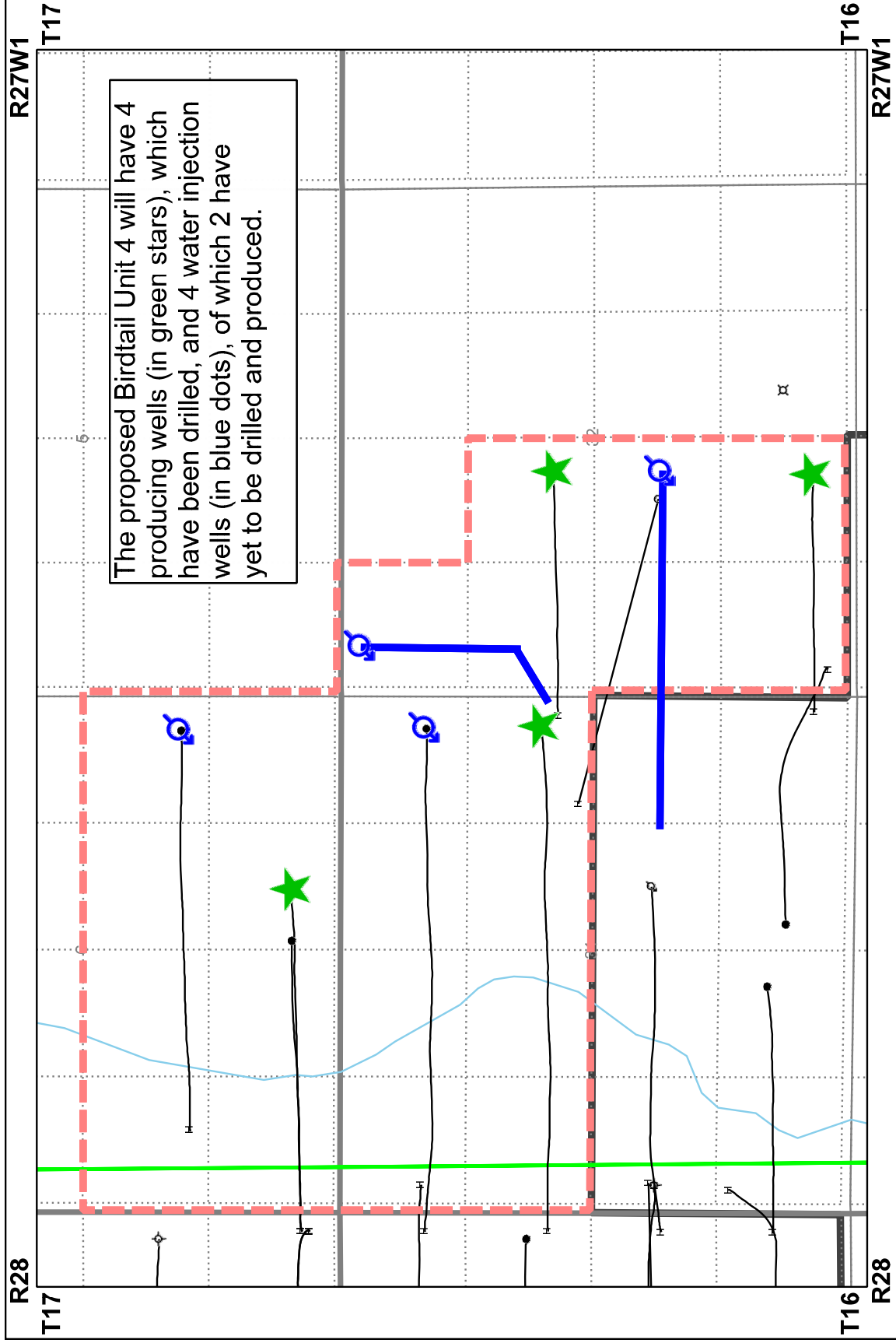
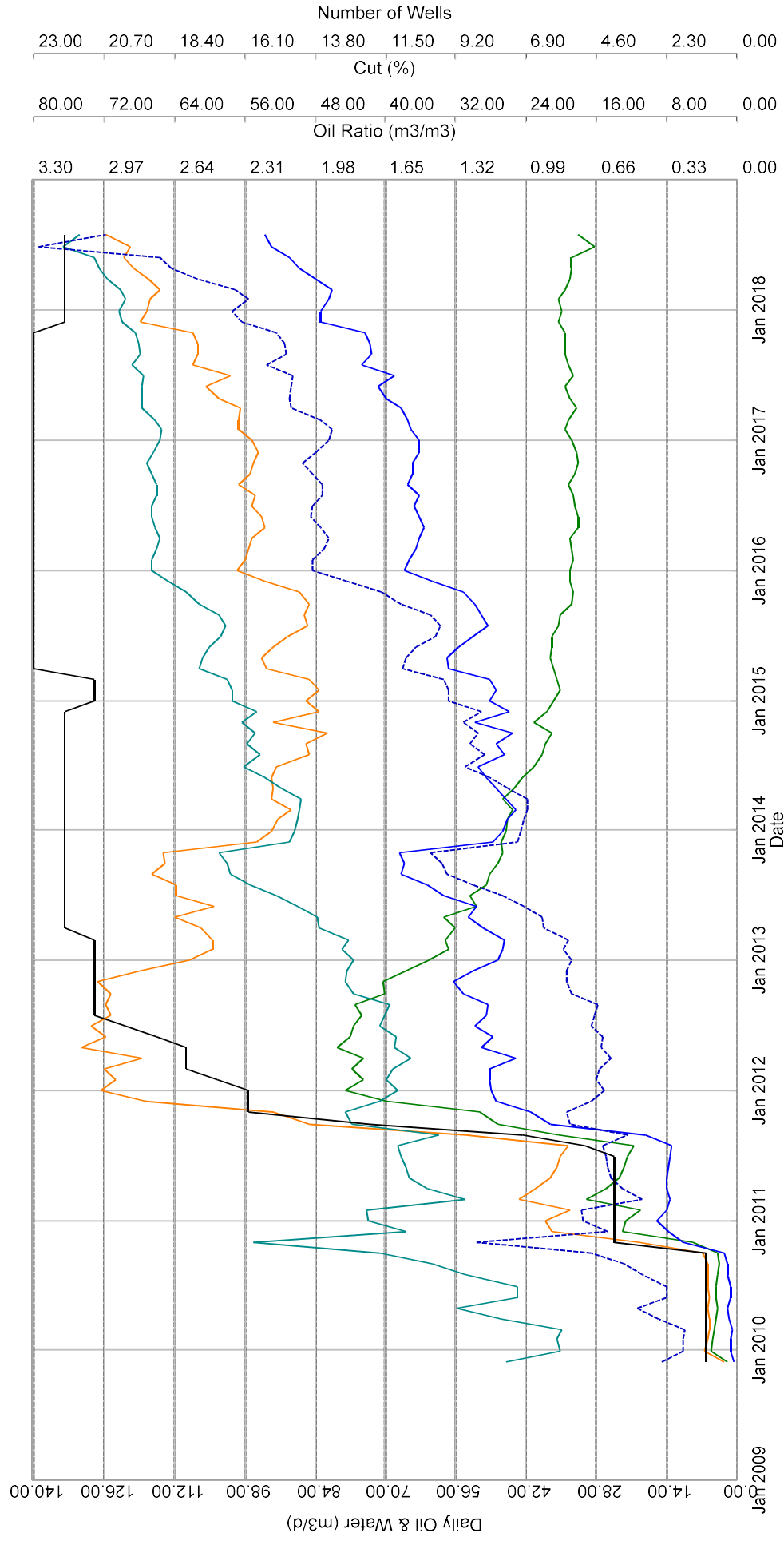


Figure No. 6

Production Graph

Group:	birdtail unit no. 3.lwell	On Prod:	2009-11 to 2018-07	Cum Oil:	121280.8 m3
# of Wells:	28	Prod Form:	BAKKEN; BAKKENM; THREEFK	Cum Gas:	0.0 E3m3
Fluid:	Oil; Water Injection	Field:	BIRDTAIL (MB15)	Cum Wtr:	154823.4 m3
Mode:	Producing; Injection; Suspended; Drilled & Cased	Pool Code:	MB001562A	Cum Inj Oil:	0.0 m3
		Unit Code:	1562A3	Cum Inj Gas:	0.0 E3m3
				Cum Inj Wtr:	94255.0 m3

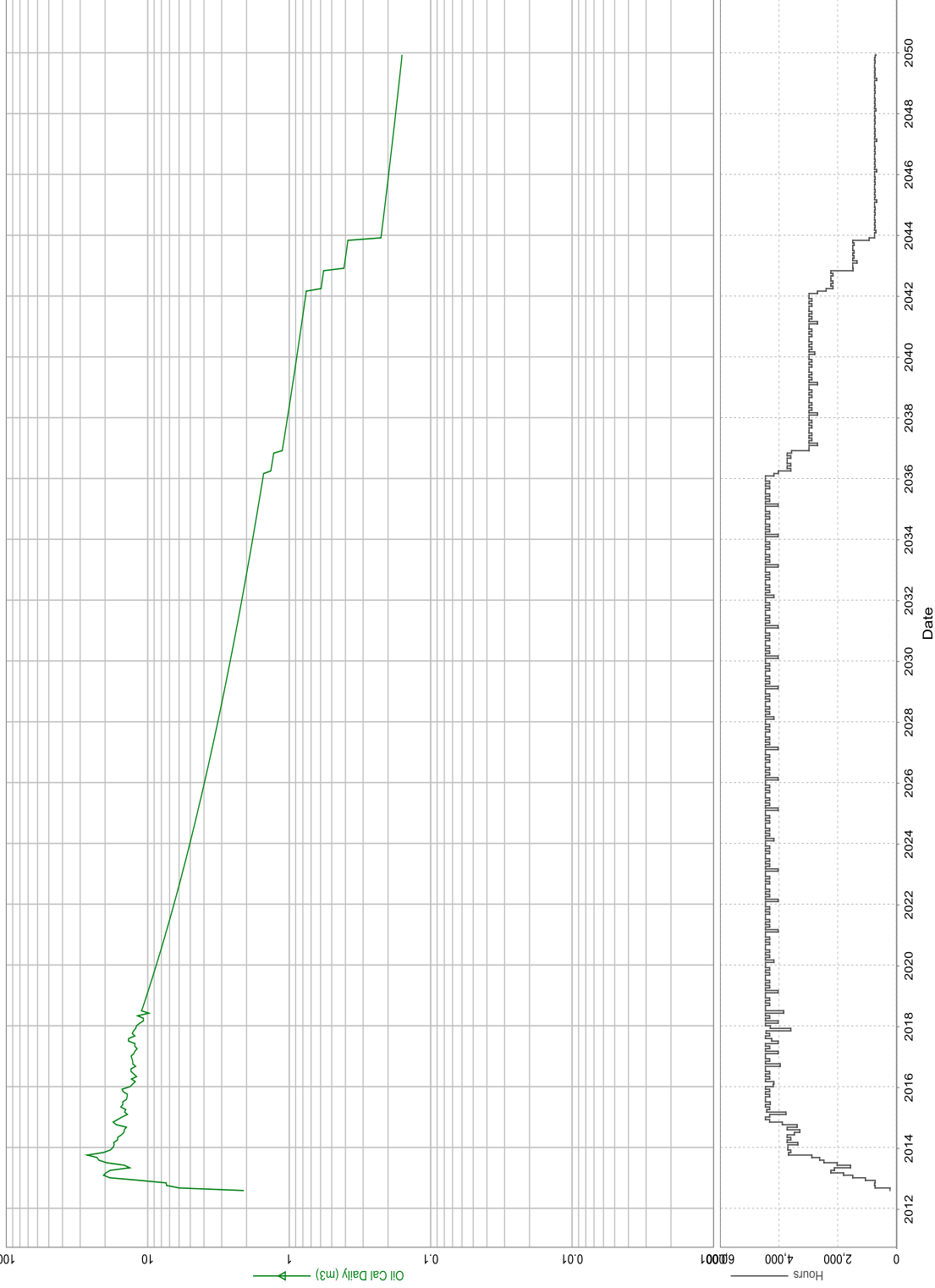


— Cal Dily Oil (m3/d)
— Cal Dily Wtr (m3/d)
— WOR (m3/m3)
— WCT (%)
— Nbr of Wells

Base Forecast
Sample Oil and Gas
VOLUME FORECAST
Evaluation WB List

Figure No. 7

Effective August 31, 2018



Selection: Evaluation WB List
Volume: Oil Production
Category: Base
Aggregation: Sum
Normalization: None

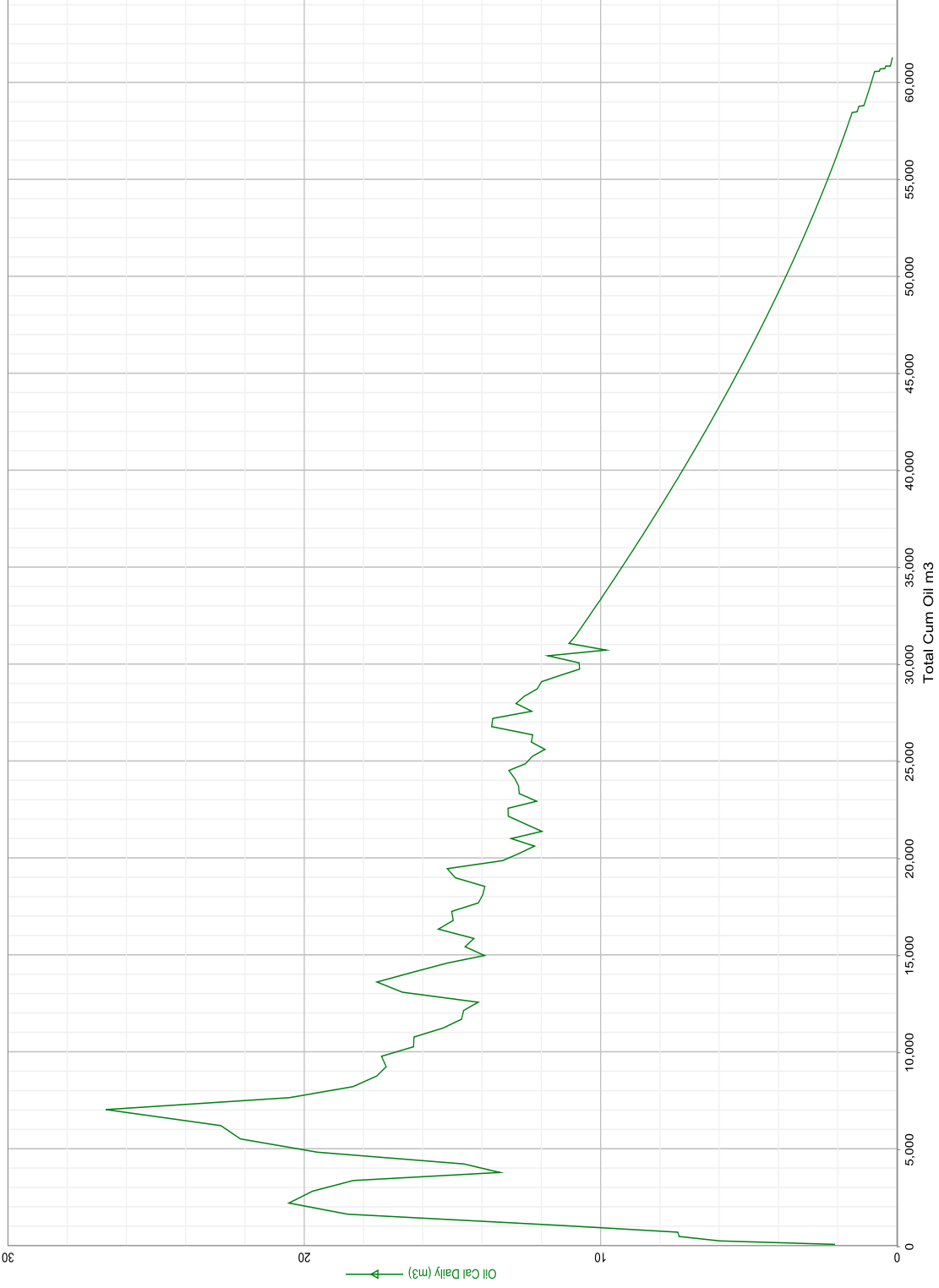
Volume Summary	
Oil	Cum (m3) 31,400
	Rem Rec (m3) 29,859
	Ult Rec (m3) 61,259
Gas	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
Water	Cum (m3) 56,209
	Rem Rec (m3) 211,940
	Ult Rec (m3) 268,149
Field	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
NGL	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0

Forecast and Indicators @ Eif Date	
Product	Oil
Forecast Start	2018/09/01
Forecast End	2049/12/01
Presentation	Saved Public
Initial Rate (m3)	10.72
Final Rate (m3)	0.16
Ult Rec (m3)	61,259.07
Cum (m3)	31,400.44
Rem Rec (m3)	29,858.63
Res Life (yrs)	31.25
RLI Full Year (yrs)	1.30
Res Half Life (yrs)	11.66

Base Forecast
Sample Oil and Gas
VOLUME FORECAST
Evaluation WB List

Figure No. 8

Effective August 31, 2018



Selection: Evaluation WB List
Volume: Oil Production
Category: Base
Aggregation: Sum
Normalization: None

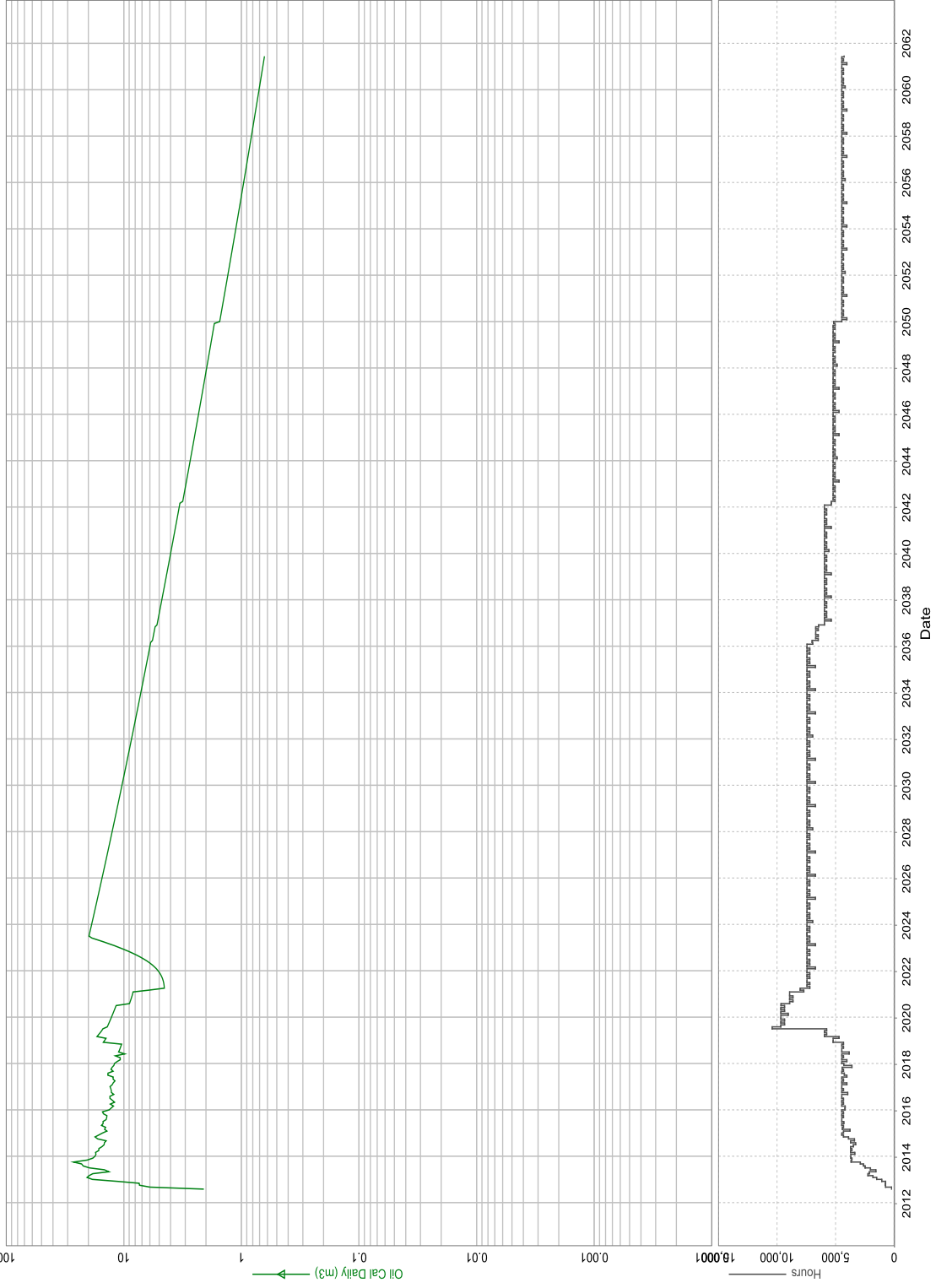
Volume Summary	
Oil	Cum (m3) 31,400
	Rem Rec (m3) 29,859
	Ult Rec (m3) 61,259
Gas	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
Water	Cum (m3) 56,209
	Rem Rec (m3) 211,940
	Ult Rec (m3) 268,149
Field	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
NGL	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0

Forecast and Indicators @ Eff Date	
Product	Oil
Forecast Start	2018/09/01
Forecast End	2049/12/01
Presentation	Saved Public
Initial Rate (m3)	10.72
Final Rate (m3)	0.16
Ult Rec (m3)	61,259.07
Cum (m3)	31,400.44
Rem Rec (m3)	29,858.63
Res Life (yrs)	31.25
RLI Full Year (yrs)	1.30
Res Half Life (yrs)	11.66

Base + Growth Forecast
Tundra Oil and Gas
VOLUME FORECAST
Evaluation WB List

Figure No. 9

Effective August 31, 2018



Selection: Evaluation WB List
Volume: Oil Production
Category: Base + Growth 1
Aggregation: Sum
Normalization: None

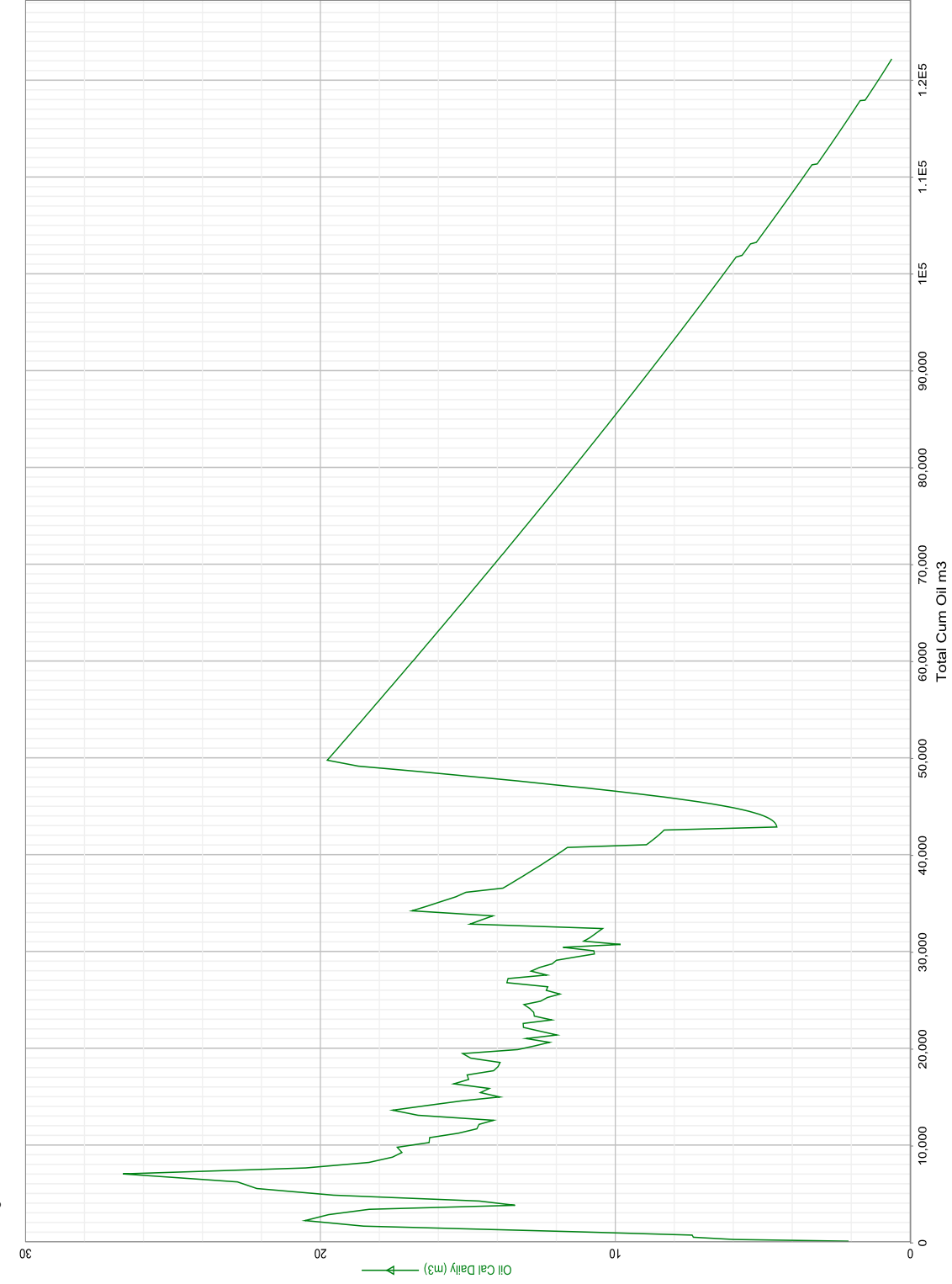
Volume Summary	
Oil	Cum (m3) 31,400
	Rem Rec (m3) 90,744
	Ult Rec (m3) 122,144
Gas	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
Water	Cum (m3) 56,209
	Rem Rec (m3) 217,989
	Ult Rec (m3) 274,198
Field	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
NGL	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0

Forecast and Indicators @ Eff Date	
Product	Oil
Forecast Start	2018/09/01
Forecast End	2061/06/01
Presentation	Saved Public
Initial Rate (m3)	10.72
Final Rate (m3)	0.64
Ult Rec (m3)	122,144.33
Cum (m3)	31,400.44
Rem Rec (m3)	90,743.88
Res Life (yrs)	42.75
RLI Full Year (yrs)	2.81
Res Half Life (yrs)	15.74

**Base + Growth Forecast
Tundra Oil and Gas
VOLUME FORECAST
Evaluation WB List**

Figure No. 10

Effective August 31, 2018



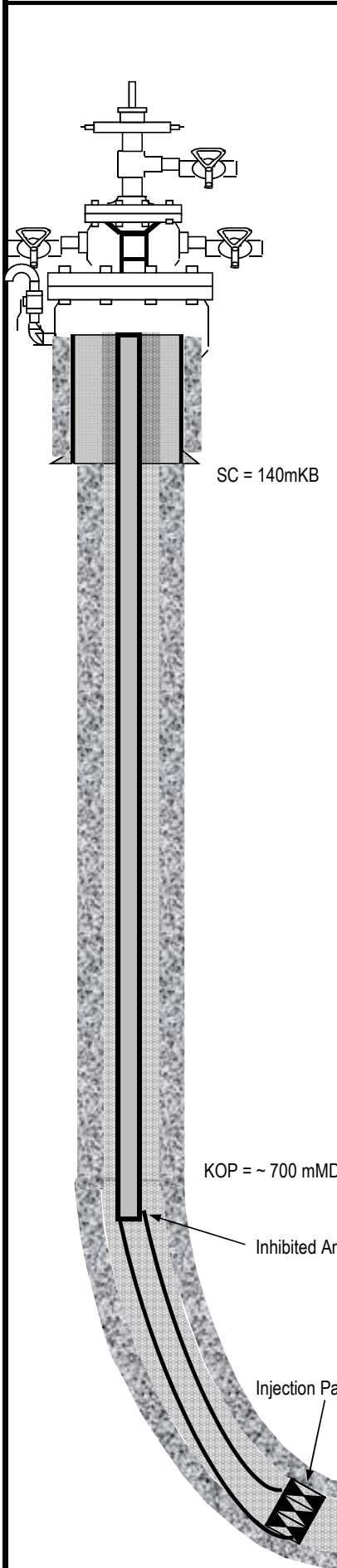
Selection:	Evaluation WB List
Volume:	Oil Production
Category:	Base + Growth 1
Aggregation:	Sum
Normalization:	None

Volume Summary	
Oil	Cum (m3) 31,400
	Rem Rec (m3) 90,744
	Ult Rec (m3) 122,144
Gas	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
Water	Cum (m3) 56,209
	Rem Rec (m3) 217,989
	Ult Rec (m3) 274,198
Field	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0
NGL	Cum (m3) 0
	Rem Rec (m3) 0
	Ult Rec (m3) 0

Forecast and Indicators @ Eff Date	
Product	Oil
Forecast Start	2018/09/01
Forecast End	2061/06/01
Presentation	Saved Public
Initial Rate (m3)	10.72
Final Rate (m3)	0.64
Ult Rec (m3)	122,144.33
Cum (m3)	31,400.44
Rem Rec (m3)	90,743.88
Res Life (yrs)	42.75
RLI Full Year (yrs)	2.81
Res Half Life (yrs)	15.74

Tundra Oil And Gas Partnership

TYPICAL OPEN HOLE WATER INJECTION WELL (WIW) DOWNHOLE DIAGRAM



WELL NAME: Tundra Birdtail Unit No. 4 HZNTL Open Hole WIW			WELL LICENCE:			
Prepared by WRJ		(average depths)		Date: 2012		
Elevations :						
KB	[m]	KB to THF [m]		TD	[m] 2400.0	
GL	[m]	CF (m)		PBTD	[m]	
Current Perfs:	Open Hole					
			950.0	to	2400.0	
Current Perfs:					to	
KOP:	700 m MD		Total Interval		to	
Tubulars	Size [mm]	Wt - Kg/m	Grade	Landing Depth [mKB]		
Surface Casing	244.5	48.06	H-40 - ST&C	Surface	to 140.0	
Intermed Csg (if run)	177.8	34.23 & 29.76	J-55 - LT&C	Surface	to 650.0	
Open Hole Latera	none	none	none	650.0	to 2400.0	
Tubing	60.3 or 73.0 - TK-99	6.99 or 9.67	J-55	Surface	to 640.0	
Date of Tubing Installation:					Length	Top @
Item	Description			K.B.--Tbg. Fig.	0.00	m KB
	Corrosion Protected ENC Coated Packer (set within 15 m of Intermed Csg shoe)					
	60.3 mm or 73 mm TK-99 Internally Coated Tubing					
	TK-99 Internally Coated Tubing Pup Jt					
	Coated Split Dognut					
	Annular space above injection packer filled with inhibited fresh water					
Bottom of Tubing mKB						
Rod String :						
Date of Rod Installation:						
Bottomhole Pump:						
Directions:						

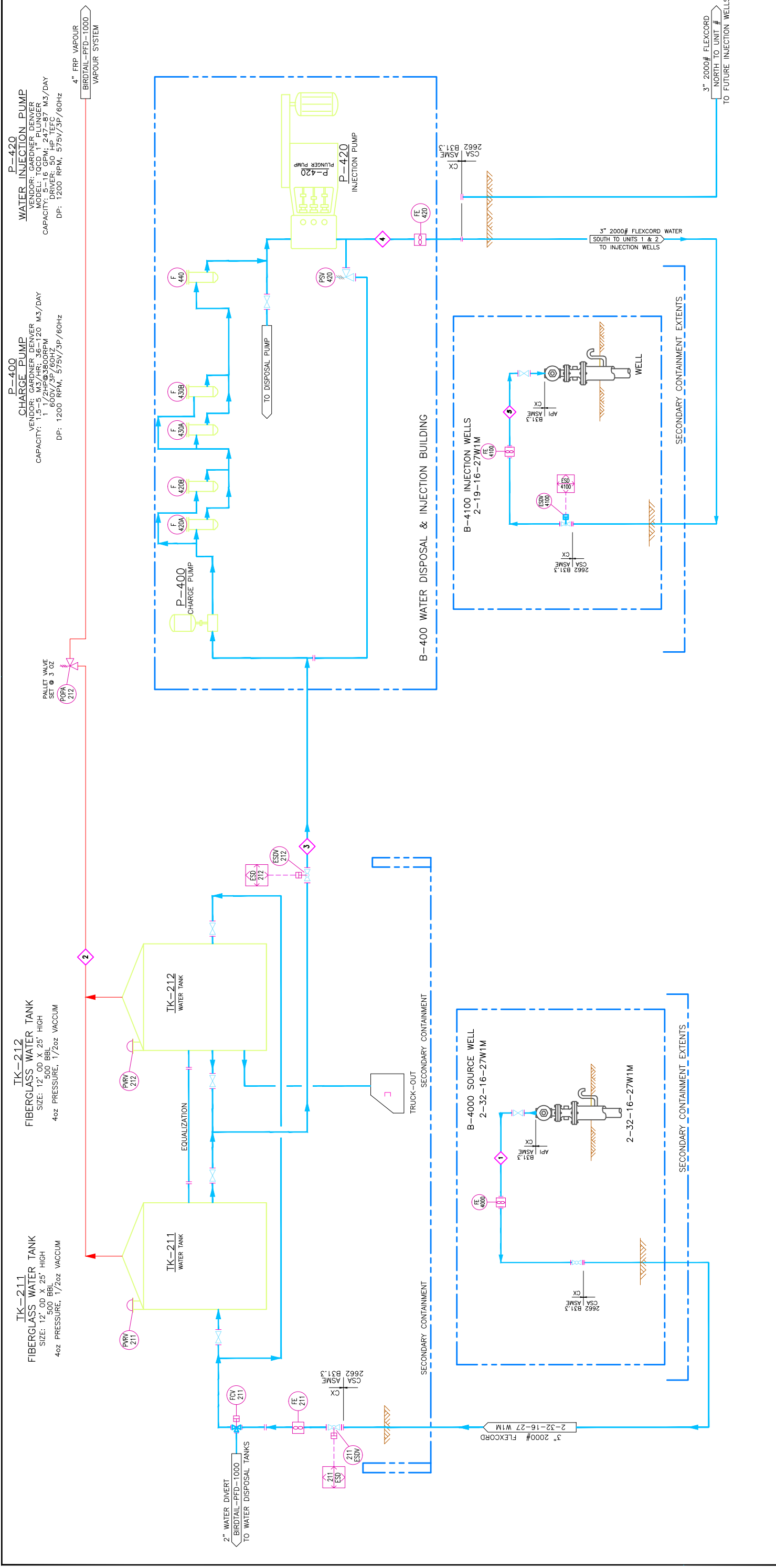
KOP = ~ 700 mMD

Inhibited Annular Fluid

Injection Packer set within 15 m of Intermediate Casing Shoe

Intermediate Casing Shoe

Open Hole Lateral Section



STREAM NUMBER	COMPONENT	OPER.	DESIGN OPER.	DESIGN OPER.	DESIGN OPER.	DESIGN OPER.	DESIGN OPER.
	OIL						
	WATER	m ³ /DAY	25	100	750	1480	40
	PROD. EMULSION	m ³ /DAY					
	PROD. GAS	10 ³ m ³ /DAY		25	500		
	PRESSURE	PSI	500	740	2.02	4.02	
	TEMPERATURE	°C	16	37		16	37
	LINE SIZE	in.	3			4	3

REV	DESCRIPTION	BY	DATE	CHK	APP
B	REVISIONS				
A	ISSUED FOR REVIEW	RM	22-NOV-2012	AP	JC

REV	DESCRIPTION	BY	DATE	CHK	APP

NOTES:

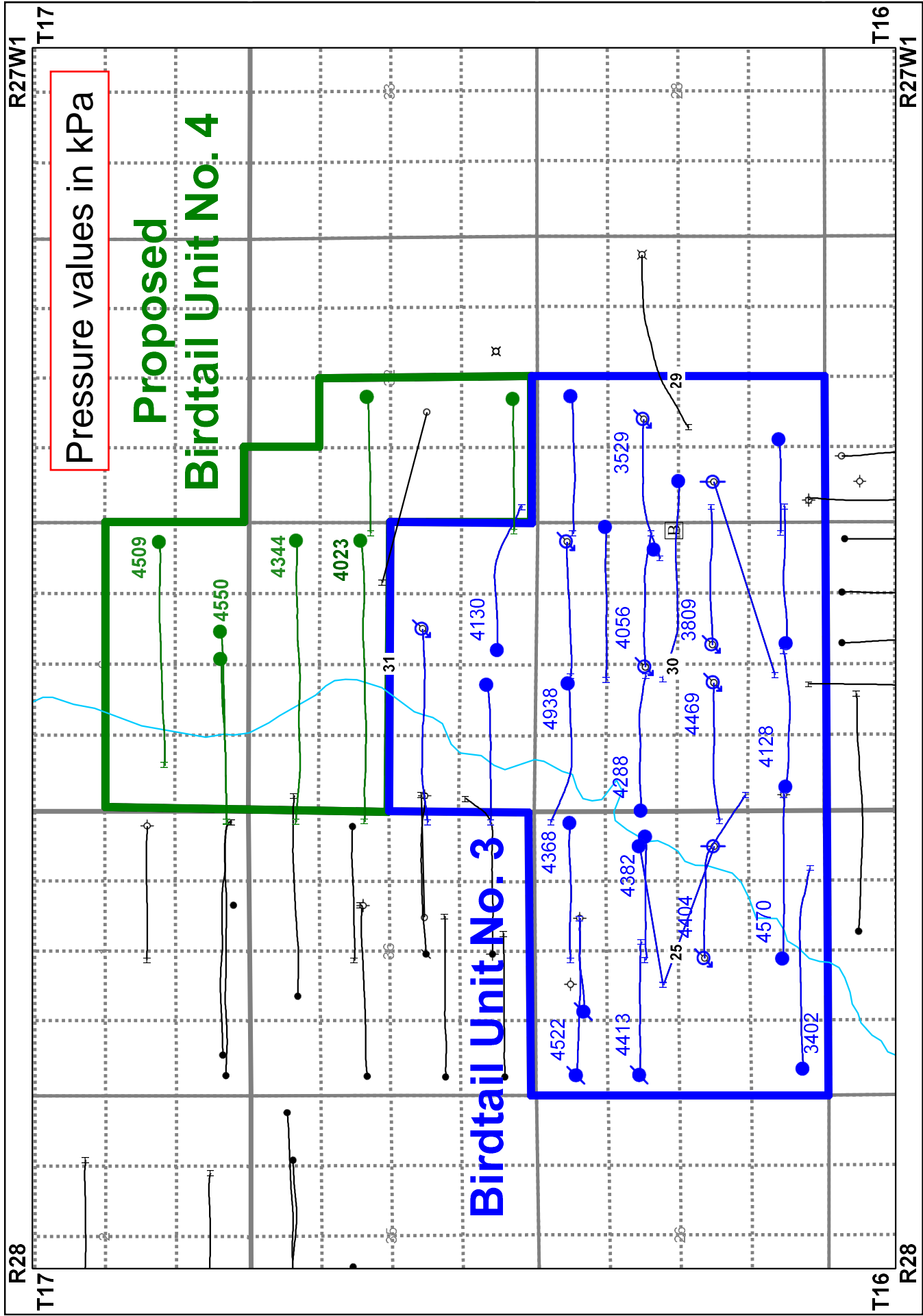
Figure No. 12

TUNDRA OIL & GAS PARTNERSHIP

BIRDTAIL
 8-30-16-27- W1M
 WATER FLOOD
 PROCESS FLOW DIAGRAM 3 OF 3

SCALE: NTS
 DRAWN BY: RM
 AFE:
 DRAWING NUMBER: 8-30-16-27-PFD-1010
 REV NO: A

Figure No. 13



Datum: NAD27 Projection: Stereographic DLS Version AB: ATS 2.6, BC: PRB 2.0, SK: STS 2.5, MB: MLI07