# **2011 VTEM Inversion Studies** LAWN HILL BLOCK 1

# OCTOBER 2011 Petros Eikon Inc.

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# Lawn Hill Block 1



Channel 6 Hz displayed (.167 msec).

#### **OCTOBER 2011**

	37226	
	35342	
	33458	
	31574	
	29690	
	27806	
	25922	
	24038	
	22154	
	20270	
	18386	
	16502	
	10302	
	14618	
	12734	
	10850	
pT/	8966 Soc	
p1/Sec		

# Lawn Hill Block 1



Bird Height.

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Block 1: Hz Ch7 contour from a grid with grid cells which are 50m in NS direction and 500m EW.

pT/Sec



Block 1: Hz Ch14 contour from a grid with grid cells which are 50m in NS direction and 500m EW. Difficult to differentiate between Ch7 and Ch14 except for the actual values.

#### **OCTOBER 2011**

00 -8019000	21746
	20590
-8017000	19434
-8015000	18278
	17122
-8013000	15966
-8011000	14810
	13654
-8009000	12498
-8007000	11342
	10186
-8005000	9030
-8003000	7874
	6718
-8001000 D0	5562
	4406

17122
15966
14810
13654
12498
11342
10186
9030
7874
6718
5562
4406

pT/Sec



Block 1: Hz Ch21 contour from a grid with grid cells which are 50m in NS direction and 500m EW.

#### OCTOBER 2011

7000	6115
	5806
5000	5497
:000	5188
	4879
000	4570
1000	4261
	3952
7000	3643
6000	3334
	3025
:000	2716
1000	2407
	2099
	1790
	1481
	p1/Sec



Block 1: Hz Ch28 contour from a grid with grid cells which are 50m in NS direction and 500m EW.

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-8017000		1012
-8015000		955
		899
-8013000		843
-8011000		786
		730
-8009000		673
-8007000		617
		561
8005000		504
-8003000		448
		391
-8001000 10		335
		279
		222
	nT/S	166 PC
	p 1/ 3	

# Lawn Hill Block 1



Block 1: Decay rate (exponential) Ch3-Ch9 in msec.

#### **OCTOBER 2011**

000	0.310
	0.302
000	0.294
000	0.286
	0.278
000	0.270
000	0.262
000	0.254
000	0.246
	0.238
000	0.230
000	0.221
	0.213
000	0.205
	0.197
	0.189
	mSec

# Lawn Hill Block 1



Block 1: Decay rate (exponential) Ch7-Ch13 in msec.

#### **OCTOBER 2011**

	0.464
000	0.453
000	0.441
000	0.430
000	0.418
	0.407
000	0.395
000	0.384
	0.372
000	0.361
000	0.349
	0.338
000	0.326
	0.315
	0.303
	0.292

mSec



Block 1: Decay rate (exponential) Ch13-Ch19 in msec.

	0.838
000	0.812
000	0.786
	0.760
000	0.734
000	0.708
100	0.682
000	0.657
	0.631
000	0.605
000	0.579
	0.553
000	0.527
000	0.501
	0.475
	0.449
	mSec



Block 1: Decay rate (exponential) Ch21-Ch27 in msec.

	1.570
	1.526
	1.482
	1.438
	1.394
	1.350
	1.306
	1.262
	1.218
	1.174
	1.130
	1.086
	1.042
	0.998
	0.955
m	0.911 Sec



Block 1: Decay rate (exponential) Ch26-Ch32 in msec.

	2.351
	2.296
	2.240
	2.185
	2.130
	2.075
	2.020
	1.965
	1.910
	1.855
	1.799
	1.744
	1.689
	1.634
	1.579
	1.524
m	Sec

# Horizontal:Vertical 1:25





# Horizontal:Vertical 1:25

L20520



**OCTOBER 2011** 



# Horizontal:Vertical 1:25

L20530





	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm n	ı(log)





Ch25



# Horizontal:Vertical 1:25

# L20540

![](_page_15_Figure_3.jpeg)

![](_page_15_Picture_4.jpeg)

## Horizontal:Vertical 1:25

![](_page_16_Figure_2.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
Ohmum	-0.30
Oum.u	1(10g)

![](_page_16_Figure_4.jpeg)

![](_page_16_Figure_5.jpeg)

## Horizontal:Vertical 1:25

# L20560

![](_page_17_Figure_3.jpeg)

**OCTOBER 2011** 

**PETROSEIKON** 

![](_page_17_Figure_6.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	n(log)

![](_page_17_Figure_8.jpeg)

![](_page_17_Figure_9.jpeg)

![](_page_17_Figure_10.jpeg)

![](_page_17_Figure_11.jpeg)

Ch25

# Horizontal:Vertical 1:25

# L20570

![](_page_18_Figure_3.jpeg)

![](_page_18_Figure_4.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm · m	ı(log)

![](_page_18_Figure_6.jpeg)

![](_page_18_Figure_7.jpeg)

![](_page_18_Figure_8.jpeg)

![](_page_18_Figure_9.jpeg)

![](_page_18_Figure_10.jpeg)

![](_page_18_Picture_12.jpeg)

#### Horizontal:Vertical 1:25

![](_page_19_Figure_2.jpeg)

![](_page_19_Picture_3.jpeg)

Horizontal: Vertical 1:25

L20590

![](_page_20_Figure_3.jpeg)

Horizontal:Vertical 1:25

L20600

![](_page_21_Figure_3.jpeg)

Horizontal:Vertical 1:25

![](_page_22_Figure_2.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	ı(log)

![](_page_22_Figure_4.jpeg)

Ch6

#### Horizontal:Vertical 1:25

![](_page_23_Figure_2.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	ı(log)

![](_page_23_Figure_4.jpeg)

### Horizontal:Vertical 1:25

![](_page_24_Figure_2.jpeg)

![](_page_24_Figure_3.jpeg)

![](_page_24_Figure_4.jpeg)

### Horizontal:Vertical 1:25

L20640

GPSZ

![](_page_25_Figure_3.jpeg)

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	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	1(log)

# Ch6

Horizontal:Vertical 1:25

L20650

GPSZ

![](_page_26_Figure_3.jpeg)

OCTOBER 2011

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	ı(log)

# Ch6

### Horizontal:Vertical 1:25

![](_page_27_Figure_2.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	ı(log)

# Ch6

### Horizontal:Vertical 1:25

L20670

GPSZ

![](_page_28_Figure_3.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	1(log)

# Ch6

![](_page_28_Picture_7.jpeg)

# Horizontal:Vertical 1:25

L20680

GPSZ

![](_page_29_Figure_3.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	1(log)

# Ch6

#### Horizontal: Vertical 1:25

L20690

GPSZ

![](_page_30_Figure_3.jpeg)

OCTOBER 2011

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	1(log)

# Ch6

#### Horizontal:Vertical 1:25

![](_page_31_Figure_2.jpeg)

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	ı(log)

# Ch6

#### Horizontal:Vertical 1:25

![](_page_32_Figure_2.jpeg)

GPSZ

L20710

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm∙n	1(log)

# Ch6

# Horizontal:Vertical 1:25

![](_page_33_Figure_2.jpeg)

	1.85	
	1.66	
	1.46	
	1.27	
	1.07	
	0.87	
	0.68	
	0.48	
	0.29	
	0.09	
	-0.11	
	-0.30	
Ohm•m(log)		

# Ch6

#### Horizontal:Vertical 1:25

![](_page_34_Figure_2.jpeg)

![](_page_34_Figure_3.jpeg)

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#### Horizontal:Vertical 1:25

![](_page_35_Figure_2.jpeg)

![](_page_36_Figure_1.jpeg)

OCTOBER 2011

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm·n	ı(log)

# Horizontal:Vertical 1:25

# L91030

![](_page_37_Figure_3.jpeg)

GPSZ

	1.85
	1.66
	1.46
	1.27
	1.07
	0.87
	0.68
	0.48
	0.29
	0.09
	-0.11
	-0.30
Ohm·n	ı(log)

GPSZ - 50m

![](_page_38_Figure_2.jpeg)

Note: This grid and the following grids, use the tielines as well. The inversion process utilizes multiple stations along each line but not across lines. While some would argue that the inversions should use neighbouring lines, in many mining applications this is not reliable. This grid, however, does provide a quick QC analyses of the data. We can provide inversions at the intersections which use both the flight line and the tie line if required.

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![](_page_38_Figure_6.jpeg)

#### Ohm-m

![](_page_38_Picture_8.jpeg)

GPSZ - 50m

![](_page_39_Figure_2.jpeg)

# Contoured Grid Display

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GPSZ - 0m

![](_page_40_Figure_2.jpeg)

OCTOBER 2011

GPSZ - -30m

![](_page_41_Figure_2.jpeg)

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![](_page_41_Figure_5.jpeg)

![](_page_41_Picture_6.jpeg)

GPSZ – -50m

![](_page_42_Figure_2.jpeg)

#### **OCTOBER 2011**

View from the North in Altitude relative to ground level

![](_page_43_Picture_2.jpeg)

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#### **PETROSEIKON**

0		
-5(		
-10		
-15		

View from the West in Altitude relative to ground level

![](_page_44_Picture_2.jpeg)

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**PETROSEIKON** 

# View from the South in Altitude relative to ground level

![](_page_45_Picture_2.jpeg)

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**PETROSEIKON** 

![](_page_45_Figure_5.jpeg)

View from the East in Altitude relative to ground level

![](_page_46_Figure_2.jpeg)

#### **OCTOBER 2011**

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Block 1 TEM Inversions – Deliverables

1) EMIGMA database where the inversions are attached to the survey data. EMIGMA allows cross-sectional viewing and well as 3D volume viewing with slices. EMIGMA allows export of cross-sectional inversion data as well as depth slices.

/2011/TEM Inversion Results/EMIGMA Database

2) Depth Slices are provided in a QCTool format with a depth slice at each 10m depth.

/2011/TEM Inversion Results/Depth Slices

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