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In accordance w/ <sup>condition</sup>  
of ADW this microseismic  
report should be in the  
ADW final well report  
for E-76

# **COPRC Loon Creek O-06 Re-Entry Final Well Report**

*Grid # 65° 10', 127° 00'*

*2014/05/12*



# COPRC Loon Creek O-06

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### **1.0 Introduction**

#### **1.1 Summary**

Completions operations began on the COPRC Loon Creek well on January 30, 2014 and the personnel and service company equipment were released on February 17 2014 when microseismic monitoring of the hydraulic fracturing operations on COPRC Dodo Canyon E-76 was completed with a total of 19 operating days on the well.

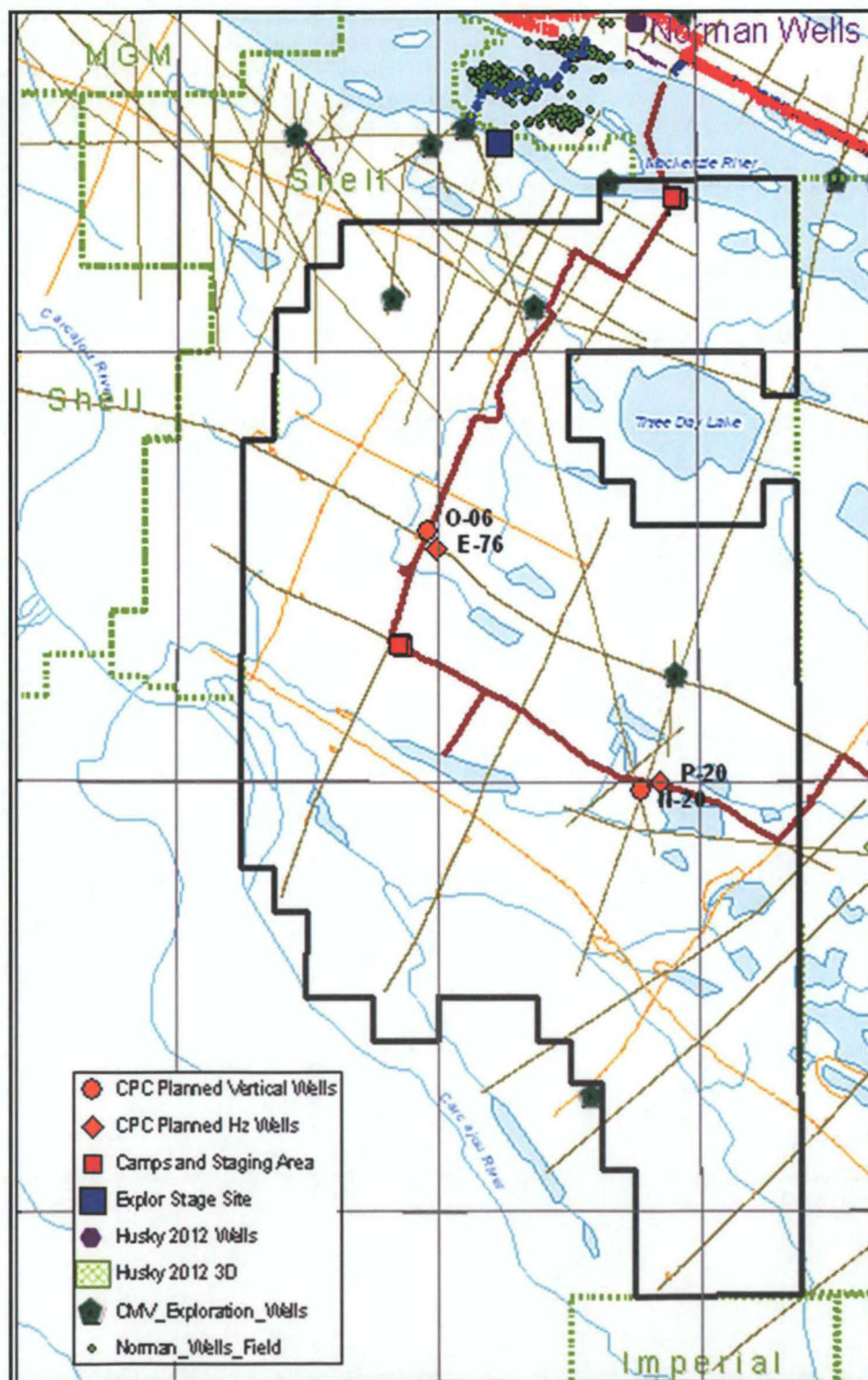
Completion operations were conducted with no major issues and no safety incidents occurred.

Microseismic monitoring was conducted on COPRC Loon Creek O-06 between February 5 and February 17 2014. The microseismic monitoring program was very successful with no significant seismic events recorded during the hydraulic fracturing operations on Dodo Canyon E-76.

The Loon Creek O-06 well is suspended with wellhead installed and valves chained and locked.



## 1.2 Locality Map



**2.0 General Data**

**2.1 Well Name**

COPRC Loon Creek O-06

**2.2 Unique Well Identifier**

300O066510127000

**2.3 Operator and Completions Contractor**

ConocoPhillips Canada Resources Corporation

Schlumberger Canada Ltd.

**2.4 Difficulties and Delays**

There were no significant drilling issues or delays experienced on this well.

### **3.0 Summary of Completions Operations**

#### **3.1 Elevations**

Ground Level: 252.40 m

Kelly Bushing: 257.60 m

KB – Ground Level: 5.20 m

#### **3.2 Total depth**

1856 m KB

#### **3.3 Commencement Date and Time**

January 30 2014 @ 1030 Hours

#### **3.4 Date Operations Completed**

Drilling completed 2/17/2104

#### **3.5 Rig Release Date and Time**

N/A.

#### **3.6 Well Status**

Suspended

#### **3.7 Hole sizes and depths**

Surface Hole: 311 mm to 600 m KB

Main Hole: 222 mm to 1856 m KB (TD)

#### **3.8 Casing and Cementing Record**

##### **3.7.1 Conductor Hole**

##### **3.8.2 Surface Hole**

244.5 mm, 53.57 kg/m, J-55 LTC set at 597.0 m KB

##### **3.8.3 Main Hole**

177.8 mm, 38.69 kg/m P-110 LTC set at 1856.0 m KB

#### **3.9 Suspension Status**

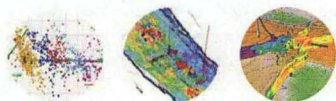
CPORC O-06 is suspended. A StreamFlo 34.5 MPa wellhead with two master valves is installed and chained and locked.

#### **4. Well Evaluation**

##### **4.1 Surface Casing Vent Flow report**

# Content

- Casing vent identification
- Receiver orientation
- Velocity model building
- Microseismic events
- Waveform examples
- ESV

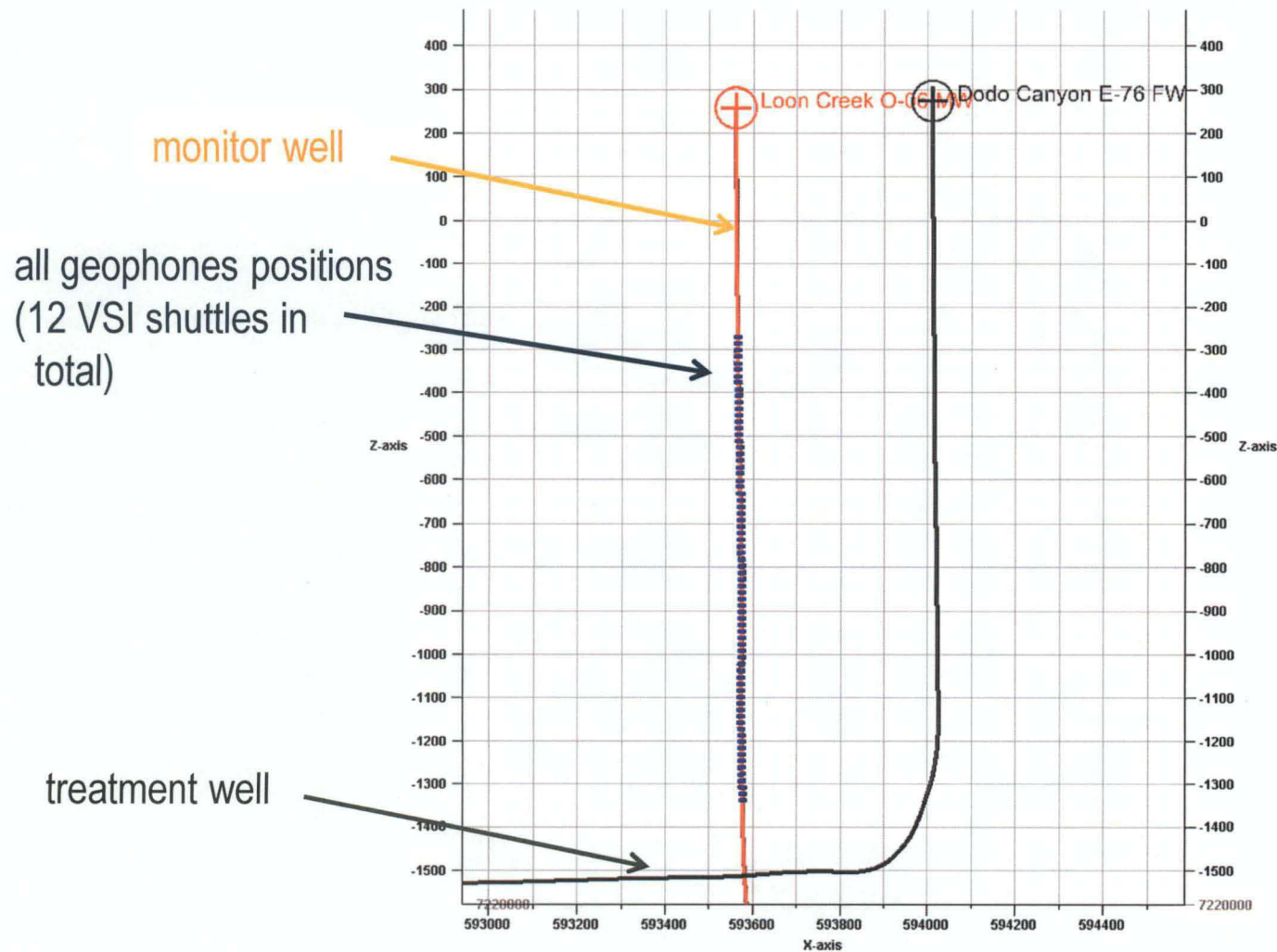


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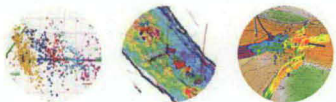


# Geophone positions during rig up



background noise was recorded at each depth indicated by the geophone positions in blue while lowering tools down to final anchoring depth (last shuttle at 1630 MD)

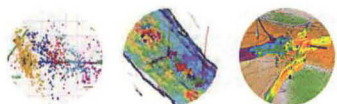
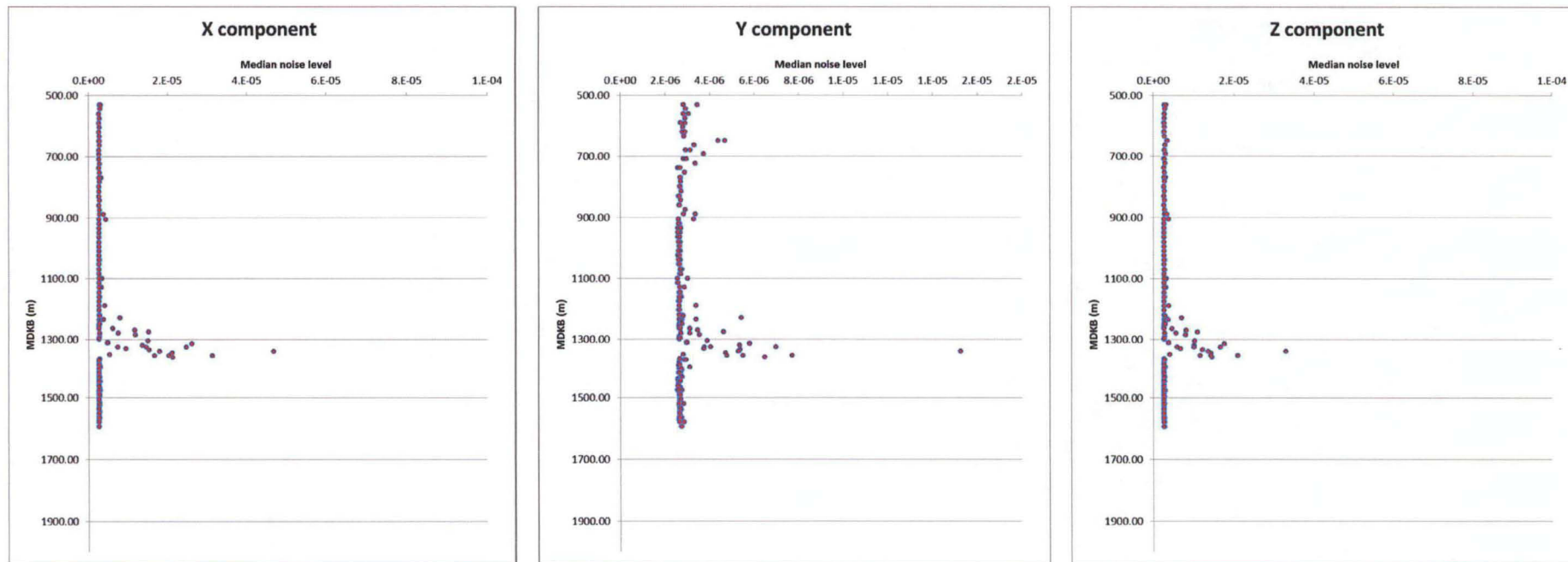
 (view from South)



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# Casing vent identification

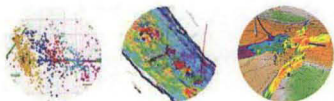
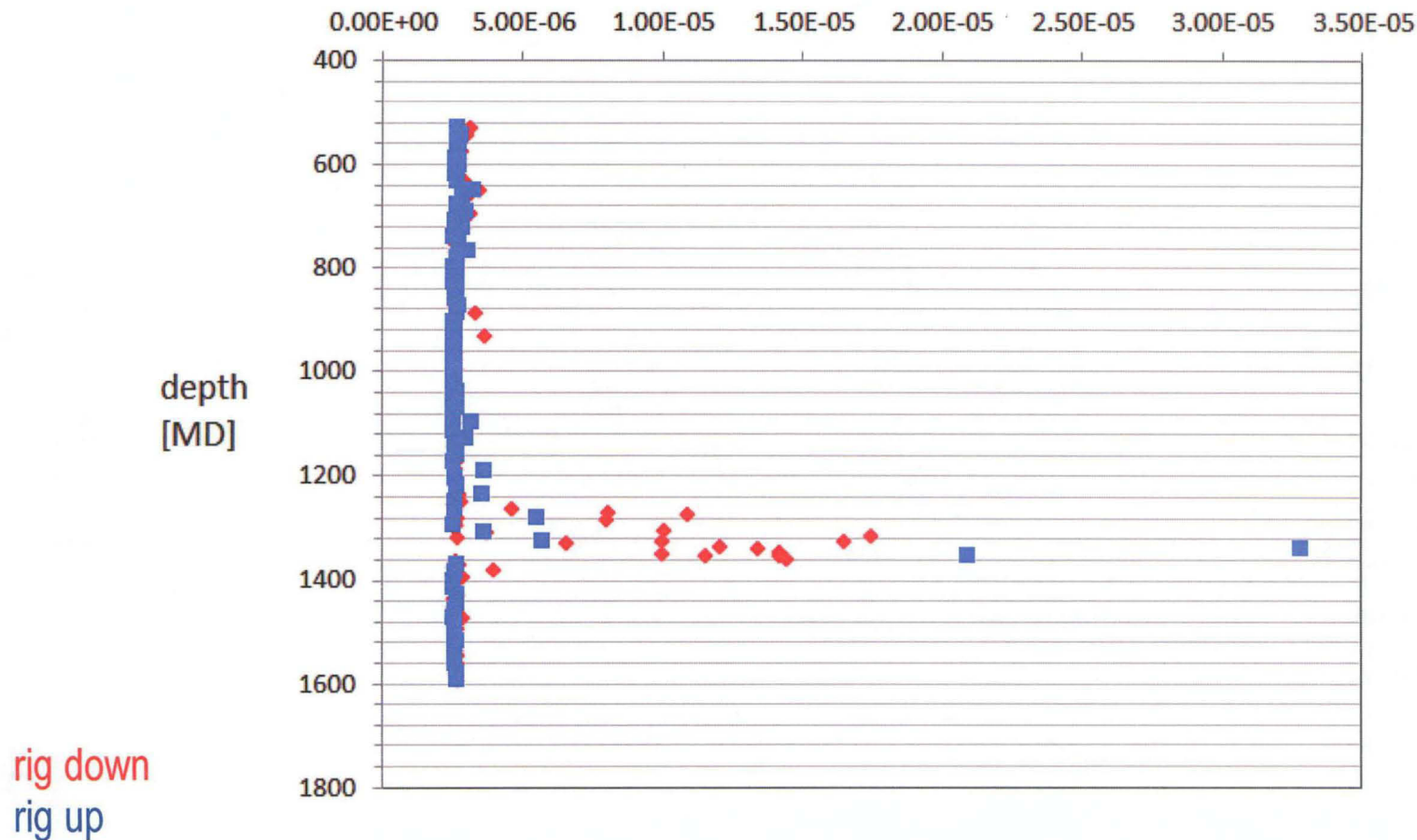


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# Noise measurement (unfiltered data)

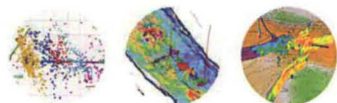
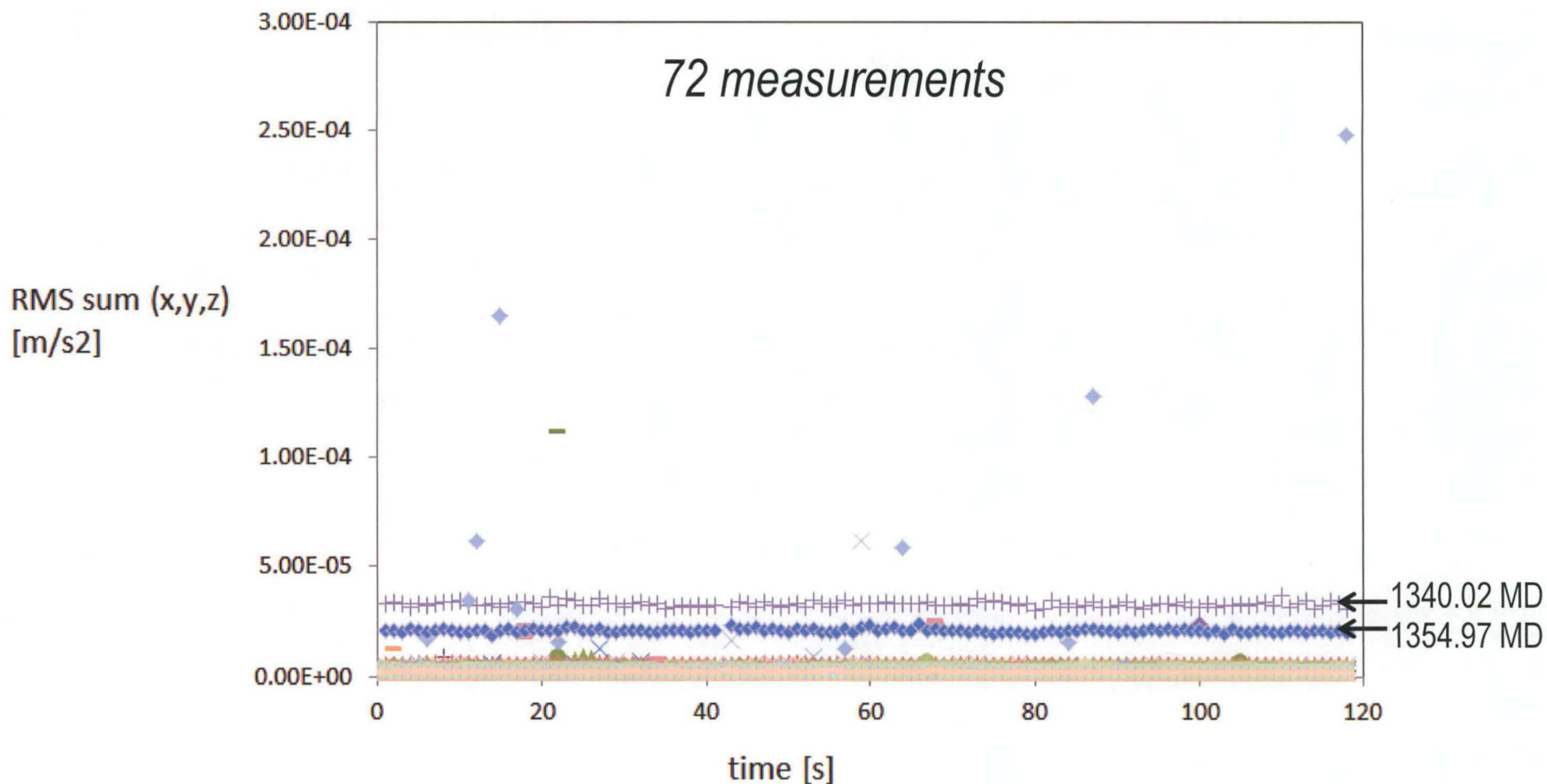
median RMS sum (x,y,z) for 1 - 2 minutes noise measurement [m/s<sup>2</sup>]



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# 2 minutes noise for each station at each depth

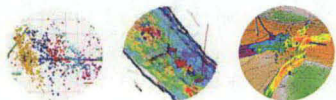
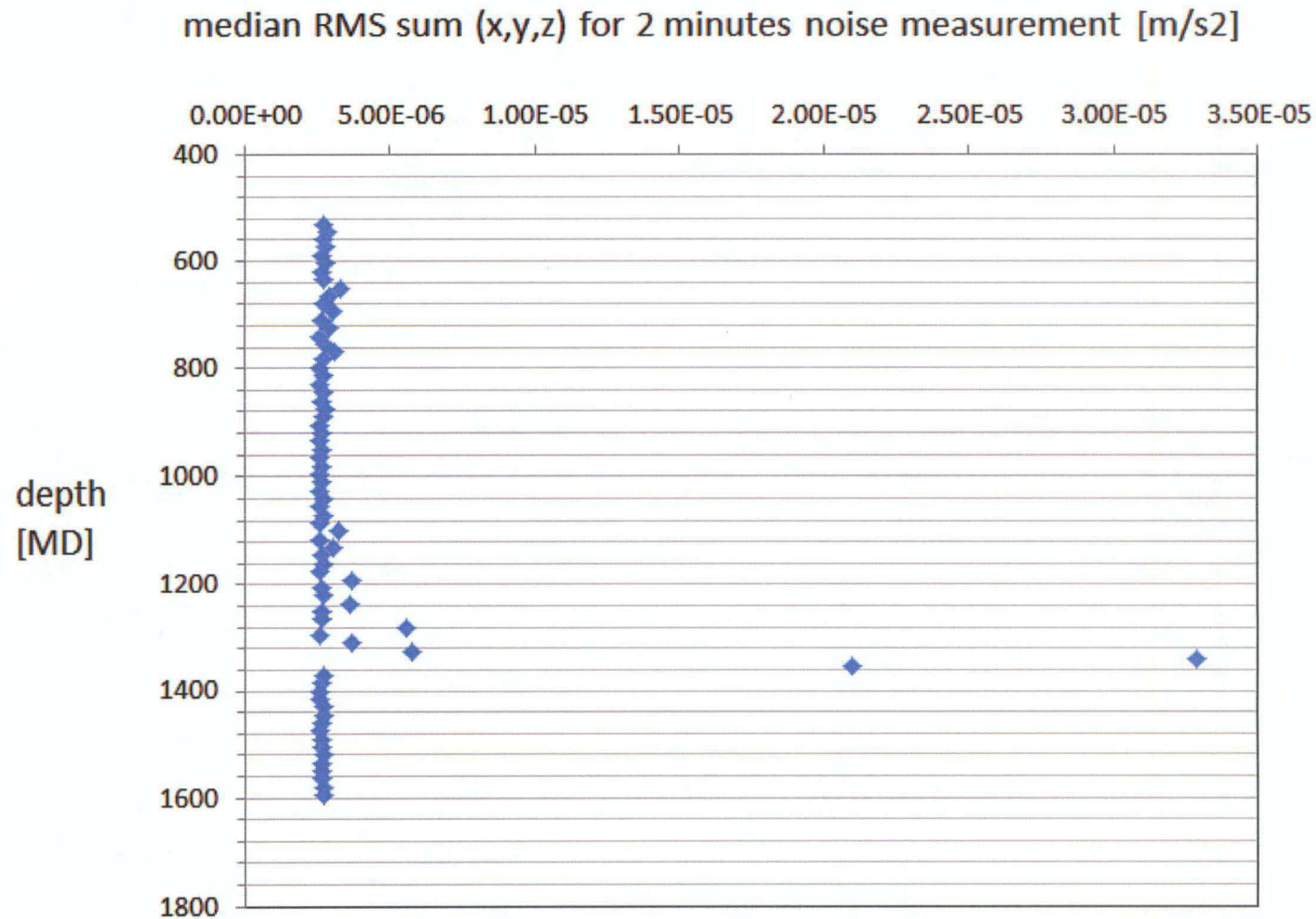


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# Noise measurement (unfiltered data)



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**4.2 Microseismic Monitoring Report**



# Schlumberger

ConocoPhillips

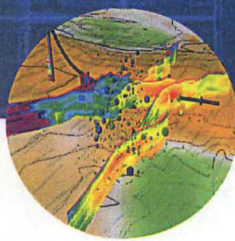
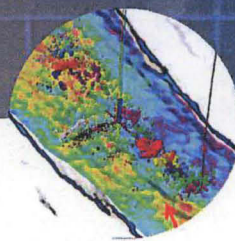
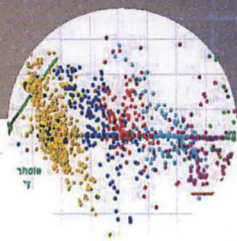
Dodo Canyon E-76

Microseismic Results

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Martin Haege, Richard Parker

April 30th 2014

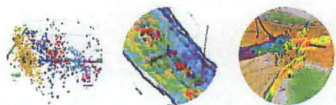


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# Content

- Casing vent identification
- Receiver orientation
- Velocity model building
- Microseismic events
- Waveform examples
- ESV

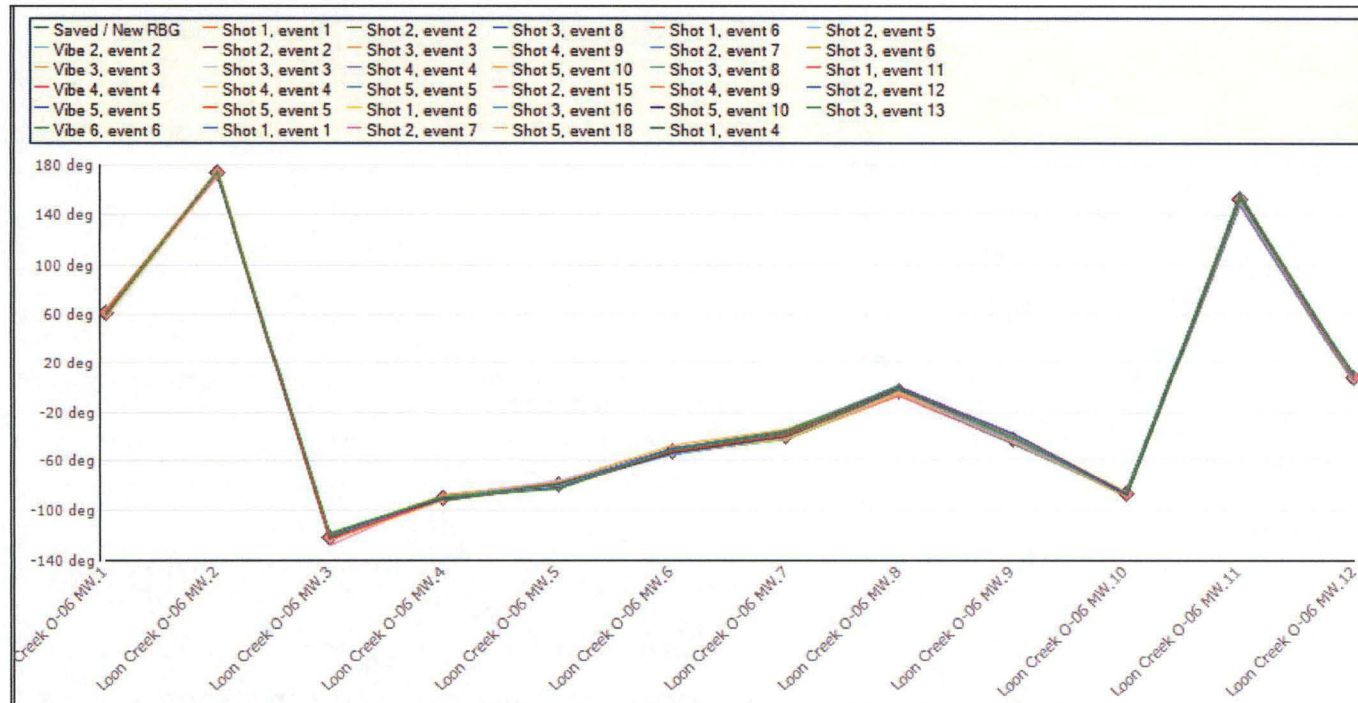


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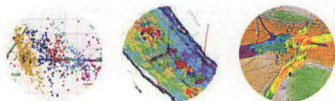
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# Receiver orientation



| New RBG std dev |       |
|-----------------|-------|
| 1.95            | MW.1  |
| 1.74            | MW.2  |
| 2.48            | MW.3  |
| 1.15            | MW.4  |
| 1.69            | MW.5  |
| 1.69            | MW.6  |
| 2.16            | MW.7  |
| 2.69            | MW.8  |
| 2.79            | MW.9  |
| 1.10            | MW.10 |
| 2.83            | MW.11 |
| 2.26            | MW.12 |

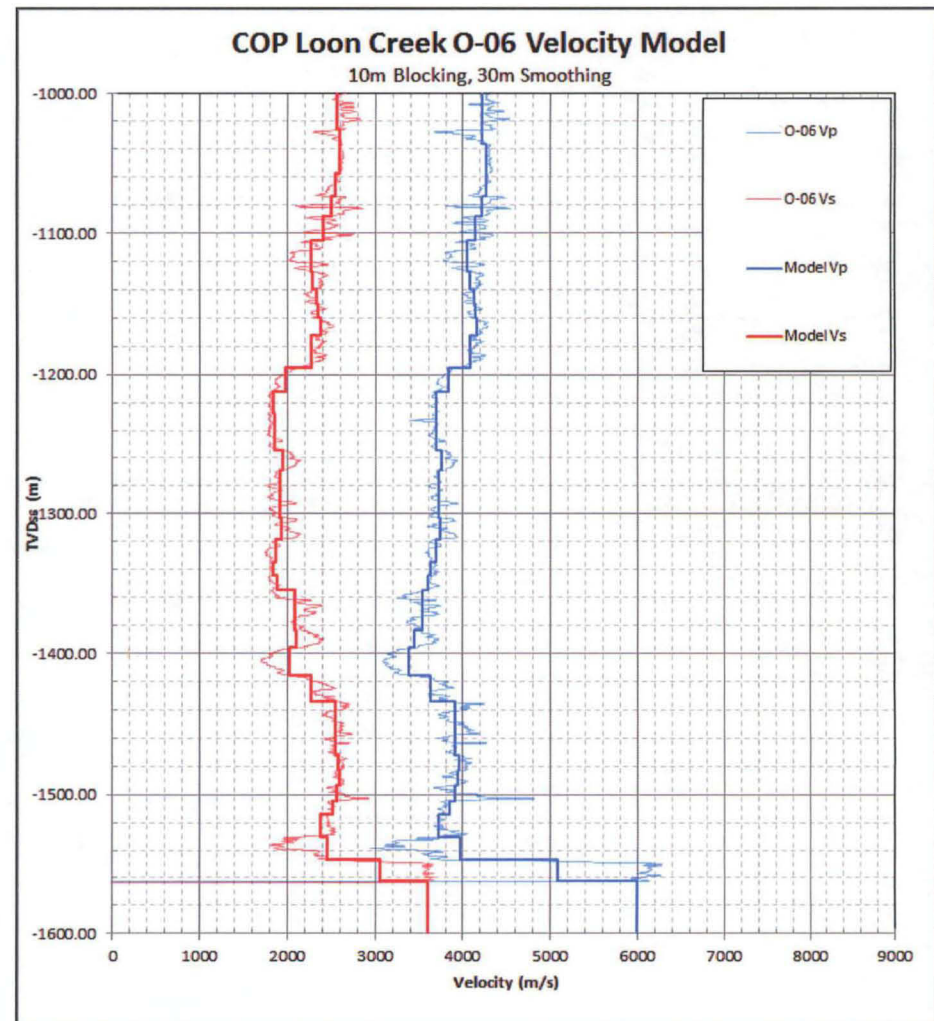


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# Velocity Model Building: E-76

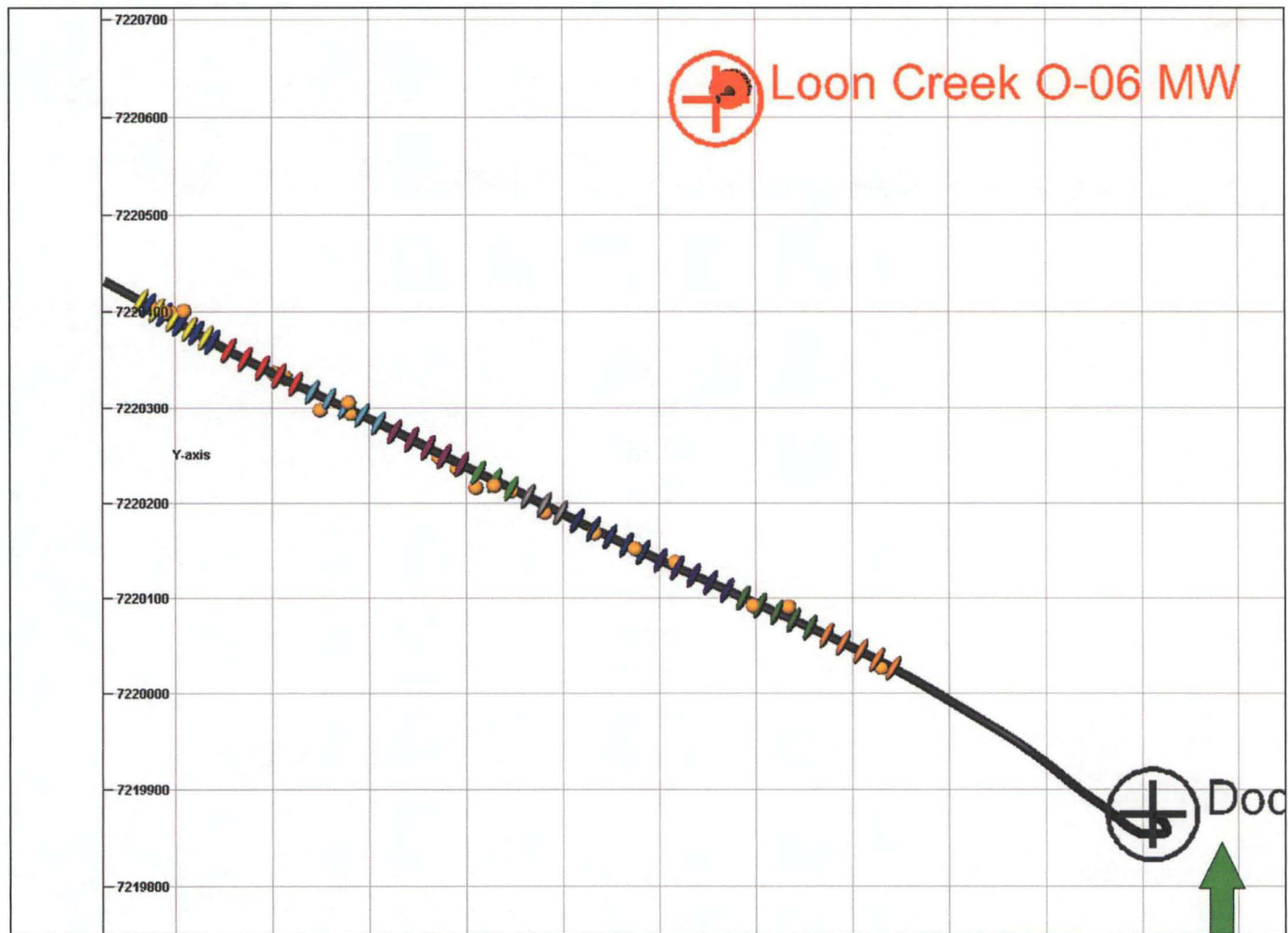
- Initial velocity model built from Loon Creek O-06 monitor well dipole sonic log
- Logs blocked with minimum thickness of 10m, smoothed at 30m



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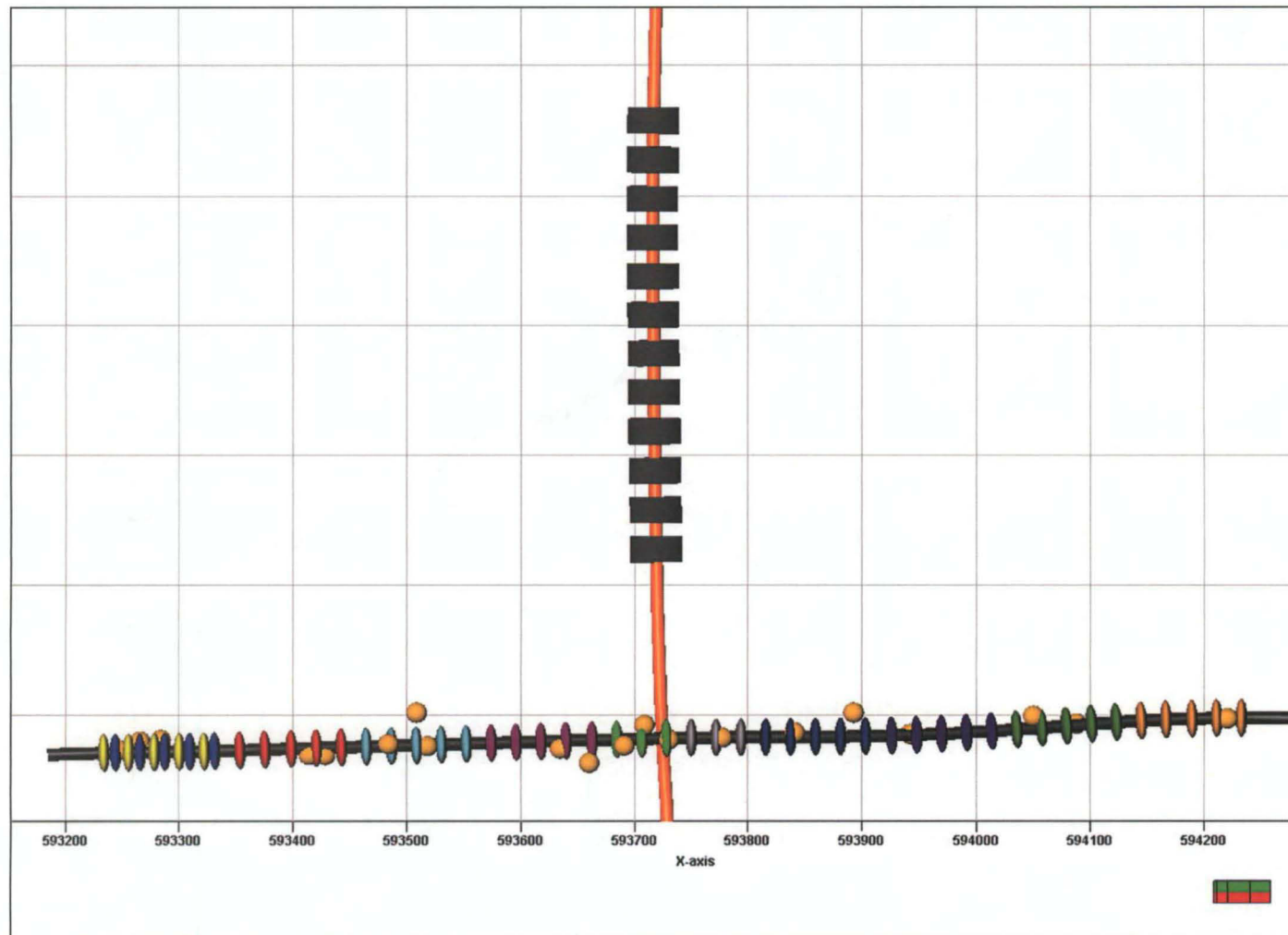
# Perfs (top view)



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# Perfs (side view, azimuth 30, deviation 90)



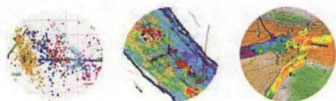
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# Perf shots

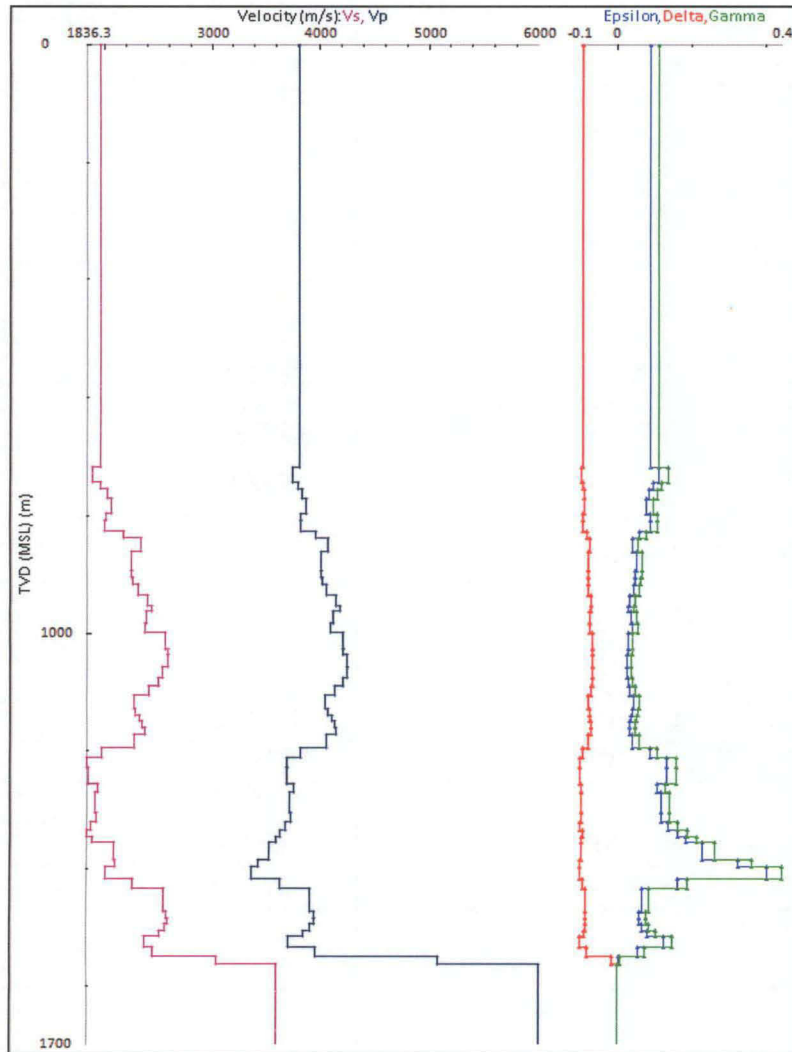
| Stage # | Perf | Actual position |             |           | Relocated    |             |           | Difference |        |        |
|---------|------|-----------------|-------------|-----------|--------------|-------------|-----------|------------|--------|--------|
|         |      | Northing (m)    | Easting (m) | Depth (m) | Northing (m) | Easting (m) | Depth (m) | dN (m)     | dE (m) | dZ (m) |
| -       | 1    | 7220401.57      | 592981.40   | -1528.83  | 7220405.40   | 592975.50   | -1526.96  | -3.83      | 5.90   | -1.86  |
|         | 3    | 7220392.11      | 592998.74   | -1528.58  | 7220399.05   | 592996.96   | -1525.71  | -6.94      | 1.78   | -2.87  |
|         | 1a   | 7220397.61      | 592989.21   | -1528.72  | 7220399.54   | 592990.75   | -1520.18  | -1.93      | -1.53  | -8.54  |
|         | 3    | 7220388.11      | 593005.66   | -1528.48  | 7220400.93   | 593009.81   | -1519.04  | -12.82     | -4.15  | -9.43  |
| -       | 2    | 7220334.22      | 593107.13   | -1525.44  | 7220336.93   | 593102.68   | -1530.58  | -2.71      | 4.45   | 5.14   |
|         | 5    | 7220326.01      | 593124.25   | -1524.82  | 7220332.30   | 593114.37   | -1530.77  | -6.30      | 9.87   | 5.94   |
| -       | 3    | 7220309.33      | 593158.36   | -1523.81  | 7220297.96   | 593149.77   | -1522.36  | 11.37      | 8.60   | -1.45  |
|         | 3    | 7220301.02      | 593175.43   | -1523.30  | 7220305.99   | 593178.98   | -1497.64  | -4.98      | -3.55  | -25.66 |
|         | 4    | 7220292.43      | 593192.37   | -1522.76  | 7220293.90   | 593181.45   | -1523.85  | -1.46      | 10.92  | 1.09   |
| -       | 4    | 7220249.63      | 593277.09   | -1519.71  | 7220248.66   | 593271.86   | -1525.90  | 0.96       | 5.22   | 6.19   |
|         | 5    | 7220240.82      | 593295.03   | -1519.15  | 7220236.72   | 593290.69   | -1536.88  | 4.09       | 4.34   | 17.73  |
| -       | 5    | 7220232.41      | 593312.05   | -1518.68  | 7220216.53   | 593310.02   | -1523.58  | 15.88      | 2.03   | 4.89   |
|         | 2    | 7220224.05      | 593329.10   | -1518.22  | 7220218.60   | 593329.00   | -1507.34  | 5.45       | 0.10   | -10.87 |
|         | 3    | 7220215.94      | 593346.27   | -1517.69  | 7220213.50   | 593347.51   | -1518.66  | 2.44       | -1.24  | 0.96   |
|         | 6    | 7220198.98      | 593380.26   | -1517.14  | 7220190.99   | 593381.56   | -1517.28  | 7.99       | -1.30  | 0.14   |
|         | 7    | 7220173.51      | 593431.23   | -1516.78  | 7220169.31   | 593432.97   | -1513.14  | 4.20       | -1.74  | -3.64  |
|         | 4    | 7220156.97      | 593465.42   | -1516.41  | 7220152.46   | 593474.80   | -1497.67  | 4.51       | -9.37  | -18.74 |
| -       | 8    | 7220140.48      | 593500.75   | -1515.74  | 7220138.32   | 593515.99   | -1514.31  | 2.16       | -15.24 | -1.43  |
|         | 9    | 7220100.65      | 593586.81   | -1510.85  | 7220092.46   | 593597.25   | -1500.25  | 8.18       | -10.44 | -10.61 |
|         | 3    | 7220085.32      | 593621.46   | -1508.11  | 7220091.07   | 593634.16   | -1506.25  | -5.76      | -12.70 | -1.86  |
| -       | 10   | 7220026.72      | 593741.67   | -1501.69  | 7220027.25   | 593730.33   | -1502.18  | -0.53      | 11.34  | 0.49   |
|         |      |                 |             |           |              |             | median    | 4.51       | 4.45   | 4.89   |



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# Velocity model calibration



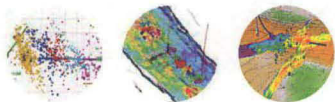
*example: stage 4*

7 velocity models:

Epsilon: 0 – 0.43

Delta: -0.1 – 0.0

Gamma: 0 – 0.47



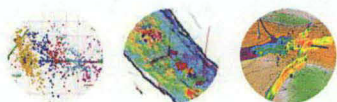
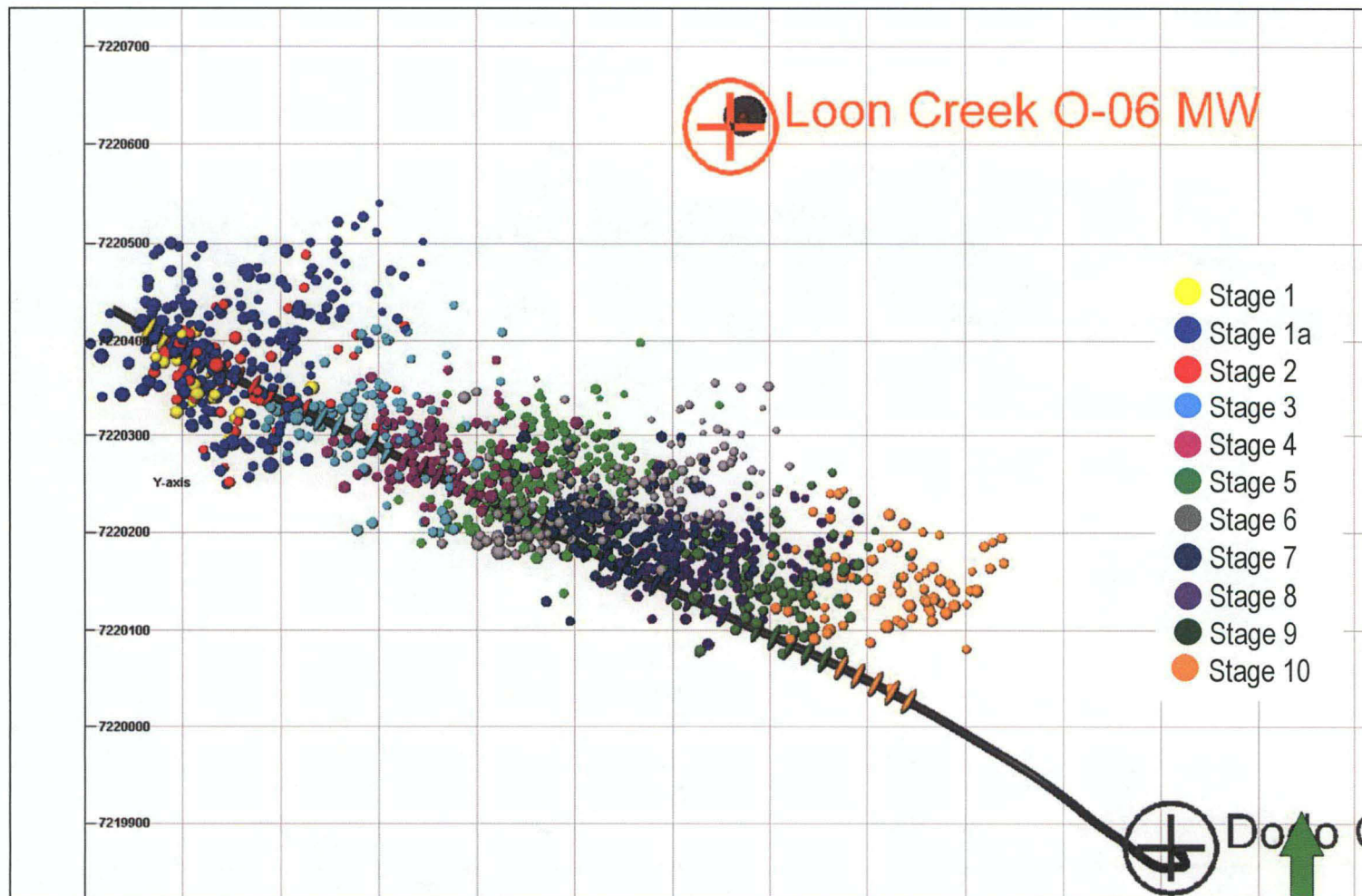
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# Events (top view)

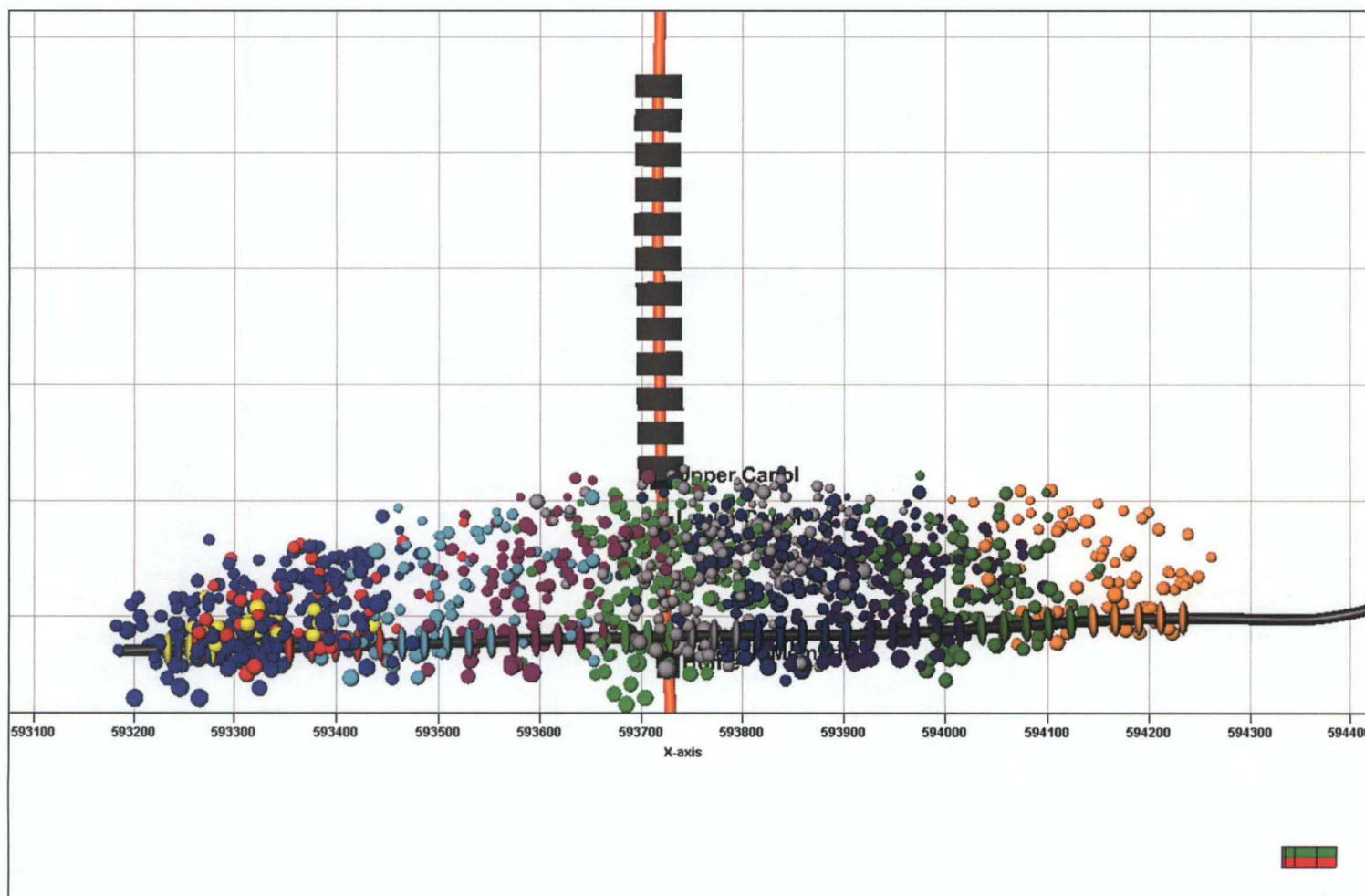
events are scaled by  
magnitude ( $-3 < MW < -1$ )



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# Events (side view, azimuth 30, deviation 90)

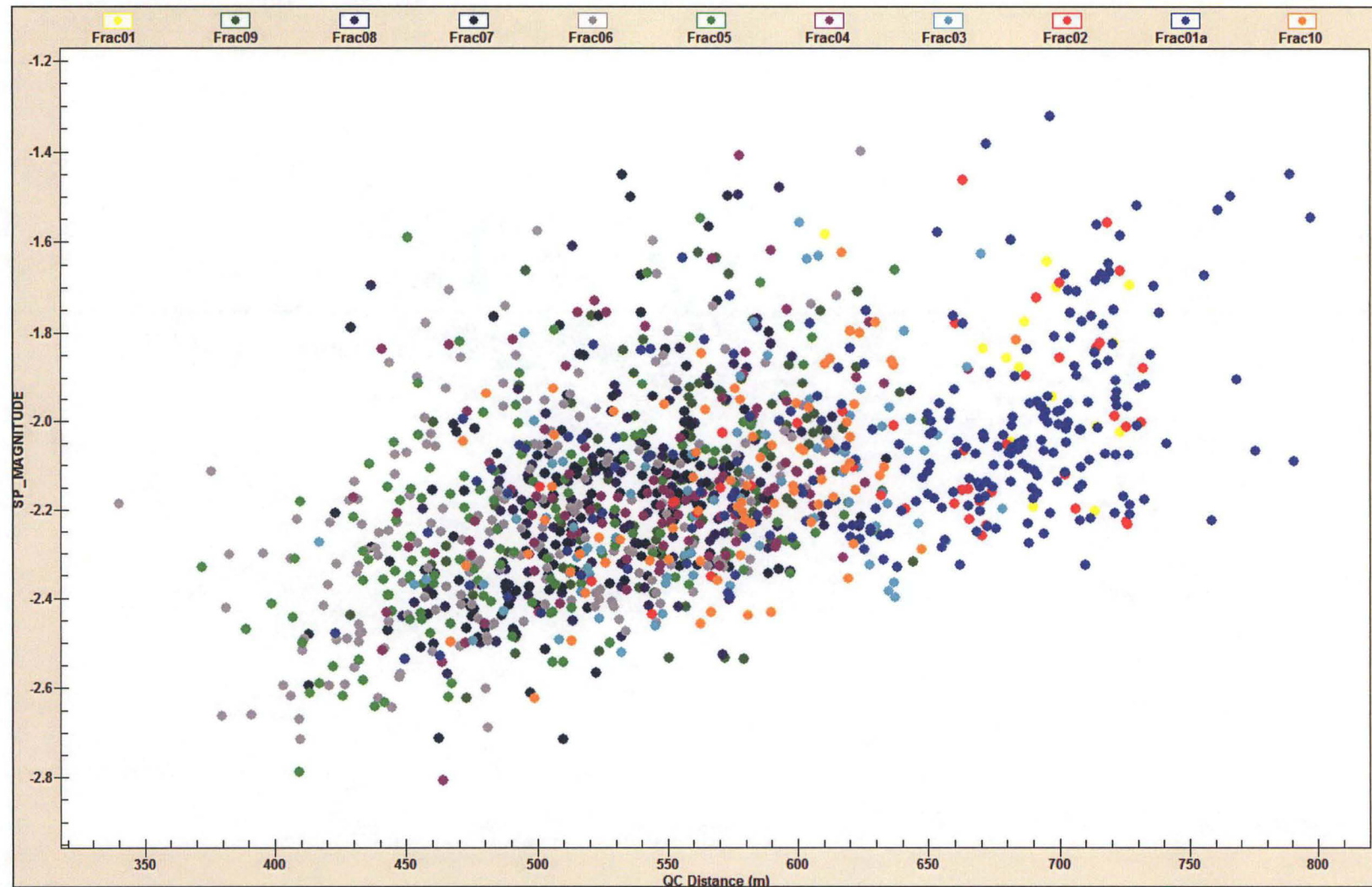


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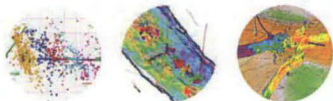
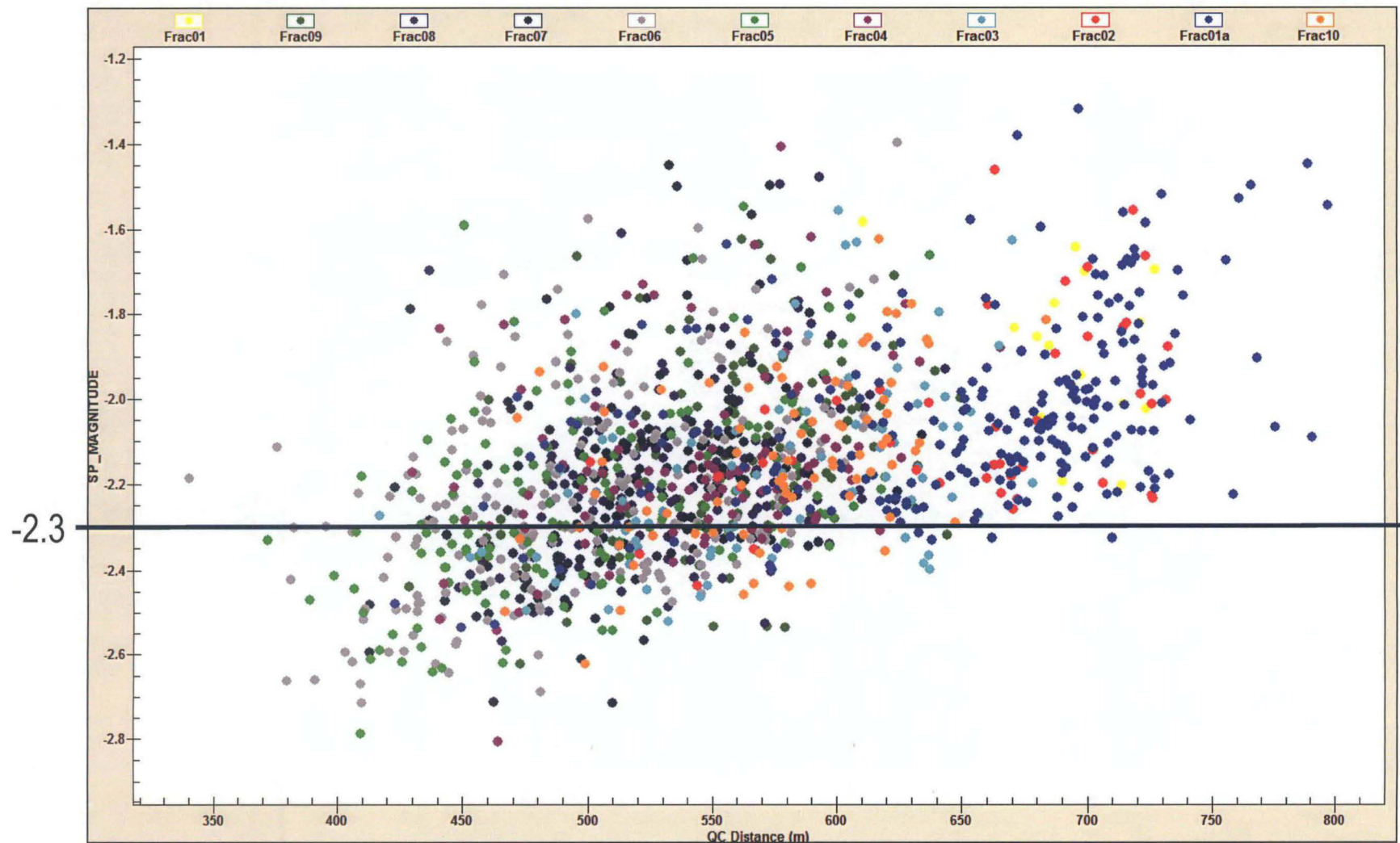
# Magnitude vs distance



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# Magnitude vs distance

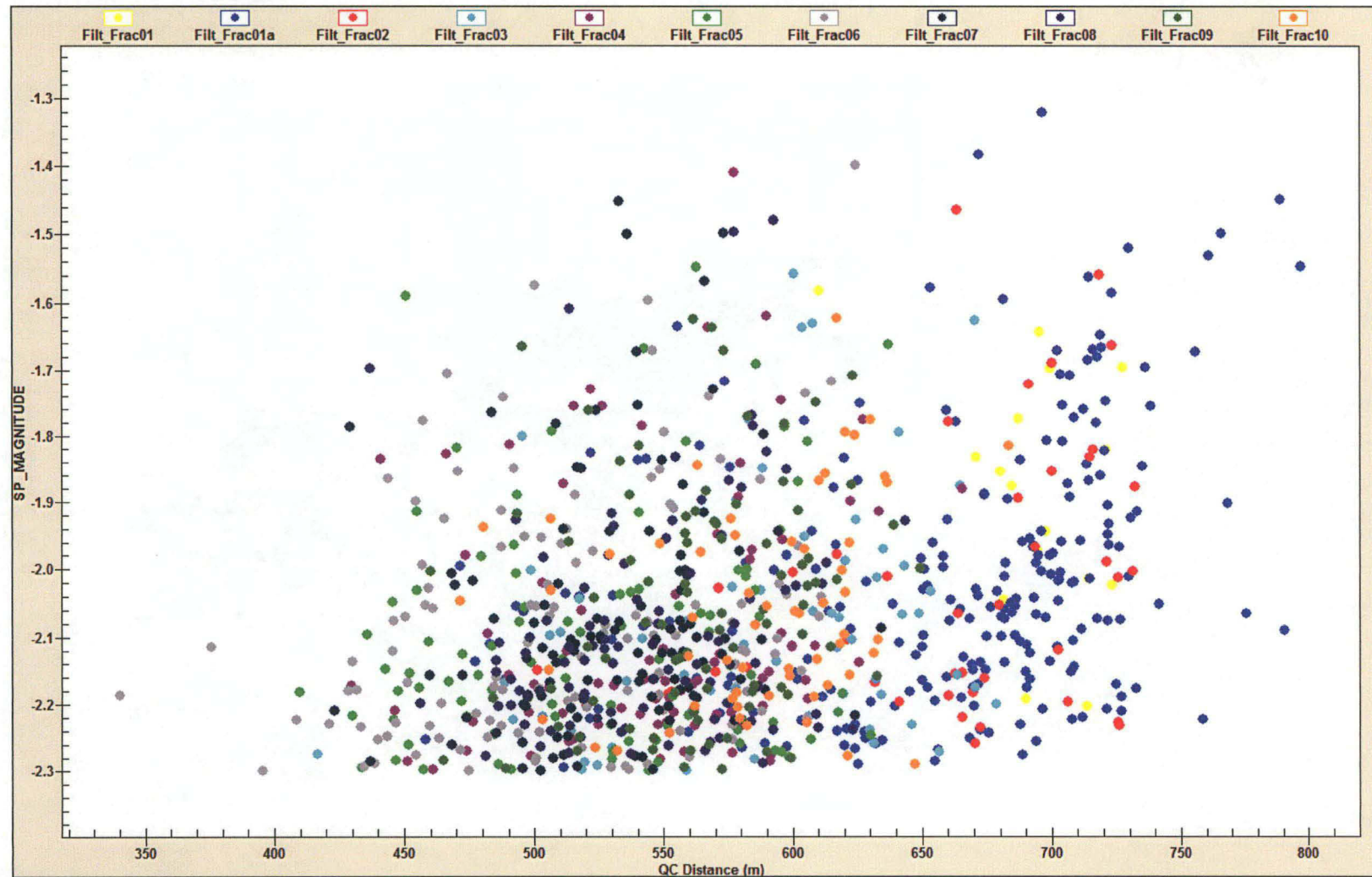


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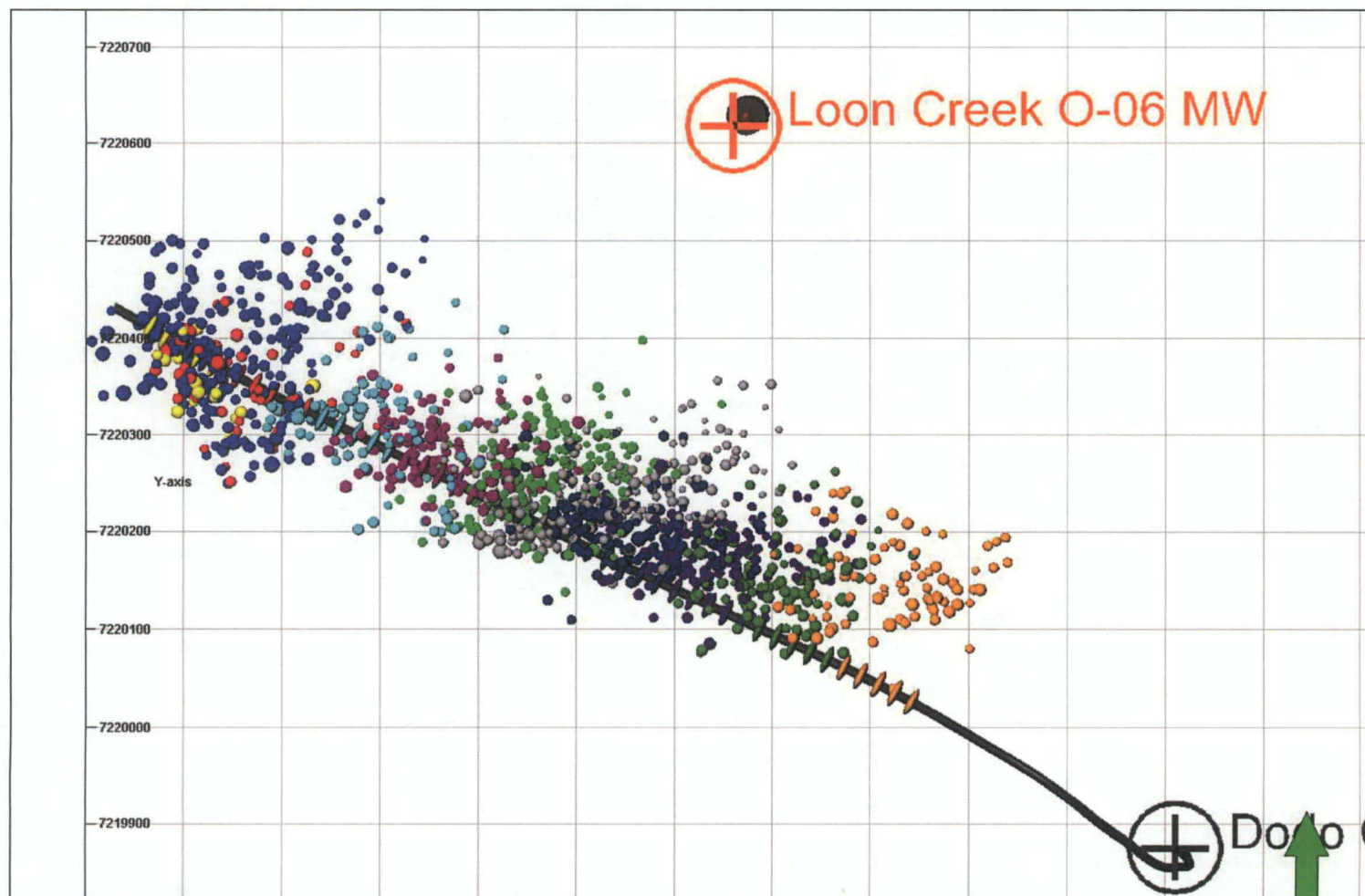
# Magnitude vs distance filtered



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# Events (top view)

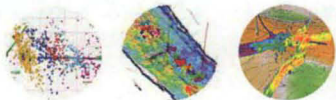
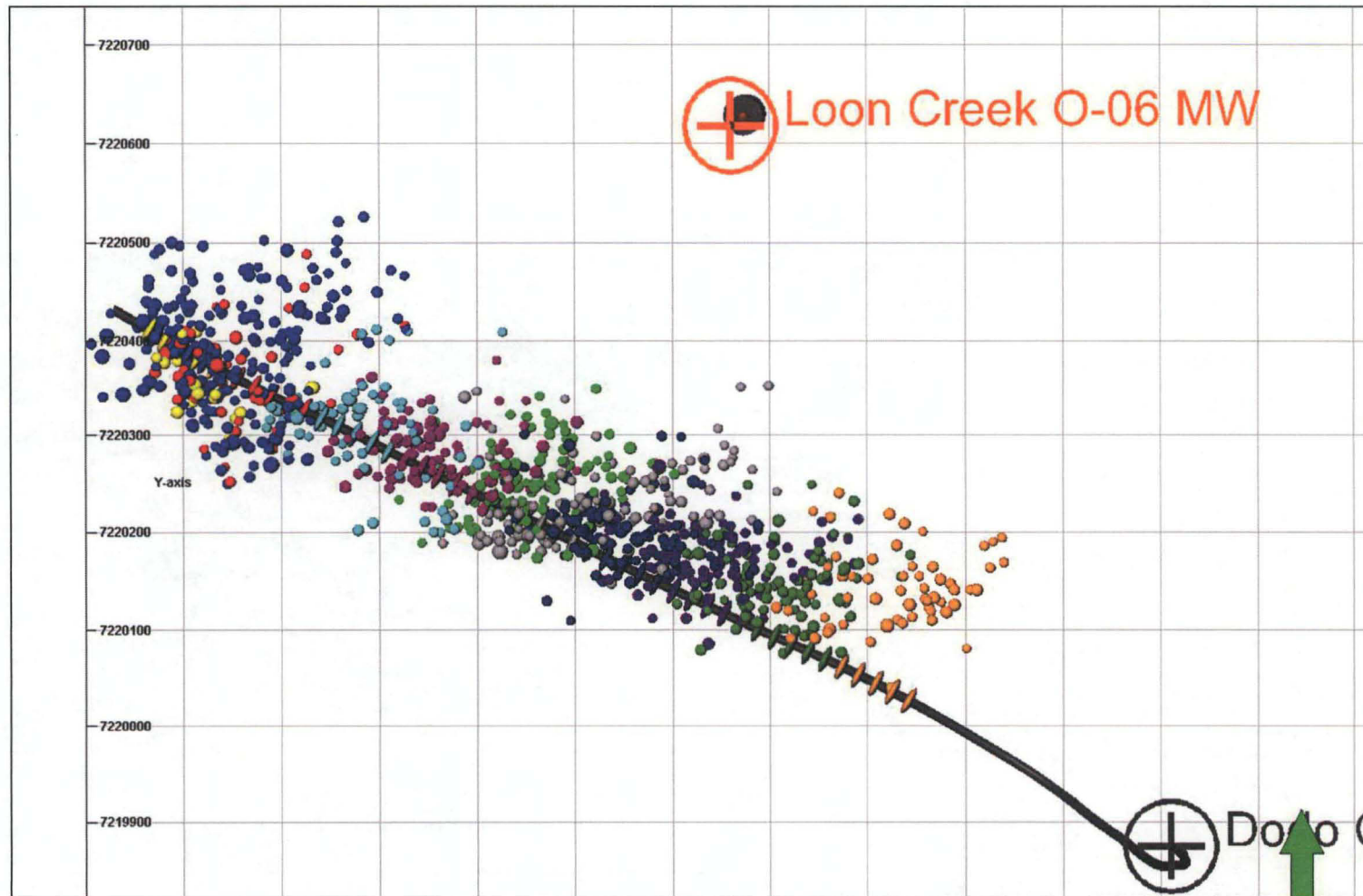


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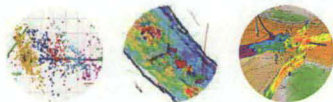
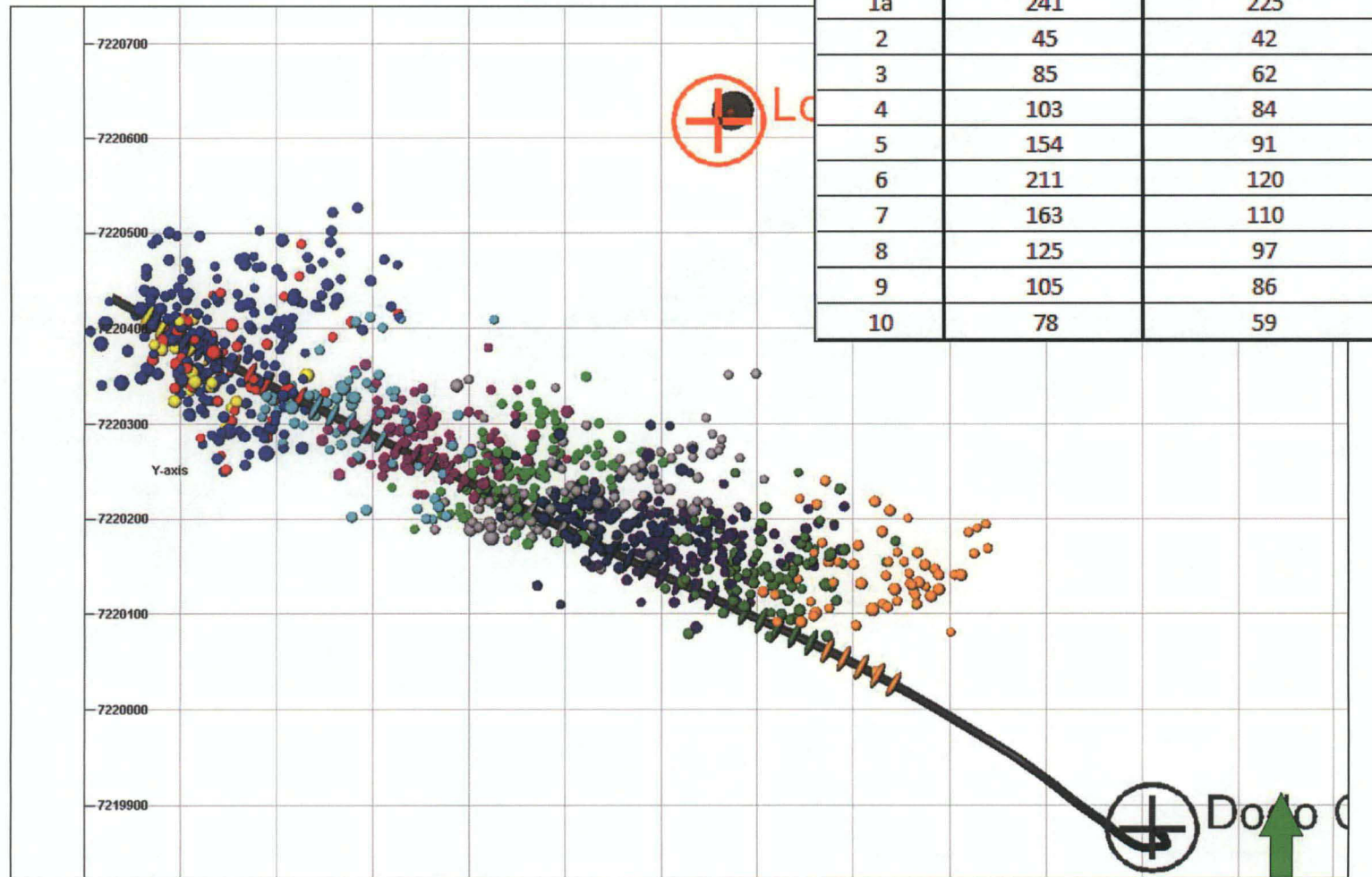
# Events (top view, filtered)



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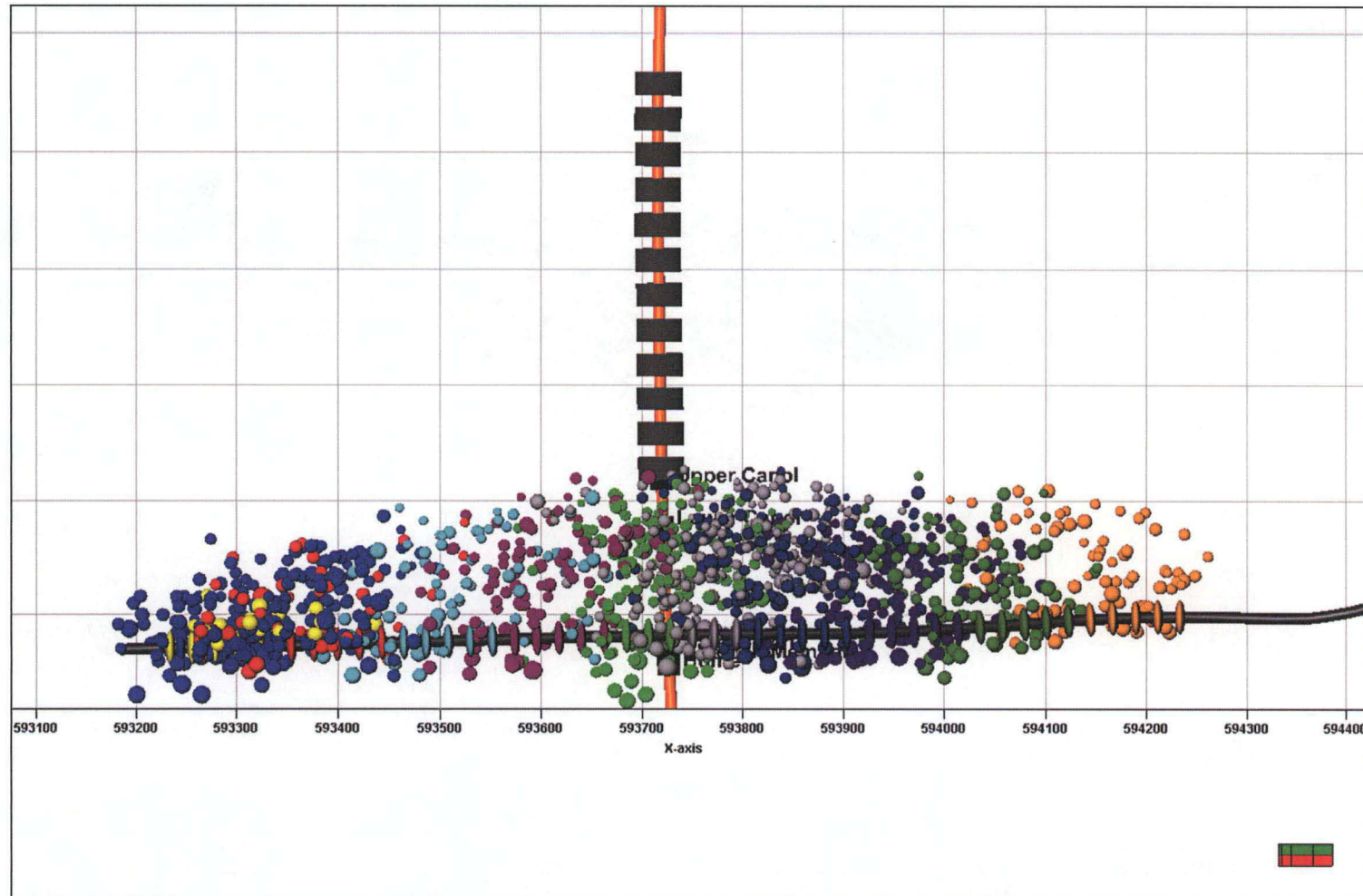
# Events (top view, filtered)



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# Events (side view, azimuth 30, deviation 90)

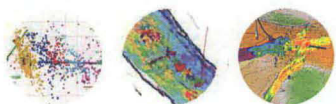
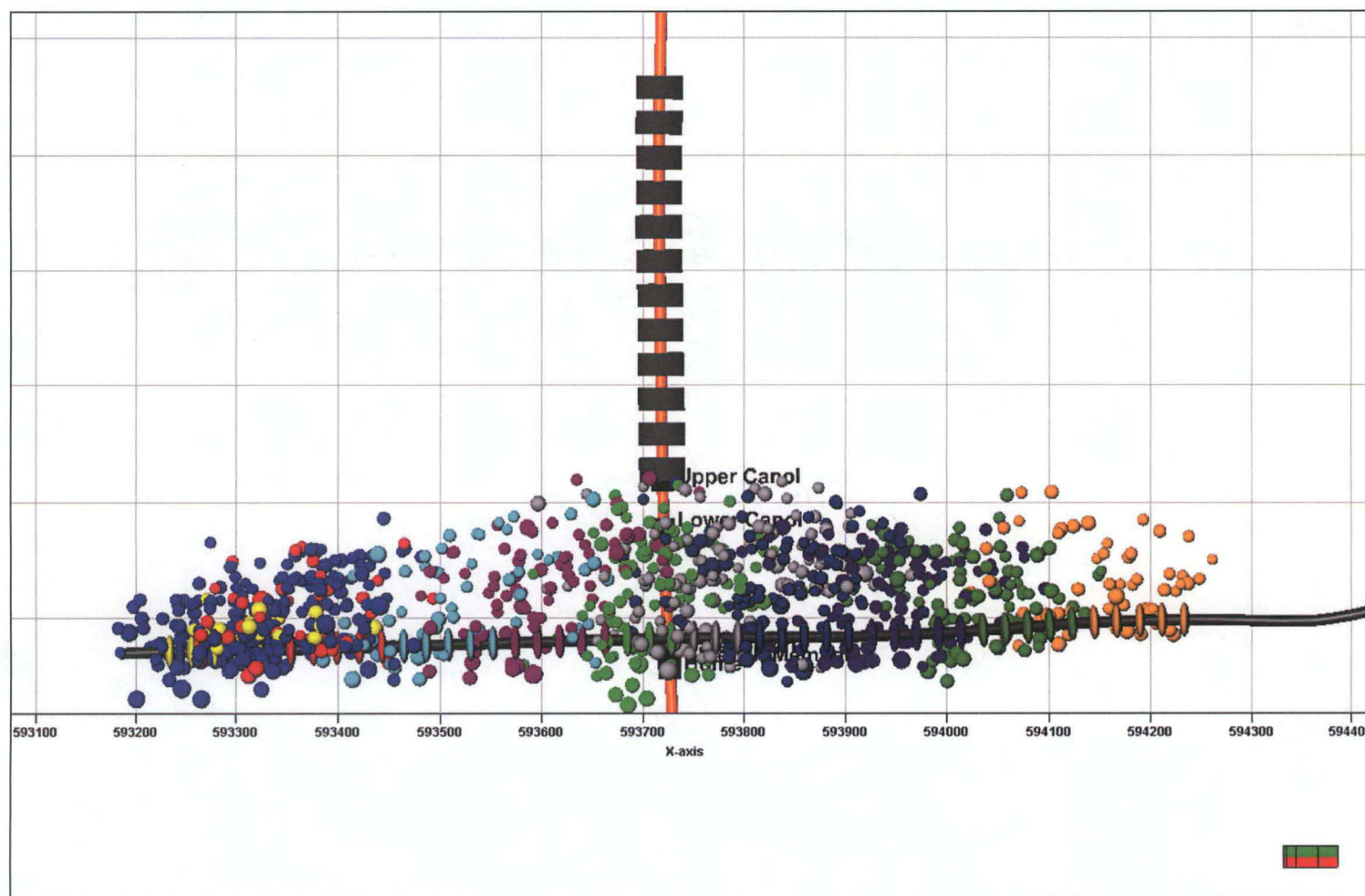


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# Events (side view, filtered, azimuth 30, deviation 90)

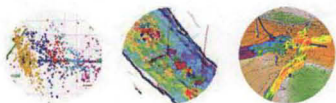
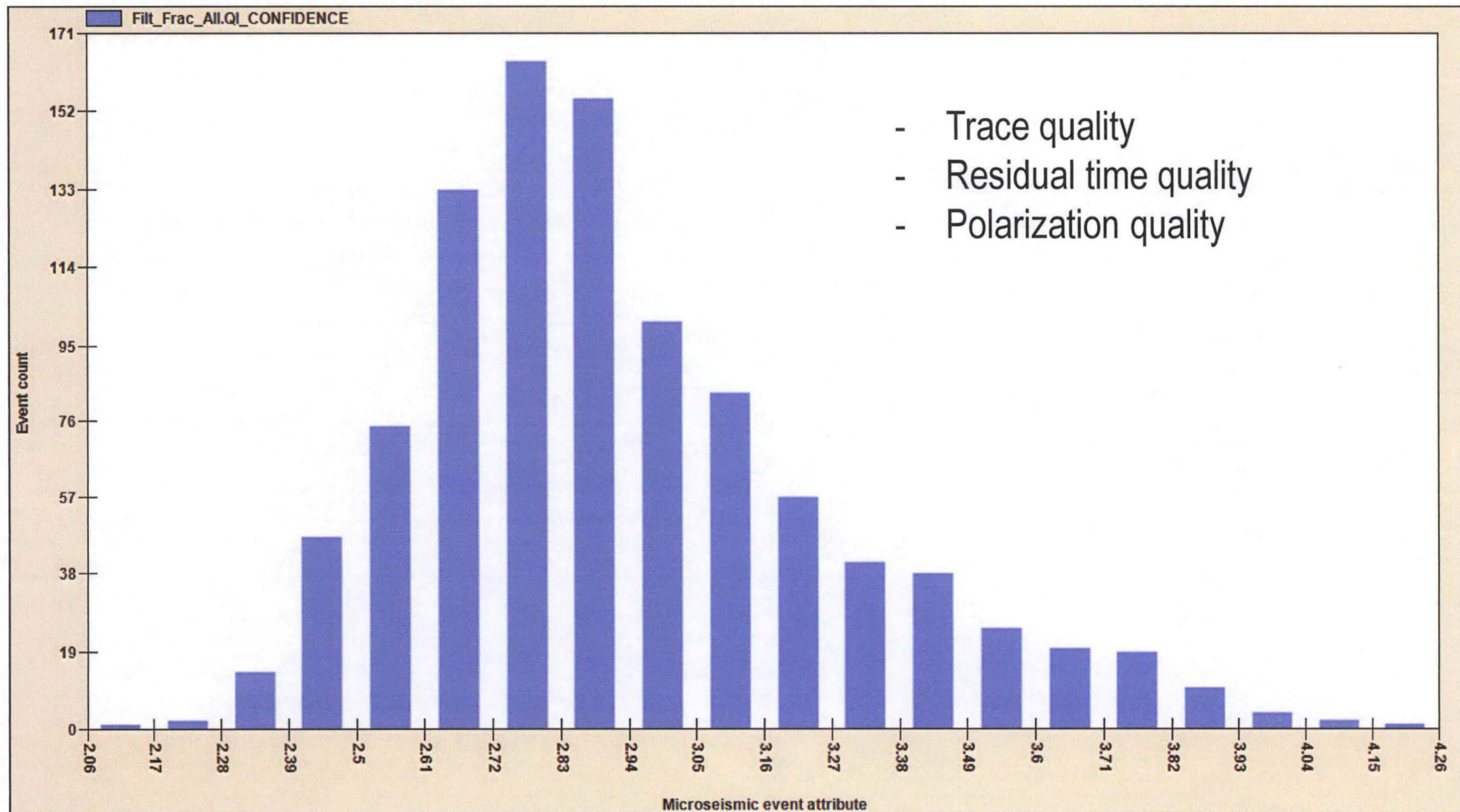


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# Confidence factor (MW filtered)

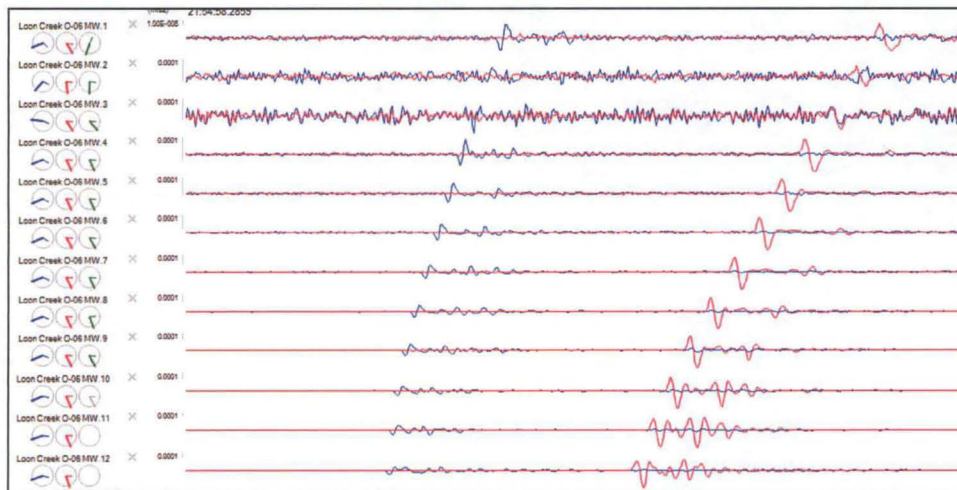


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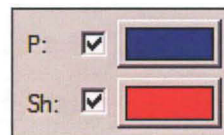
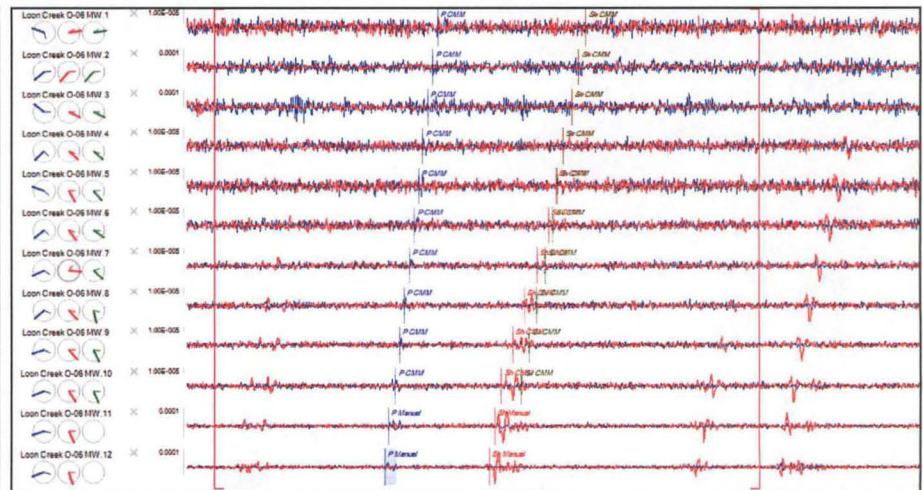
**Schlumberger**

# Confidence factor

3.8



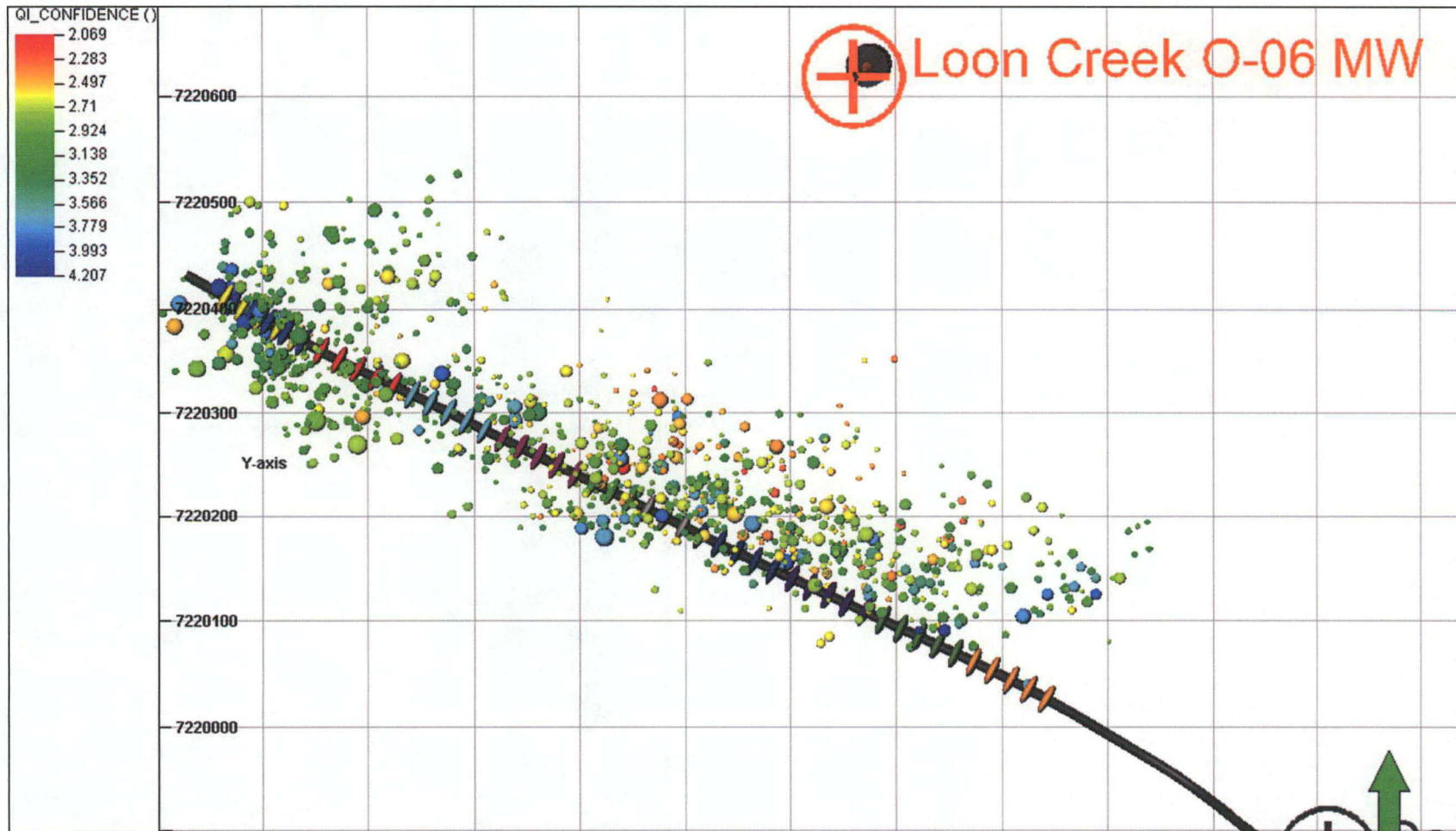
2.8



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# Confidence factor (MW filtered)

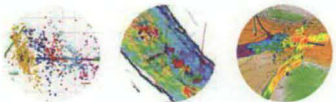
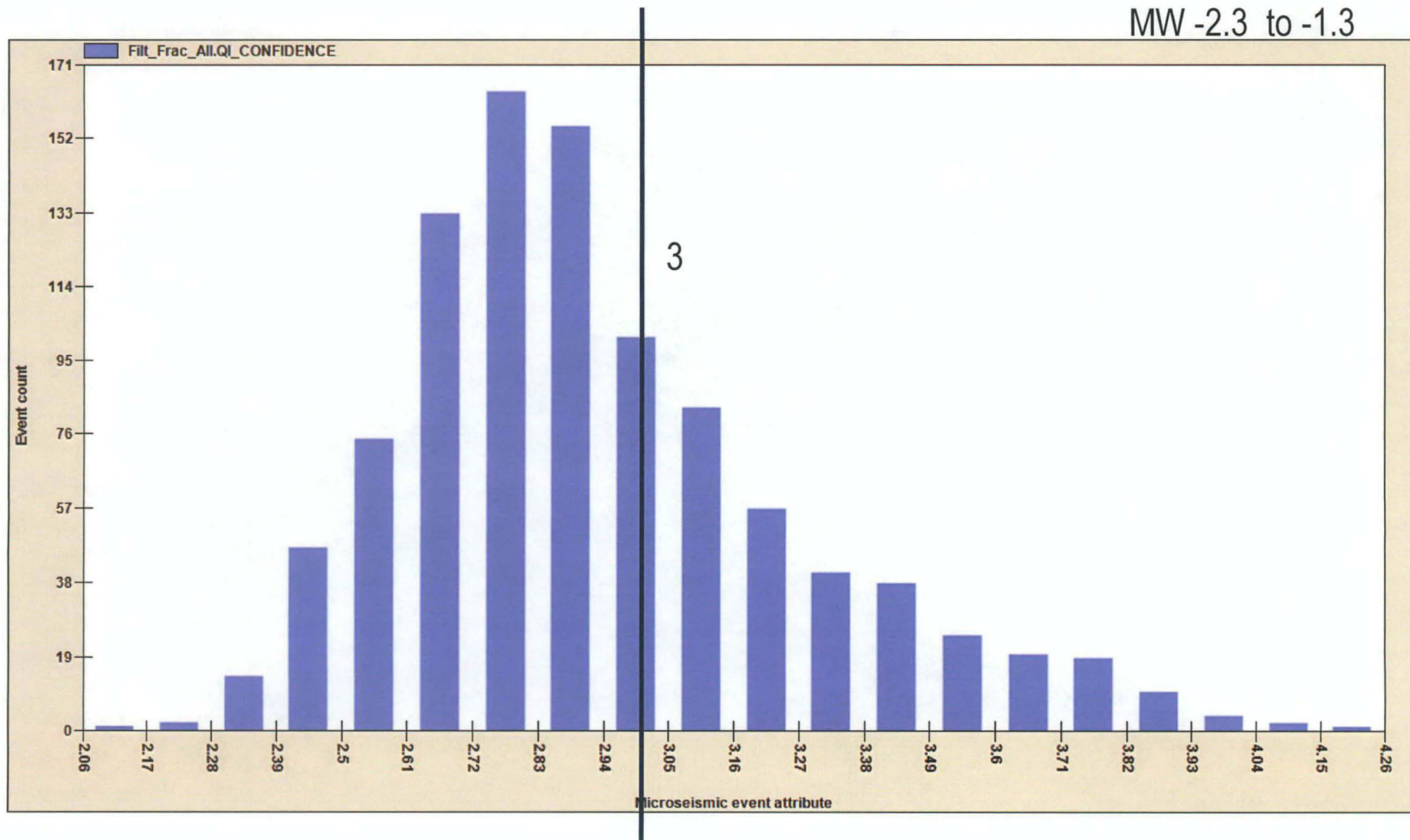


Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**



# Confidence factor (MW filtered)

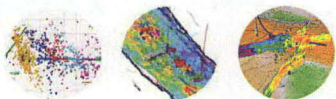
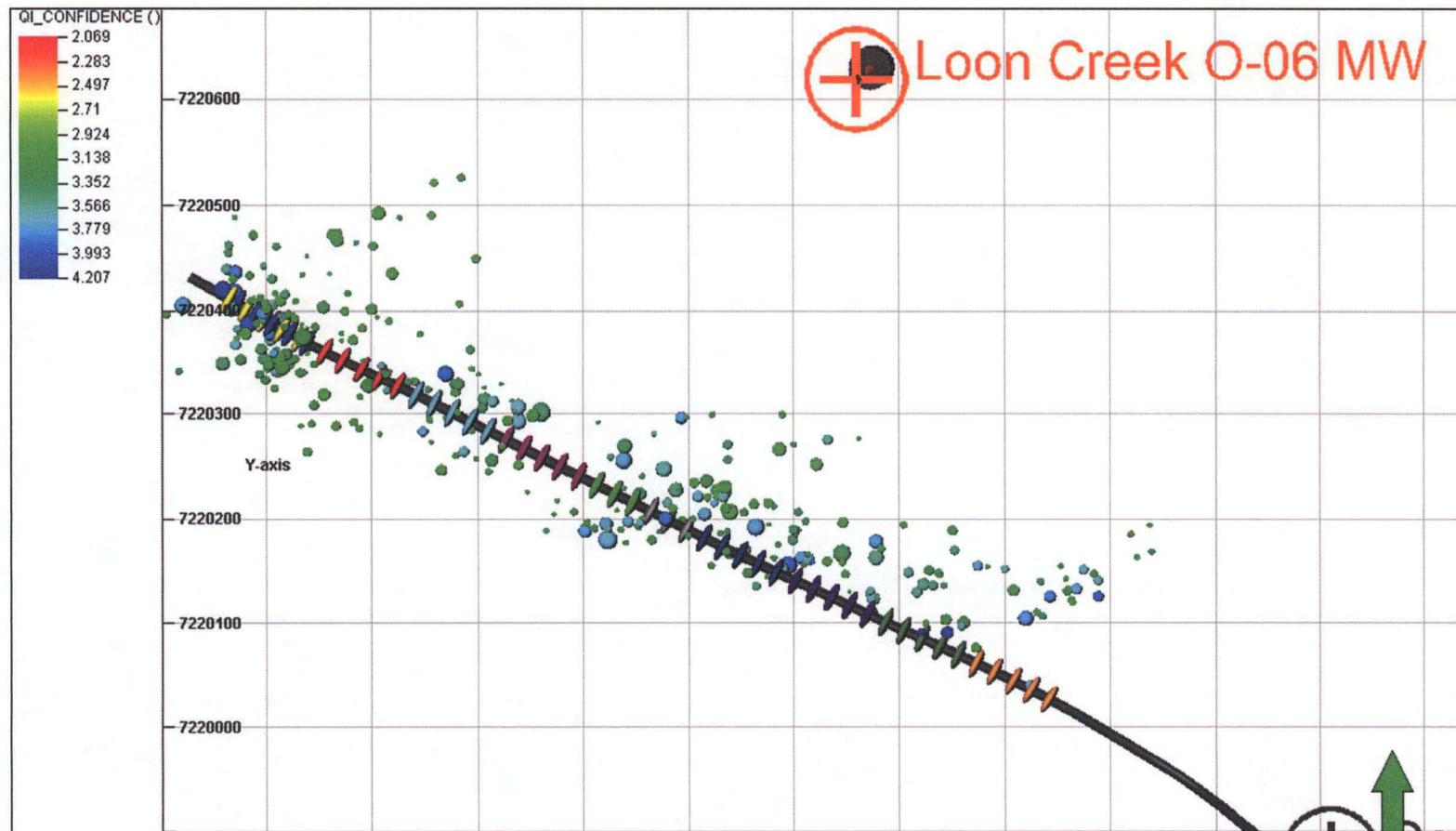


Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**



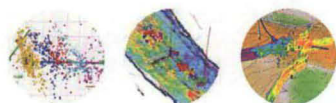
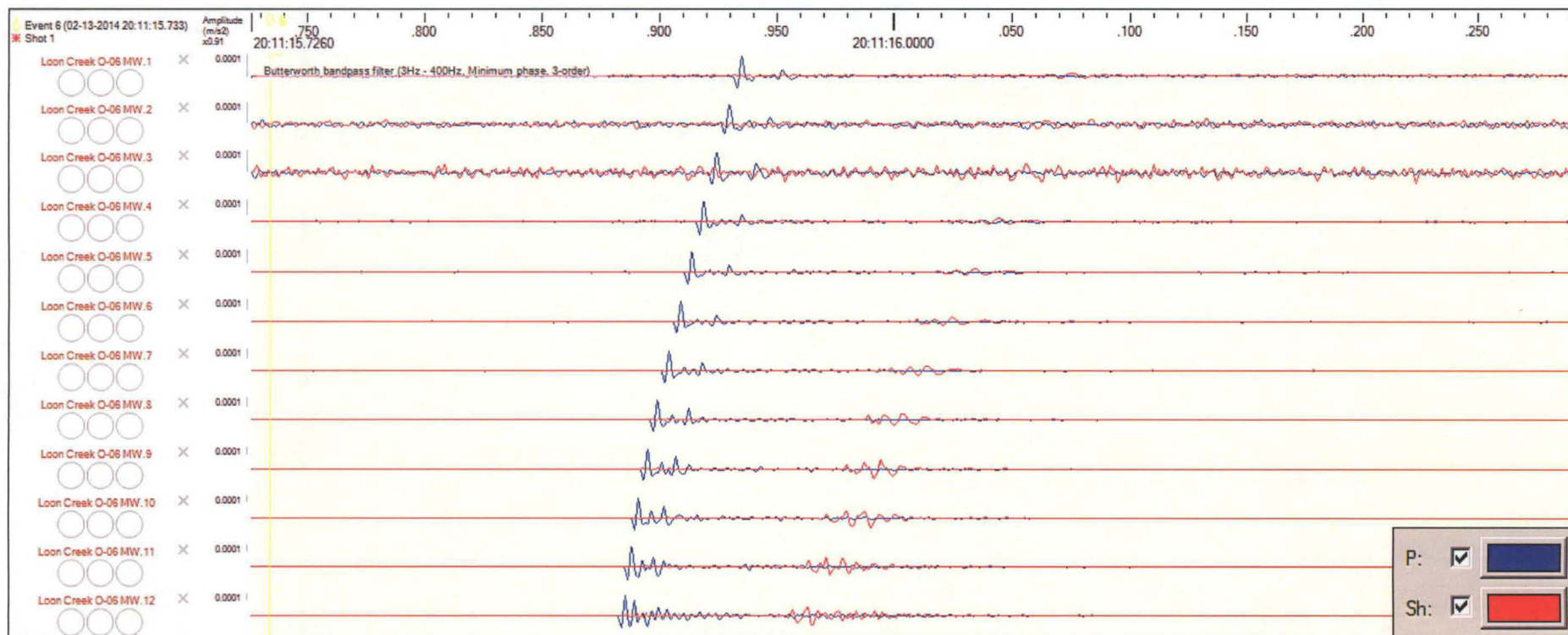
# Confidence factor $\geq 3$ (MW filtered)



Microseismic Services  
Image · Interpret · Integrate

**Schlumberger**

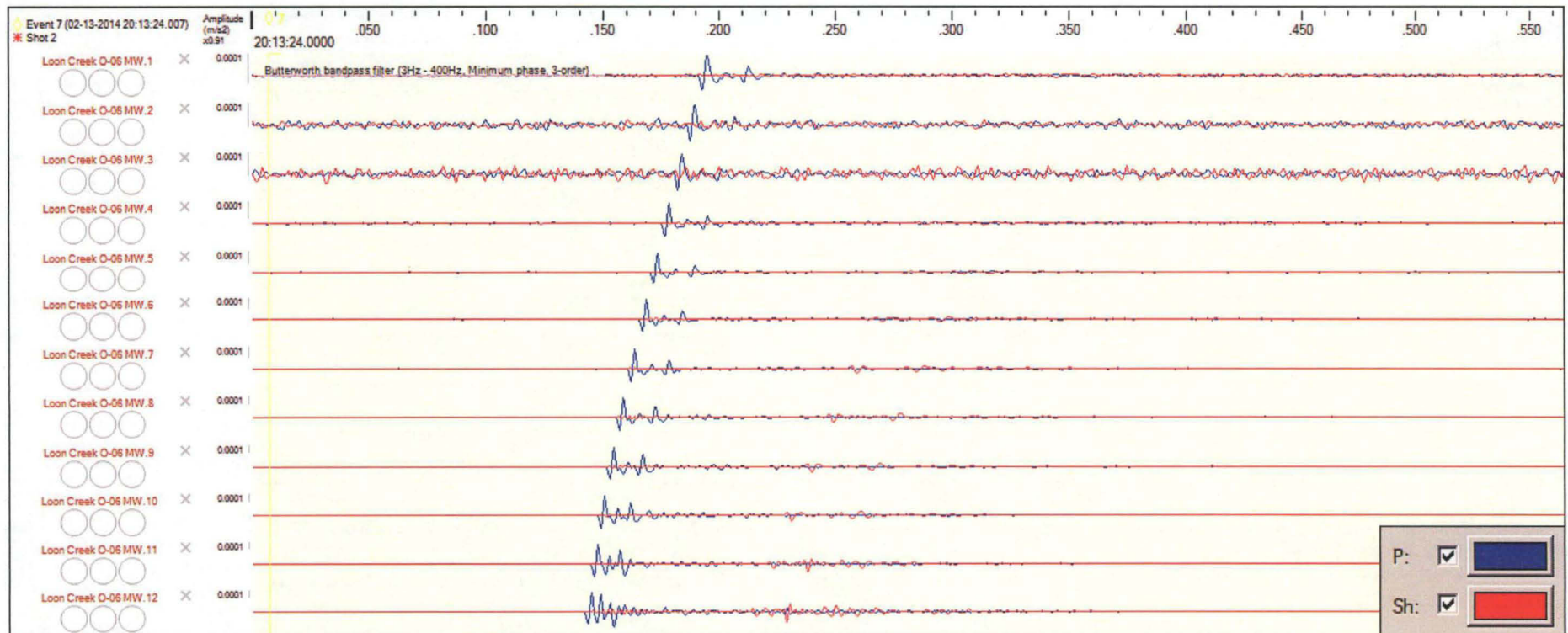
# Perf 4 shot 1



Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**

# Perf 4 shot 2

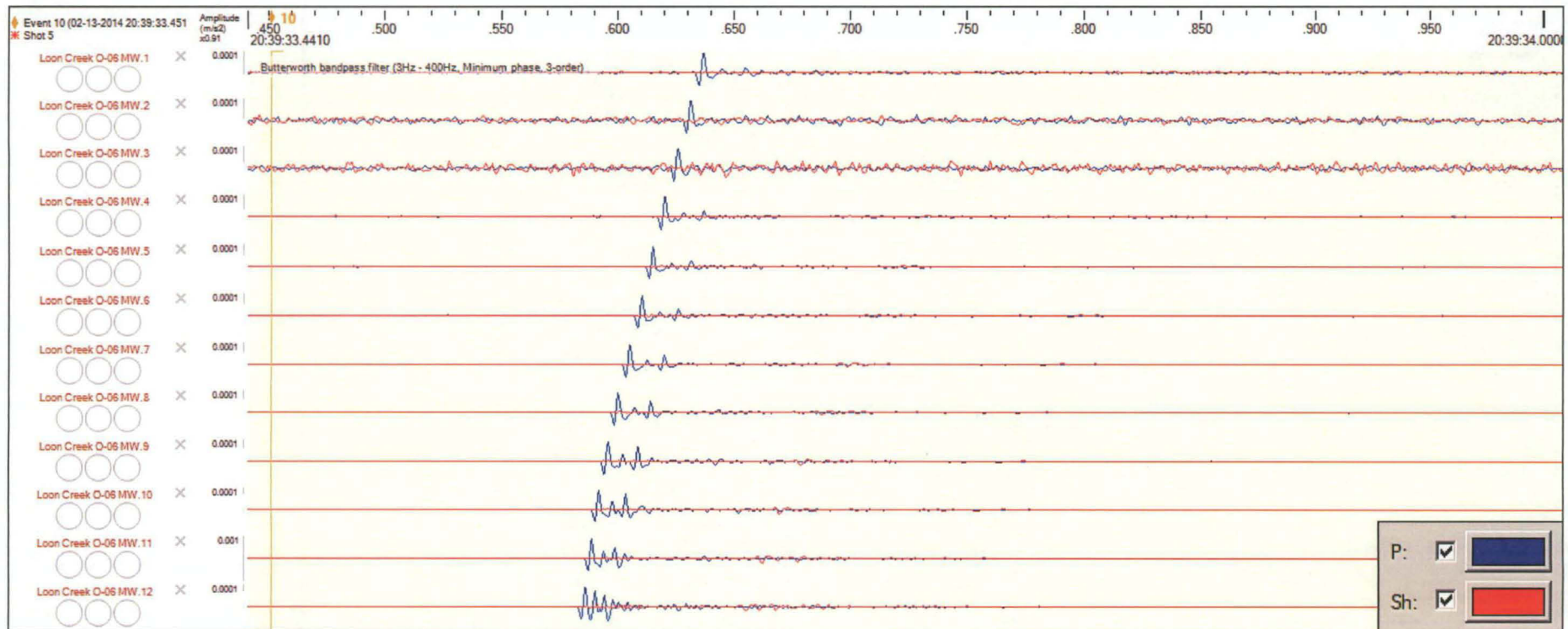


Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**



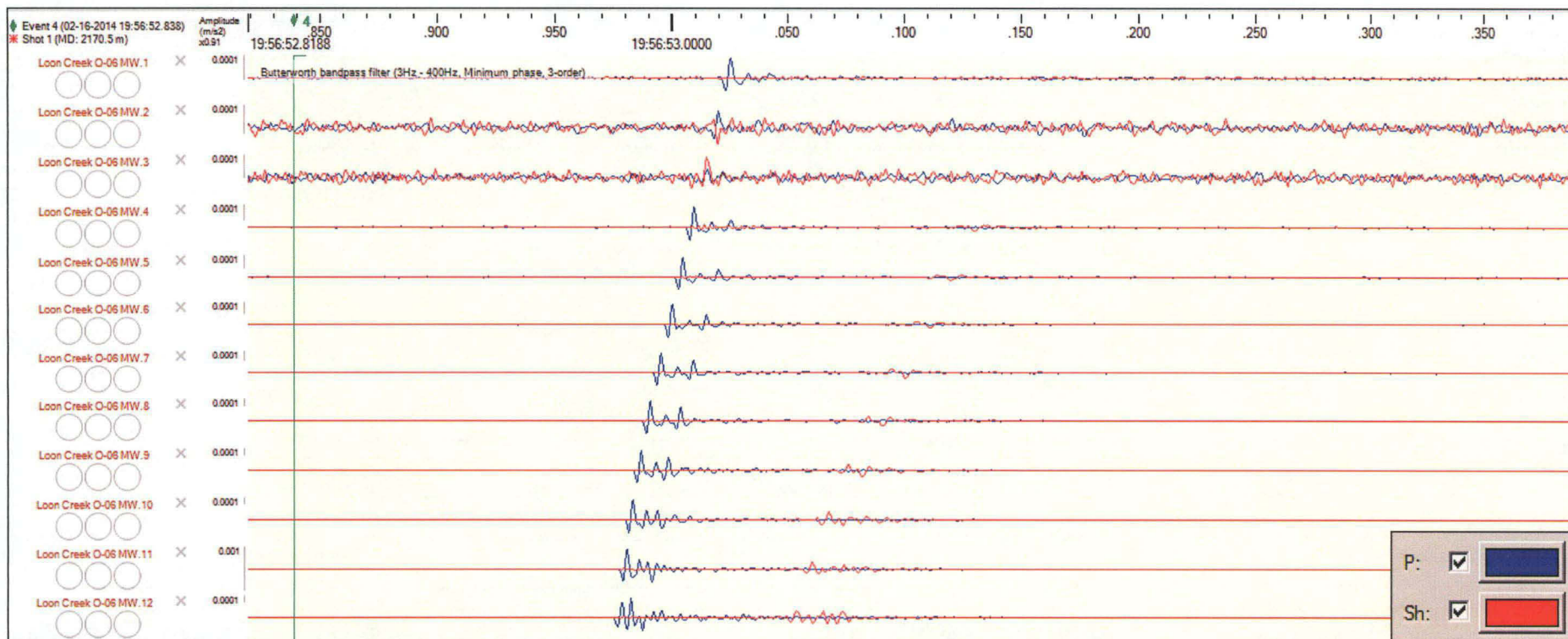
# Perf 4 shot 5



Microseismic Services  
Image · Interpret · Integrate

**Schlumberger**

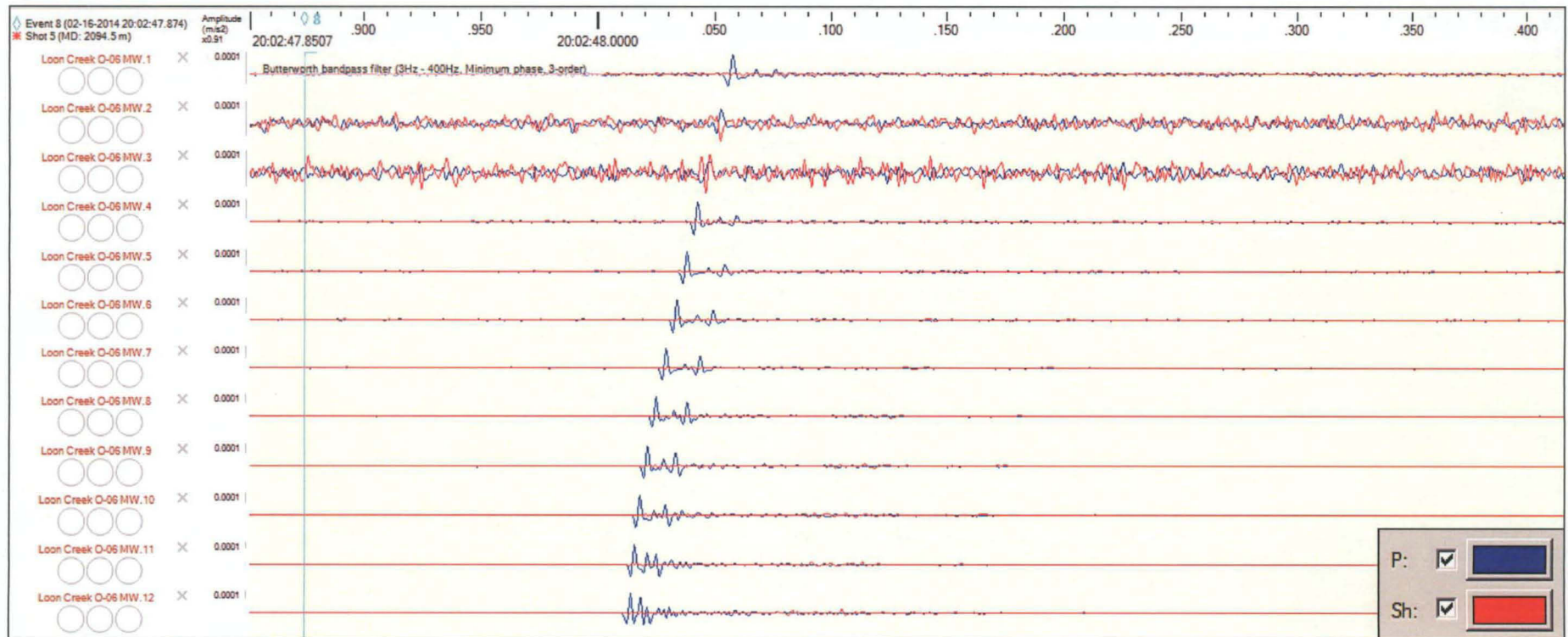
# Perf 9 shot 1



Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**

# Perf 9 shot 5

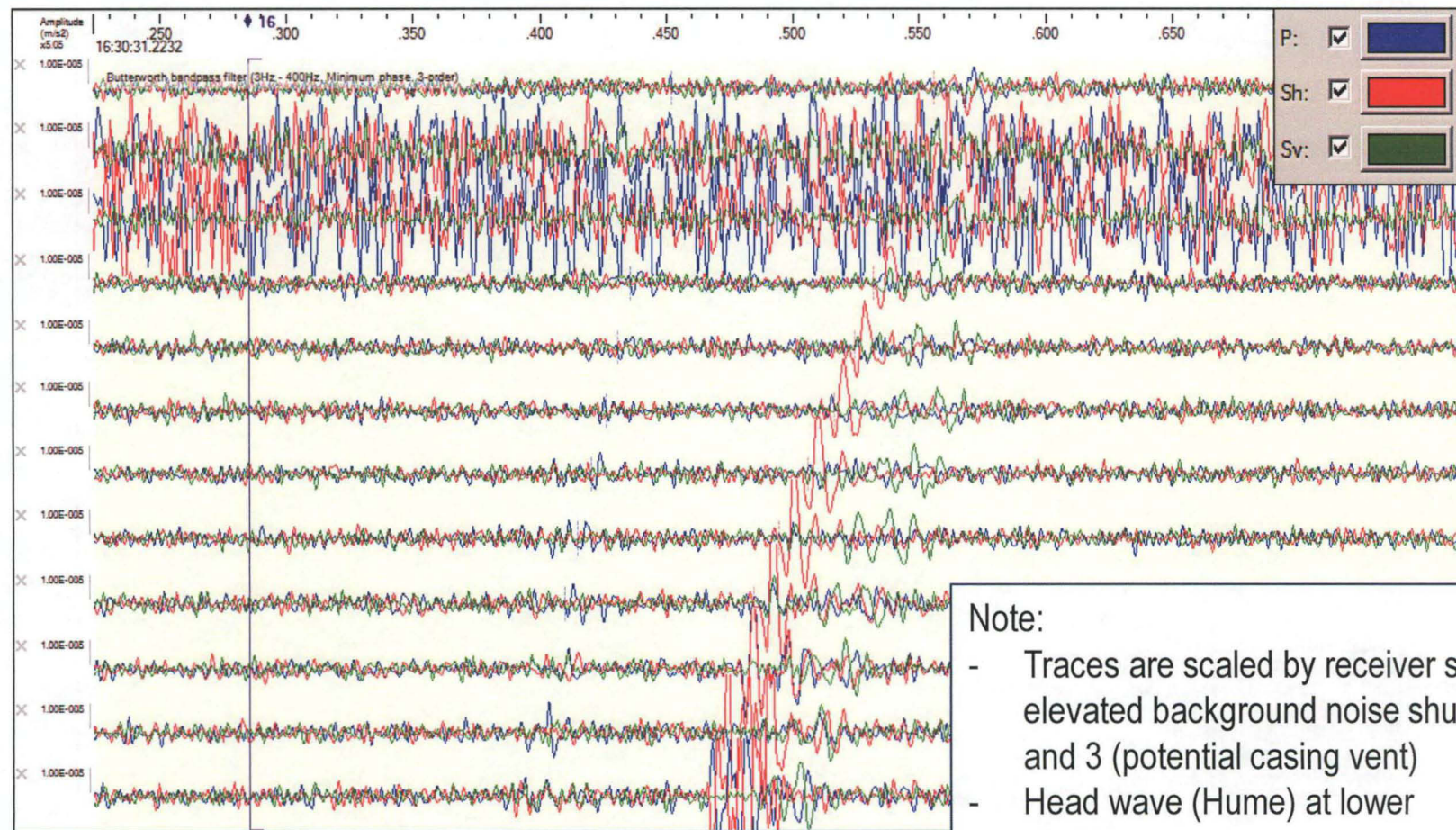


Microseismic Services  
Image · Interpret · Integrate

**Schlumberger**



# Waveform example of low SNR (MW -2)



## Note:

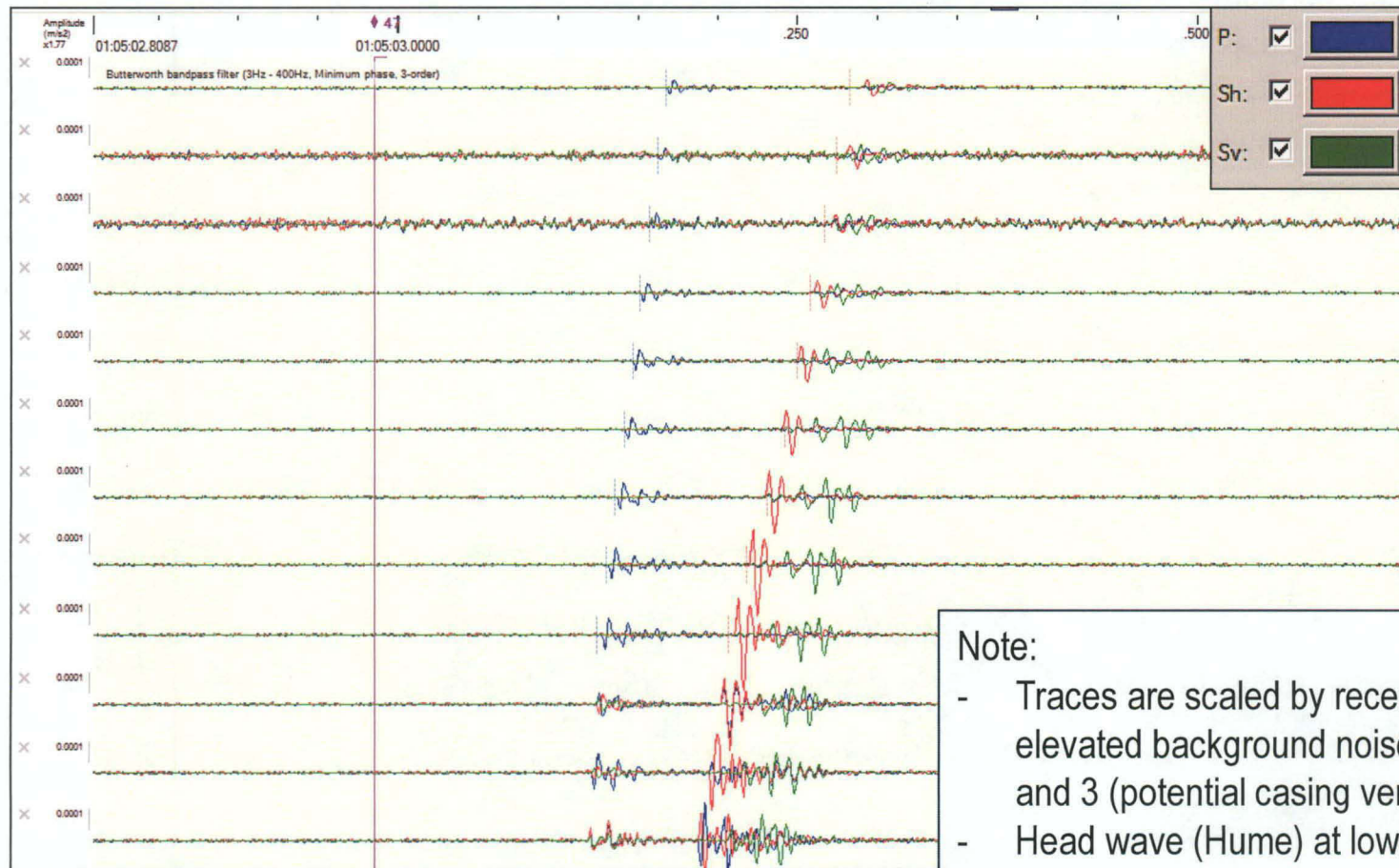
- Traces are scaled by receiver set: elevated background noise shuttle 2 and 3 (potential casing vent)
- Head wave (Hume) at lower shuttles



Microseismic Services  
Image·Interpret·Integrate

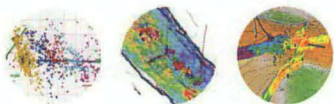
**Schlumberger**

# Waveform example of high SNR (MW -1.2)



## Note:

- Traces are scaled by receiver set: elevated background noise shuttle 2 and 3 (potential casing vent)
- Head wave (Hume) at lower shuttles

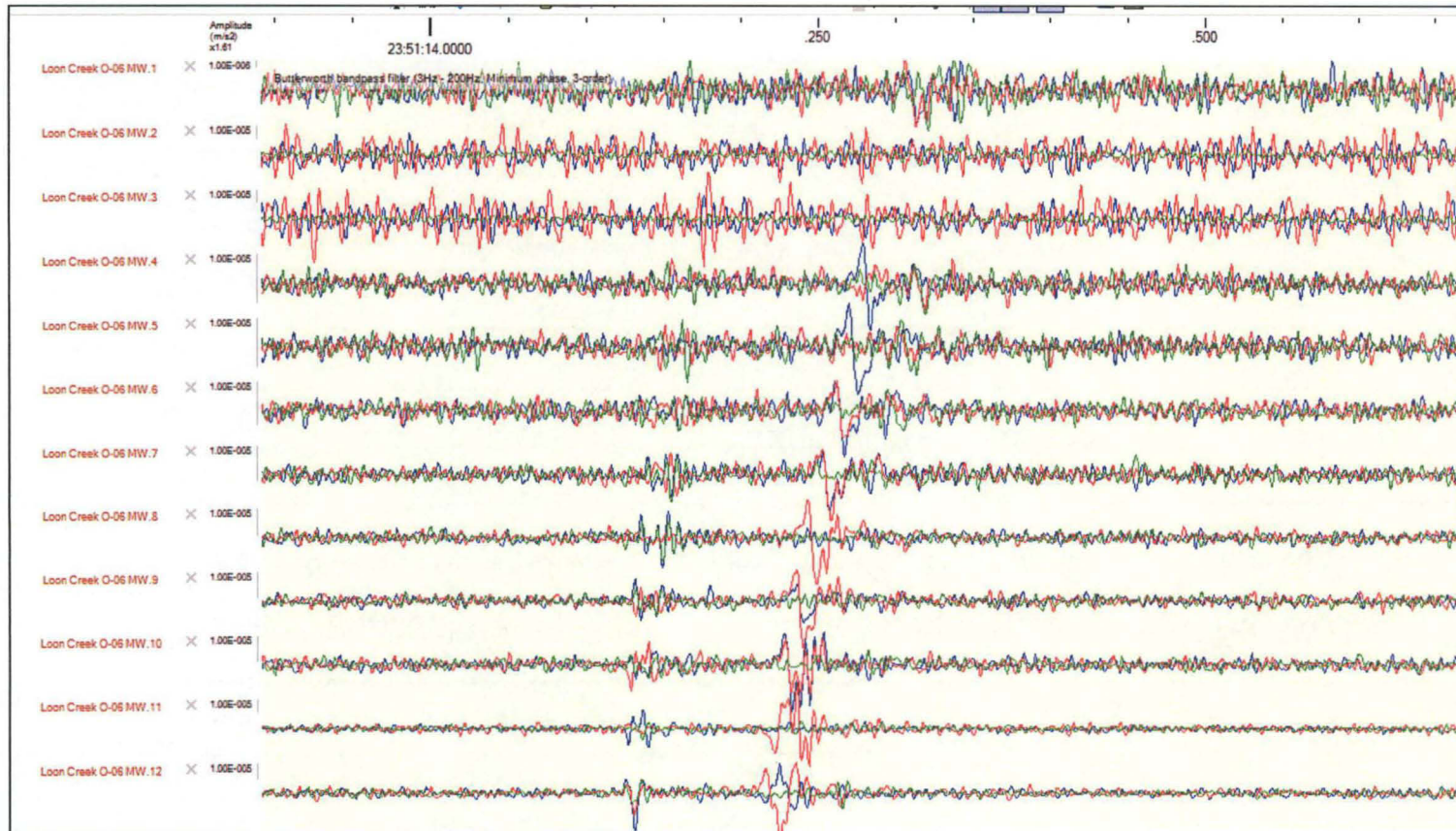
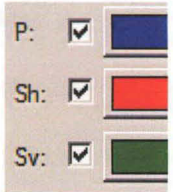


Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**



# Event example stage 1 (MW -1.7)

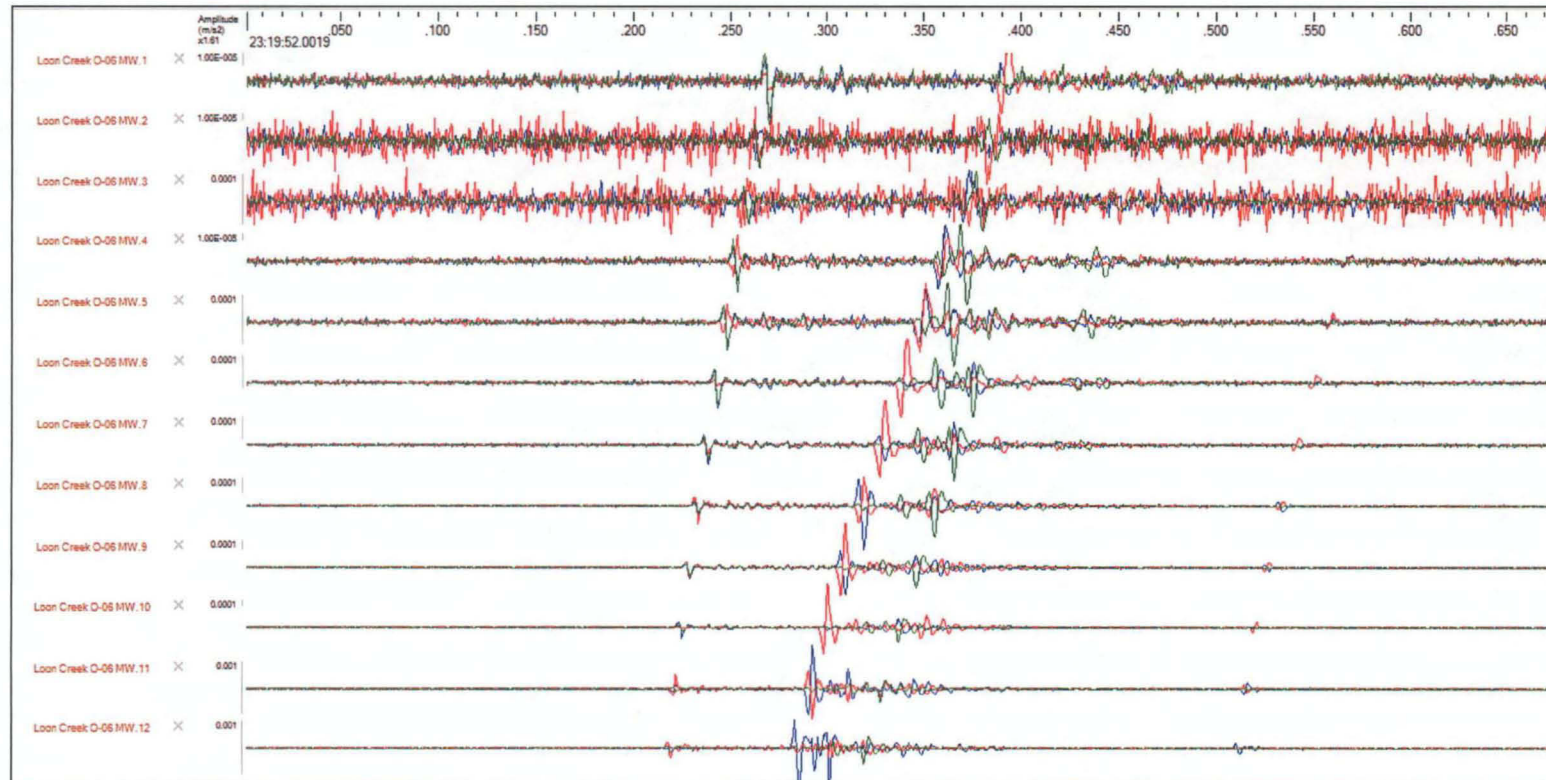
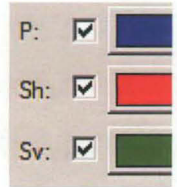


Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**



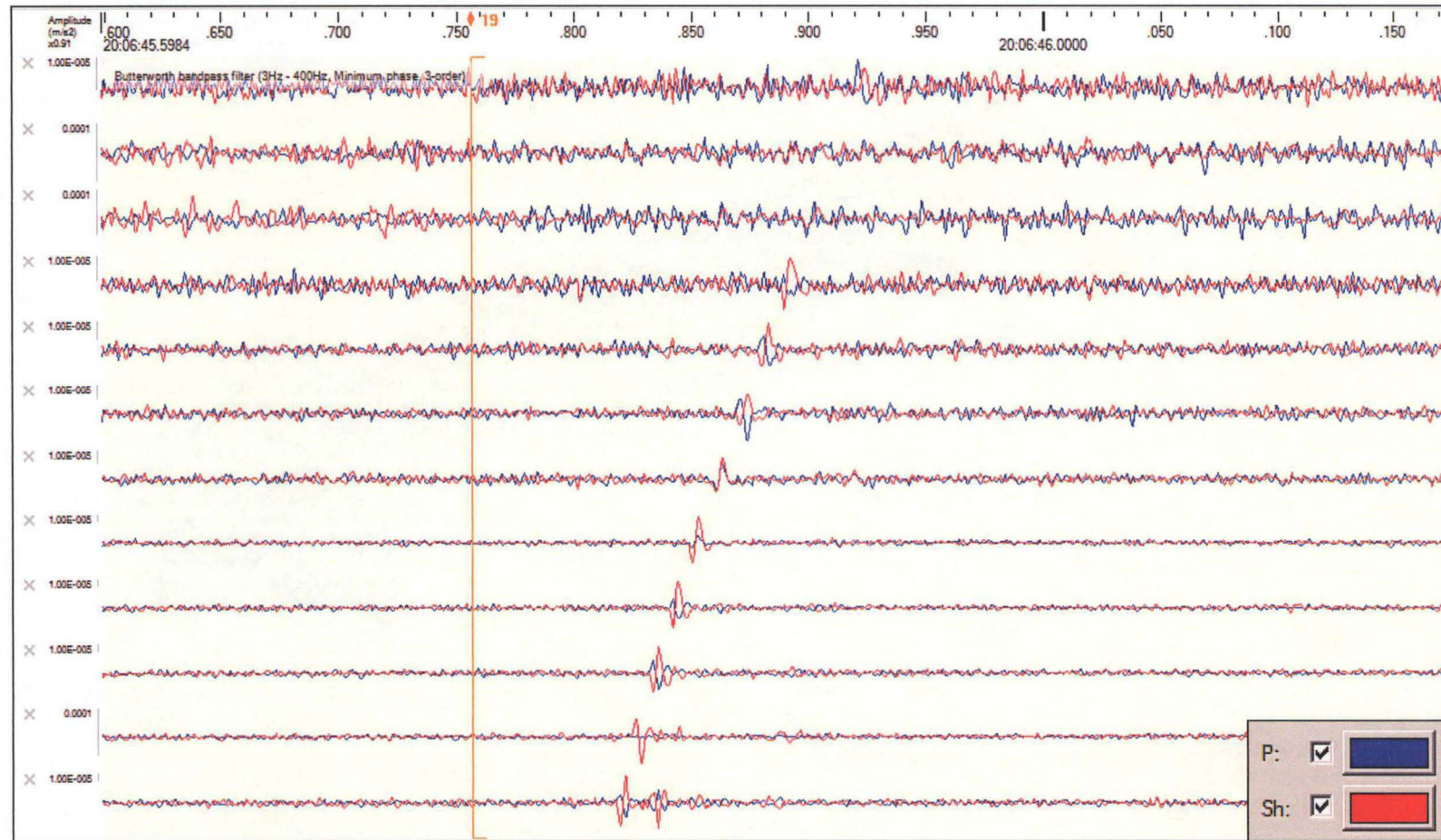
# Event example stage 9 (MW -1.6)



Microseismic Services  
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**Schlumberger**

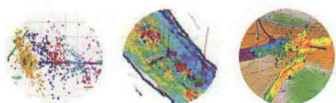
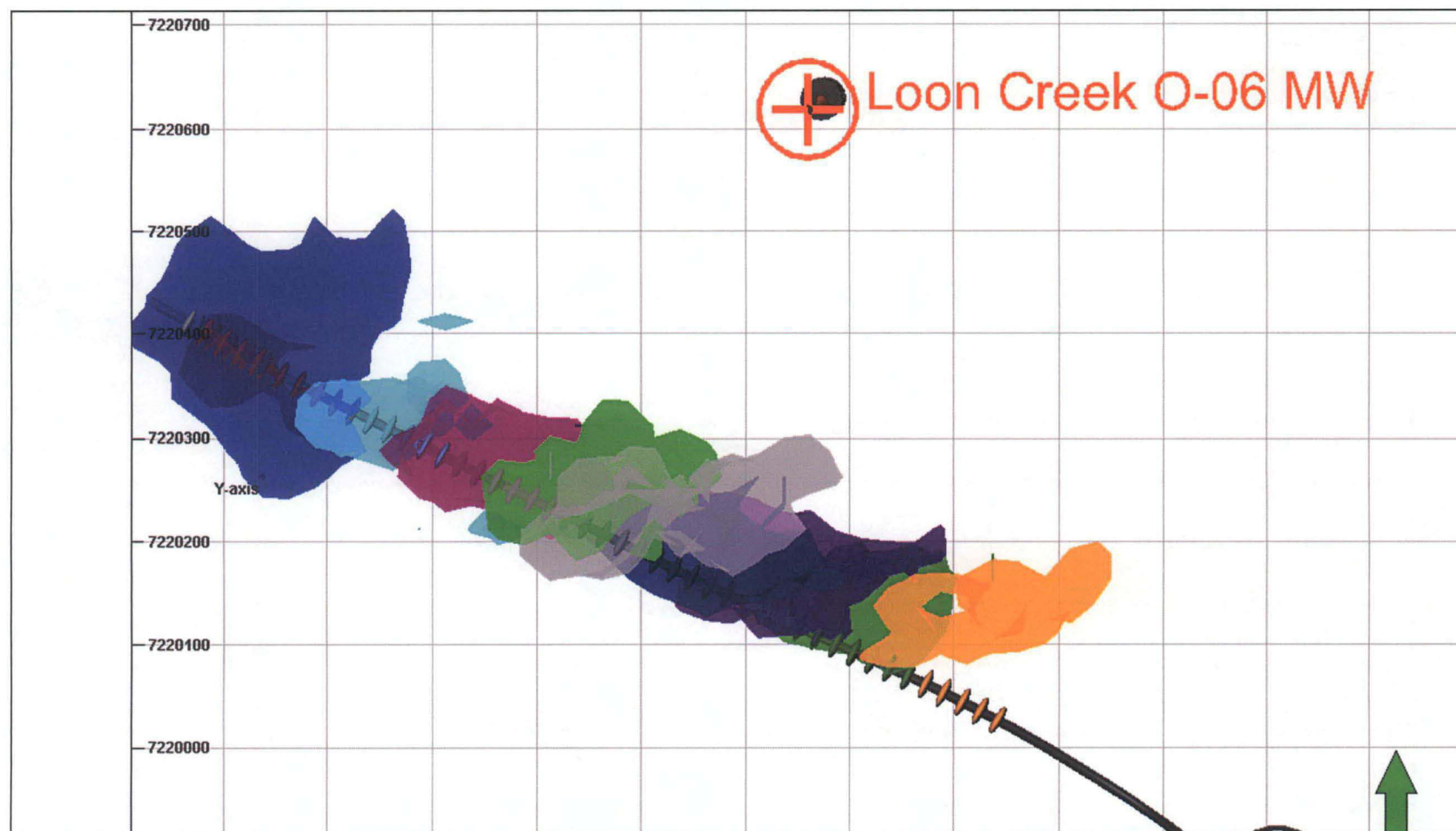
# Event example stage 2, no P-phase



Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**

# ESV (top view)

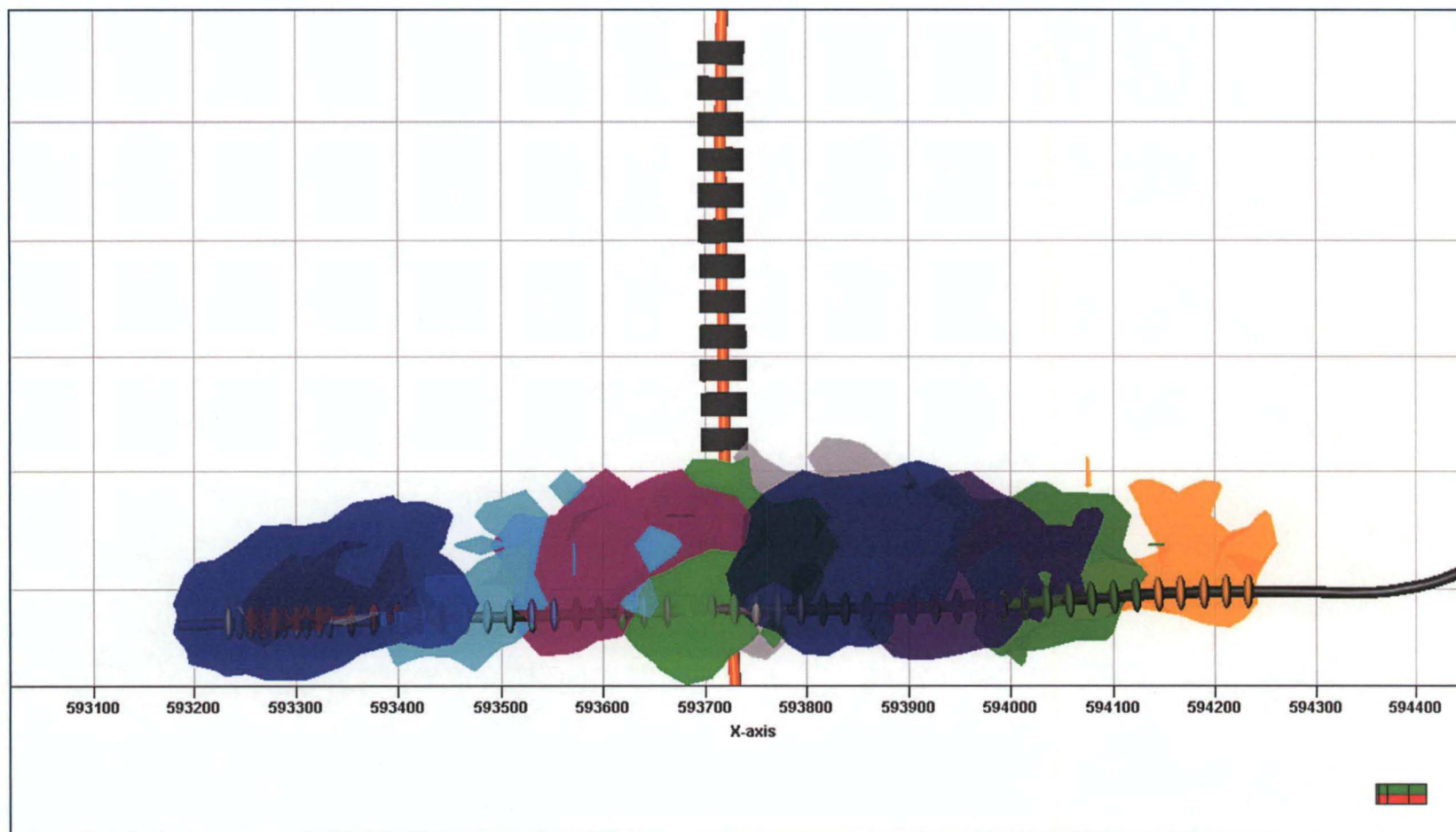


Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**



# ESV (side view, deviation 90, azimuth 30)



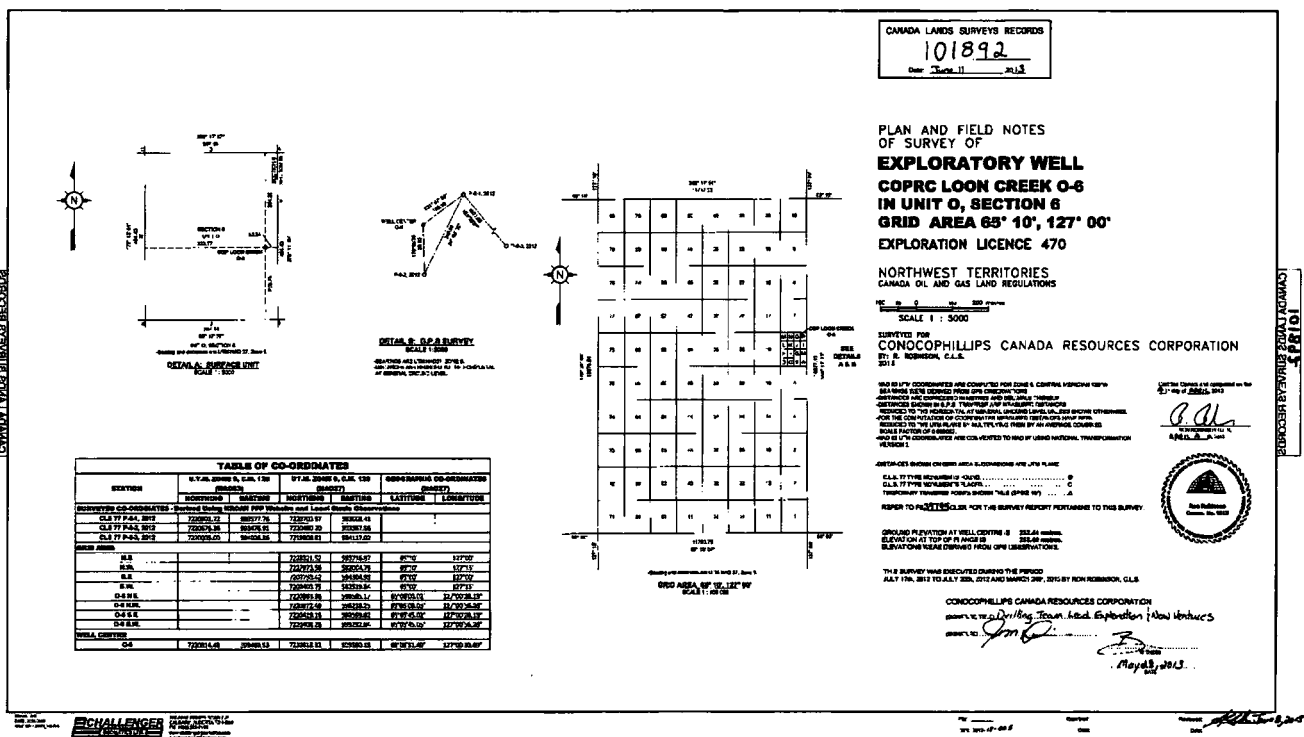
Microseismic Services  
Image·Interpret·Integrate

**Schlumberger**

# COPRC Loon Creek O-06

## Appendices to Well History Report

### I. Final Survey Plot of COPRC Loon Creek O-06



101892

Date: June 11, 2013

PLAN AND FIELD NOTES  
OF SURVEY OF**EXPLORATORY WELL****COPRC LOON CREEK O-6****IN UNIT O, SECTION 6****GRID AREA 65° 10', 127° 00'****EXPLORATION LICENCE 470**NORTHWEST TERRITORIES  
CANADA OIL AND GAS LAND REGULATIONS100 0 100 200 metres  
SCALE 1 : 5000SURVEYED FOR  
**CONOCOPHILLIPS CANADA RESOURCES CORPORATION**  
BY: R. ROBINSON, C.L.S.  
2013

NAD 83 UTM COORDINATES ARE COMPUTED FOR ZONE 9, CENTRAL MERIDIAN 120°W.  
 BEARINGS WERE DERIVED FROM GPS OBSERVATIONS.  
 DISTANCES ARE EXPRESSED IN METRES AND DECIMALS THEREOF.  
 DISTANCES SHOWN IN O.P.S. TRAVERSE ARE MEASURED DISTANCES  
 REDUCED TO THE HORIZONTAL AT GENERAL GROUND LEVEL UNLESS SHOWN OTHERWISE.  
 FOR THE COMPUTATION OF COORDINATES MEASURED DISTANCES HAVE BEEN  
 REDUCED TO THE UTM PLANE BY MULTIPLYING THEM BY AN AVERAGE COMBINED  
 SCALE FACTOR OF 0.999992.  
 NAD 83 UTM COORDINATES ARE CONVERTED TO NAD 27 USING NATIONAL TRANSFORMATION  
 VERSION 2.

Certified Correct and completed on the  
4<sup>th</sup> day of June 11, 2013

*R. Robinson*  
 RON ROBINSON C.L.S.  
 APR 11, 2013



DISTANCES SHOWN ON GRID AREA SUBDIVISIONS ARE UTM PLANE.

C.L.S. 77 TYPE MONUMENTS FOUND ..... ●  
 C.L.S. 77 TYPE MONUMENTS PLACED ..... ○  
 TEMPORARY TRAVERSE POINTS SHOWN THUS (SPIKE 10°) ..... △

REFER TO FB 39795 CLSR FOR THE SURVEY REPORT PERTAINING TO THIS SURVEY.

GROUND ELEVATION AT WELL CENTRE IS 233.44 metres.  
 ELEVATION AT TOP OF FLANGE IS 233.40 metres.  
 ELEVATIONS WERE DERIVED FROM GPS OBSERVATIONS.

THIS SURVEY WAS EXECUTED DURING THE PERIOD  
 JULY 17th, 2012 TO JULY 20th, 2012 AND MARCH 24th, 2013 BY RON ROBINSON, C.L.S.

CONOCOPHILLIPS CANADA RESOURCES CORPORATION

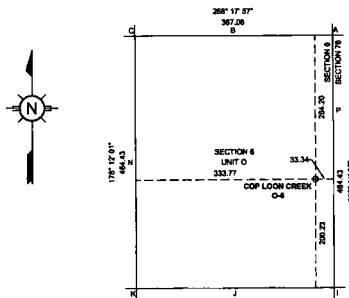
(SIGNATURE, TITLE) *Drilling Team Lead Exploration New Ventures*

(SIGNATURE) *[Signature]* .....  
 WITNESS  
*May 8, 2013*  
 DATE

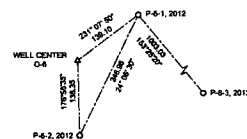
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 Rev: 2013-12-005

Examined: .....  
 Date: .....

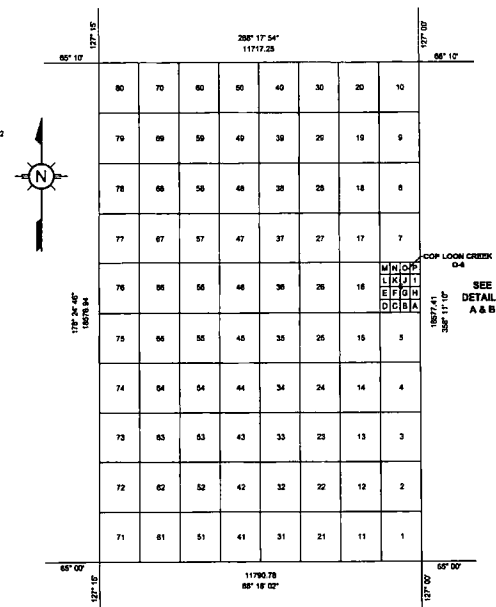
Reviewed: .....  
 Date: .....



UNIT O, SECTION 6  
 Bearings and distances are UTM NAD 27, Zone 9.  
**DETAIL A: SURFACE UNIT**  
 SCALE 1 : 5000



**DETAIL B: G.P.S. SURVEY**  
 SCALE 1:5000  
 BEARINGS ARE UTM NAD 27, ZONE 9.  
 DISTANCES ARE REDUCED TO THE HORIZONTAL  
 AT GENERAL GROUND LEVEL.



Bearings and distances are UTM NAD 27, Zone 9.  
**GRID AREA 65° 10', 127° 00'**  
 SCALE 1 : 100 000

| STATION                                                                                      | U.T.M. ZONE 9, C.M. 129<br>(NAD83) |           | U.T.M. ZONE 9, C.M. 129<br>(NAD27) |           | GEOGRAPHIC CO-ORDINATES<br>(NAD27) |               |
|----------------------------------------------------------------------------------------------|------------------------------------|-----------|------------------------------------|-----------|------------------------------------|---------------|
|                                                                                              | NORTHING                           | EASTING   | NORTHING                           | EASTING   | LATITUDE                           | LONGITUDE     |
| <b>SURVEYED CO-ORDINATES - Derived Using NRCAN PFP Website and Local Static Observations</b> |                                    |           |                                    |           |                                    |               |
| CLS 77 P-4-1, 2012                                                                           | 7220901.72                         | 593577.76 | 7220705.57                         | 593668.41 |                                    |               |
| CLS 77 P-4-2, 2012                                                                           | 7220675.35                         | 593476.91 | 7220480.20                         | 593567.56 |                                    |               |
| CLS 77 P-4-3, 2012                                                                           | 7220005.00                         | 594026.36 | 7219808.81                         | 594117.02 |                                    |               |
| <b>GRID AREA</b>                                                                             |                                    |           |                                    |           |                                    |               |
| N.E.                                                                                         |                                    |           | 7228321.52                         | 593716.87 | 65°10'                             | 127°00'       |
| N.W.                                                                                         |                                    |           | 7227975.56                         | 582004.79 | 65°10'                             | 127°15'       |
| S.E.                                                                                         |                                    |           | 7209753.42                         | 594304.93 | 65°00'                             | 127°00'       |
| S.W.                                                                                         |                                    |           | 7209403.75                         | 582519.34 | 65°00'                             | 127°15'       |
| O-6 N.E.                                                                                     |                                    |           | 7220883.38                         | 593585.17 | 65°06'00.02"                       | 127°00'28.13" |
| O-6 N.W.                                                                                     |                                    |           | 7220872.49                         | 582118.25 | 65°06'00.05"                       | 127°00'56.25" |
| O-6 S.E.                                                                                     |                                    |           | 7220419.28                         | 593599.82 | 65°05'45.02"                       | 127°00'28.13" |
| O-6 S.W.                                                                                     |                                    |           | 7220408.28                         | 593232.84 | 65°05'45.05"                       | 127°00'56.25" |
| <b>WELL CENTRE</b>                                                                           |                                    |           |                                    |           |                                    |               |
| O-6                                                                                          | 7220814.48                         | 593469.53 | 7220618.32                         | 593560.18 | 65°05'51.49"                       | 127°00'30.69" |

CHALLENGER  
 GEOMATICS LTD.

300-6940 PRINCE ROAD S.E.  
 CALGARY, ALBERTA T2B 0T0  
 (403) 263-4100  
 www.challengegeomatix.com  
 Email: info@challengegeomatix.com



**II. Completions Daily Reports**

# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 1  
Report Date: 1/30/2014  
Final Job Status:  
Final Report? Yes

### ALL HEADER INFORMATION

|                                            |                                |                                   |                          |                       |                                                 |
|--------------------------------------------|--------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------------------------------|
| Country<br>CANADA                          | State/Province<br>N.W.T.       | Region / Division<br>WCBU         | District<br>NEW VENTURES | Field Name<br>Loon    | Field Code<br>0579                              |
| Surface Legal Location<br>O-6 65-10 127-00 |                                | API / UWI<br>200/O-06 6510 127000 |                          | License No.<br>EL 470 |                                                 |
| Orig KB/RT (m)<br>257.60                   | Ground Elevation (m)<br>252.40 | KB-Grd (m)<br>5.20                | KB-CF (m)<br>4.87        | KB-TF (m)<br>4.22     | Total Depth (mKB)<br>1,856.00                   |
|                                            |                                |                                   |                          |                       | PBTD (All) (mKB)<br>Original Hole -<br>1,841.50 |

### JOB INFORMATION

|                                      |                                             |                               |                                           |
|--------------------------------------|---------------------------------------------|-------------------------------|-------------------------------------------|
| Job Category<br>WELL INTERVENTION    | Primary Job Type<br>MICROSEISMIC MONITORING | Secondary Job Type<br>RIGLESS | Total Field Estimate (Cost)<br>725,593.50 |
| Objective<br>Microseismic Monitoring |                                             |                               |                                           |
| Actual Start Date<br>1/30/2014 07:30 | End Date<br>2/17/2014 21:00                 | Abandon Date                  | Responsible Grp 1<br>coved                |
|                                      |                                             | Responsible Grp 2<br>lagartn  | Responsible Grp 3                         |

### AFE COST SUMMARY

|                                 |                                         |                                                |                                           |                                         |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|
| AFE / RFE / Maint.#<br>10359371 | Total AFE Amount (Cost)<br>1,190,100.00 | Total AFE + Supp Amount (Cost)<br>1,190,100.00 | Total Field Estimate (Cost)<br>725,593.50 | AFE-Field Estimate (Cost)<br>464,506.50 |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|

### DAILY INFORMATION

|                                      |                                    |                                      |                                     |                                       |
|--------------------------------------|------------------------------------|--------------------------------------|-------------------------------------|---------------------------------------|
| Report Start Date<br>1/30/2014 07:30 | Report End Date<br>1/30/2014 19:30 | Daily Cost Total (Cost)<br>47,646.00 | Cumulative Cost (Cost)<br>47,646.00 | Personnel Regular Hours (hr)<br>91.00 |
| Daily Contacts                       |                                    |                                      |                                     | Rig                                   |
| Tubing Pressure (kPa)                | Casing Pressure (kPa)<br>0         | Weather<br>overcast                  | Temperature (°C)<br>-20             | Lease Condition<br>Snow Covered       |

### Last 24hr Summary

Attended main safety meeting with medics and all services. All workers filled out medical forms. Travel to location with services. Held PJHA 01302014C with Schlumberger, Canol, IES, Peregrine on hazard associated with tasks to be performed. Perform lease walk around with services prior to spotting equipment. Remove tarps from heating wellhead. Check well pressures (slight vac). IES removed master valve, installed adapter flange and schlumberger flange using genie and crane. Spot, rig in Schlumberger E-line truck c/w full lube, bops and tool trap, picker and pressure truck. Purge and pressure test lube with propylene glycol. RIH with 154.5mm gauge ring/ccl. Tag top to Owens X-span csg patch at 1690.9mkb. Fluid level @ 80m. Log collars on way up to correlate. Did not see any restrictions on way in or out of hole. Rig off lube and secure well for night.

### Forecast

Set first plug 2m above upper csg patch @ 1690.56mkb. RIH set second plug 10m above top of first plug. Rig out services.

### DAILY TIME LOG

| Start Time | End Time | Dur (hr) | Time P-T-X | Operation                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|----------|----------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 07:30      | 08:30    | 1.00     | P          | Attended main safety meeting with all services and medics. Fill out medical information forms.                                                                                                                                                                                                                                                                                                       |
| 08:30      | 09:30    | 1.00     | P          | Travel to location with services. Tool hand went to drilling rig to retrieve plugs and adapter flange. Held PJHA 01302014C with Schlumberger, Canol picker, Peregrine pressure truck, IES on removal of master valve and installing flanges using genie, wireline work hazards. Checked all workers for valid tickets (good). Performed lease walk around with services prior to spotting equipment. |
| 09:30      | 10:30    | 1.00     | P          | Removed tarps from wellhead from heating wellhead prior 2 days. Chainlink fence was also removed prior. Check well pressures, slight vac. Remove chain and padlock from well. Ensure 10k gatevalve closed and no trapped pressure between valves. IES/Schlumberger removed master valve, installed adapter flange and Schlumberger flange using genie and picker.                                    |
| 10:30      | 14:00    | 3.50     | P          | Schlumberger assemble full 7 inch lubricator with bops and tool trap. Assemble tool string c/w 154.4mm gauge ring and ccl. Had some troubles assembling lube due to cold weather and hard to assemble. Install full lubricator onto wellhead.                                                                                                                                                        |
| 14:00      | 15:30    | 1.50     | P          | Purge and pressure test lube with propylene glycol to 1.4 and 7mpa. All connections on lube and wellhead tested good. Had a small leak off at packoff head rubber due to cold rubber. Was not able to achieve a flatline pressure test. Talked with superintendent said it was ok to continue.                                                                                                       |
| 15:30      | 18:00    | 2.50     | P          | RIH with 154.4mm gauge ring and ccl. Tag fluid top at 80m. Continue down to top of Owens x-span casing patch. Tag top of patch at 1690.9mkb. Log collars up to calibrate. Collar above @ 1685.5mkb. Did not see any restrictions on the way in or out of hole.                                                                                                                                       |
| 18:00      | 19:30    | 1.50     | P          | Rig off and lay down lubricator. Break down tool string to prep for plug run. Break down pack off head to check for any deficiencies (none found). Rig down picker and pressure truck. Cap and secure well. Tarp in and supply heat to wellhead, packoff head and plugs for morning.                                                                                                                 |

### FLUID SUMMARY

| Fluid | To lease (m³) | From lease (m³) | To well (m³) | From well (m³) | Left to recover (m³) |
|-------|---------------|-----------------|--------------|----------------|----------------------|
|       |               |                 |              |                |                      |

### DAILY COST

| BU Desc                                  | Vendor                         | Activity Code | Amount (Cost) |
|------------------------------------------|--------------------------------|---------------|---------------|
| Electric Line Servs on Drilling Ops.     | CANOL OILFIELD SERVICES INC    | K100          | 3,960.00      |
| Pressure Truck/Hot Oiler                 | PEREGRINE PRESSURE TESTING LTD | S990          | 10,550.00     |
| Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs) | ROKE TECHNOLOGIES LTD          | M220          | 1,850.00      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED    | K100          | 5,560.00      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED    | K100          | 5,560.00      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED    | K100          | 5,560.00      |

# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 1  
 Report Date: 1/30/2014  
 Final Job Status:  
 Final Report? ☐

### DAILY COST

| BU Desc                              | Vendor                         | Activity Code | Amount (Cost) |
|--------------------------------------|--------------------------------|---------------|---------------|
| Electric Line Servs on Drilling Ops. | SCHLUMBERGER CANADA LIMITED    | K100          | 8,306.00      |
| Wellsite Supervision & Engineering   | TECTONIC ENERGY CONSULTING INC | T130          | 6,300.00      |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m <sup>3</sup> ) |
|------|--------------------------------------|
|------|--------------------------------------|

### PERFORATIONS

| Date     | Zone                      | Top (mKB) | Btm (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|-----------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00  | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00  | 20.0                | Suspended      |
| 3/3/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00  | 20.0                | Suspended      |



# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 1  
Report Date: 1/30/2014  
Final Job Status:  
Final Report? Yes

### DAILY COST

| BU Desc                              | Vendor                         | Activity Code | Amount (Cost) |
|--------------------------------------|--------------------------------|---------------|---------------|
| Electric Line Servs on Drilling Ops. | SCHLUMBERGER CANADA LIMITED    | K100          | 8,306.00      |
| Wellsite Supervision & Engineering   | TECTONIC ENERGY CONSULTING INC | T130          | 6,300.00      |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m³) |
|------|-------------------------|
|------|-------------------------|

### PERFORATIONS

| Date     | Zone                      | Top (mKB) | Btm (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|-----------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00  | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00  | 20.0                | Suspended      |
| 3/3/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00  | 20.0                | Suspended      |

# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 2  
Report Date: 1/31/2014  
Final Job Status:  
Final Report? Yes

### ALL HEADER INFORMATION

|                                            |                                |                                   |                          |                       |                                                 |
|--------------------------------------------|--------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------------------------------|
| Country<br>CANADA                          | State/Province<br>N.W.T.       | Region / Division<br>WCBU         | District<br>NEW VENTURES | Field Name<br>Loon    | Field Code<br>0579                              |
| Surface Legal Location<br>O-6 65-10 127-00 |                                | API / UWI<br>200/O-06 6510 127000 |                          | License No.<br>EL 470 |                                                 |
| Orig KB/RT (m)<br>257.60                   | Ground Elevation (m)<br>252.40 | KB-Grd (m)<br>5.20                | KB-CF (m)<br>4.87        | KB-TF (m)<br>4.22     | Total Depth (mKB)<br>1,856.00                   |
|                                            |                                |                                   |                          |                       | PBTD (All) (mKB)<br>Original Hole -<br>1,841.50 |

### JOB INFORMATION

|                                      |                                             |                               |                                           |
|--------------------------------------|---------------------------------------------|-------------------------------|-------------------------------------------|
| Job Category<br>WELL INTERVENTION    | Primary Job Type<br>MICROSEISMIC MONITORING | Secondary Job Type<br>RIGLESS | Total Field Estimate (Cost)<br>725,593.50 |
| Objective<br>Microseismic Monitoring |                                             |                               |                                           |
| Actual Start Date<br>1/30/2014 07:30 | End Date<br>2/17/2014 21:00                 | Abandon Date                  | Responsible Grp 1<br>coved                |
|                                      |                                             | Responsible Grp 2<br>lagartn  | Responsible Grp 3                         |

### AFE COST SUMMARY

|                                 |                                         |                                                |                                           |                                         |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|
| AFE / RFE / Maint.#<br>10359371 | Total AFE Amount (Cost)<br>1,190,100.00 | Total AFE + Supp Amount (Cost)<br>1,190,100.00 | Total Field Estimate (Cost)<br>725,593.50 | AFE-Field Estimate (Cost)<br>464,506.50 |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|

### DAILY INFORMATION

|                                      |                                    |                                      |                                      |                                       |
|--------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|
| Report Start Date<br>1/31/2014 07:30 | Report End Date<br>1/31/2014 21:00 | Daily Cost Total (Cost)<br>74,337.00 | Cumulative Cost (Cost)<br>121,983.00 | Personnel Regular Hours (hr)<br>91.00 |
| Daily Contacts                       |                                    |                                      |                                      | Rig                                   |
| Tubing Pressure (kPa)                | Casing Pressure (kPa)<br>0         | Weather<br>overcast                  | Temperature (°C)<br>-10              | Lease Condition<br>Snow Covered       |

### Last 24hr Summary

Held PJHA #832126 with Schlumberger, Canol picker and Peregrine pressure truck on hazards with overhead loads, setting wireline plugs and pressure testing. Spot, rig in services. RIH with Smith M-CW 10K , 159.4mm retrievable bridge plug c/w HSN elements. 1 shear pin set for 2000lbs. Log onto and confirm depth. Set Plug @ 1688.20mkb at 13:15pm.

Re-build firing head. Make up second plug and tool string. RIH with second Smith M-CW 10K , 159.4mm retrievable bridge plug c/w HSN elements. 1 shear pin set for 2000lbs. Log onto and confirm depth. Set plug @1678.80mkb. Rig down E-line, install master valve and secure well. Install fence around well.

### r Forecast

ak down E-line lube and tool string. Finish rig out E-line, clean up and secure lease.

### DAILY TIME LOG

| Start Time | End Time | Dur (hr) | Time P-T-X | Operation                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|----------|----------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 07:30      | 08:30    | 1.00     | P          | Held PJHA #832126 with Schlumberger, Canol picker and Peregrine pressure truck on hazards with overhead loads, setting wireline plugs and pressure testing. Perform daily lease walk around inspections and checks. Check and record well pressures. (slight vac). Picker showed up at 08:00am, held PJHA meeting with picker operator. Check and validate all training certificates. (good).                                     |
| 08:30      | 10:45    | 2.25     | P          | Spot, rig in Canol picker and Perigrine pressure truck. Ensure all catch trays are in place under engines. Make up E-line tool string and full lubricator complete with bops and tool trap.                                                                                                                                                                                                                                       |
| 10:45      | 12:00    | 1.25     | P          | Perigrine fill and pressure test lube with propylene glycol to 1.4 and 7mpa. Had same issue as previous day. No leaks on lube but rubber in pack off head was leaking. ( pack off head was torn down and checked previous night and no deficiencies were found). Talked to superintendent and was ok to procede. Bleed back pressure and test fluid to pressure truck.                                                            |
| 12:00      | 14:30    | 2.50     | P          | RIH with Smith M-CW 10k retrievable bridge plug. 159.4mm OD c/w HSN elements. 1 Shear pin set for 2000lbs. Log onto and confirm depth.<br>Set plug @ 1688.20mkb CE<br>Top @ 1687.50mkb<br>Bottom @ 1688.9mkb.<br>Top of csg patch was tagged @ 1690.9mkb previous day.<br>CSG collar above plug @ 1685.5mkb<br>Plug was set at 13:15pm. Lost 300lbs weight after plug set. Set in 60 seconds<br>POOH E-line.<br>Fluid level @ 80m |
| 14:30      | 16:00    | 1.50     | P          | Re-build firing head. Make up second M-CW retrievable plug. Pick up tools into lube.                                                                                                                                                                                                                                                                                                                                              |
| 16:00      | 17:00    | 1.00     | T          | When picking up tools into lube the tools snagged on the lube causing the stroke to come out and engage the slips on the plug. Lay down tool string, repair setting tool and ensure in good working order. install new plug. Hoist tool string into lube and intall on well.                                                                                                                                                      |
| 17:00      | 17:30    | 0.50     | P          | Peregrine pressure truck purge and pressure test lube with propylene glycol to 1.4 and 7mpa. No leaks on lube connections but pack off head rubber had a leak.                                                                                                                                                                                                                                                                    |
| 30         | 19:30    | 2.00     | P          | RIH with second Smith M-CW 10k retrievable bridge plug. 159.4mm OD c/w HSN elements. 1 Shear pin set for 2000lbs. Log onto and confirm depth.<br>Set plug @ 1676.80mkb CE<br>Top @ 1676.10mkb<br>Bottom @ 1677.5mkb.<br>CSG collar above plug @ 1672.0mkb<br>Plug was set at 18:45pm. Lost 230lbs weight after plug set. Set in 50 seconds.<br>POOH E-line.<br>Fluid level @ 80m                                                  |



# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 2  
Report Date: 1/31/2014  
Final Job Status:  
Final Report? \

### DAILY TIME LOG

| Start Time | End Time | Dur (hr) | Time P-T-X | Operation                                                                                                                                                                                         |
|------------|----------|----------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19:30      | 21:00    | 1.50     | P          | Lay down E-line lube, rig off bops, tool trap, E-line flange and adaptor flange. Install master valve. Ensure wellhead secured, install fence around wellhead. Tidy tools and equipment on lease. |

### FLUID SUMMARY

| Fluid | To lease (m³) | From lease (m³) | To well (m³) | From well (m³) | Left to recover (m³) |
|-------|---------------|-----------------|--------------|----------------|----------------------|
|       |               |                 |              |                |                      |

### DAILY COST

| BU Desc                                     | Vendor                         | Activity Code | Amount (Cost) |
|---------------------------------------------|--------------------------------|---------------|---------------|
| Electric Line Servs on Drilling Ops.        | CANOL OILFIELD SERVICES INC    | K100          | 3,960.00      |
| Pressure Truck/Hot Oiler                    | PEREGRINE PRESSURE TESTING LTD | S990          | 4,762.00      |
| Welltesting (Eqpmt, Srvcs, PTA, Gov't Subs) | ROKE TECHNOLOGIES LTD          | M220          | 1,850.00      |
| Electric Line Servs on Drilling Ops.        | SCHLUMBERGER CANADA LIMITED    | K100          | 21,320.00     |
| Downhole Completion Equipment               | SCHLUMBERGER CANADA LIMITED    | C100          | 40,900.00     |
| Wellsite Supervision & Engineering          | TECTONIC ENERGY CONSULTING INC | T130          | 1,545.00      |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m³) |
|------|-------------------------|
|      |                         |

### PERFORATIONS

| Date     | Zone                      | Top (mKB) | Btm (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|-----------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00  | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00  | 20.0                | Suspended      |
| 3/3/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00  | 20.0                | Suspended      |



# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 2  
 Report Date: 1/31/2014  
 Final Job Status:  
 Final Report? Yes

### LY TIME LOG

| Start Time | End Time | Dur (hr) | Time P-T-X | Operation                                                                                                                                                                                         |
|------------|----------|----------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19:30      | 21:00    | 1.50     | P          | Lay down E-line lube, rig off bops, tool trap, E-line flange and adaptor flange. Install master valve. Ensure wellhead secured, install fence around wellhead. Tidy tools and equipment on lease. |

### FLUID SUMMARY

| Fluid | To lease (m³) | From lease (m³) | To well (m³) | From well (m³) | Left to recover (m³) |
|-------|---------------|-----------------|--------------|----------------|----------------------|
|       |               |                 |              |                |                      |

### DAILY COST

| BU Desc                                     | Vendor                         | Activity Code | Amount (Cost) |
|---------------------------------------------|--------------------------------|---------------|---------------|
| Electric Line Servs on Drilling Ops.        | CANOL OILFIELD SERVICES INC    | K100          | 3,960.00      |
| Pressure Truck/Hot Oiler                    | PEREGRINE PRESSURE TESTING LTD | S990          | 4,762.00      |
| Welltesting (Eqpmt, Srvcs, PTA, Gov't Subs) | ROKE TECHNOLOGIES LTD          | M220          | 1,850.00      |
| Electric Line Servs on Drilling Ops.        | SCHLUMBERGER CANADA LIMITED    | K100          | 21,320.00     |
| Downhole Completion Equipment               | SCHLUMBERGER CANADA LIMITED    | C100          | 40,900.00     |
| Wellsite Supervision & Engineering          | TECTONIC ENERGY CONSULTING INC | T130          | 1,545.00      |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m³) |
|------|-------------------------|
|      |                         |

### PERFORATIONS

| Date     | Zone                      | Top (mKB) | Bltn (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|------------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00   | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00   | 20.0                | Suspended      |
| 3/3/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00   | 20.0                | Suspended      |

# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 3  
Report Date: 2/5/2014  
Final Job Status:  
Final Report? Yes

### WELL HEADER INFORMATION

|                                            |                                |                                   |                          |                       |                                                                                  |
|--------------------------------------------|--------------------------------|-----------------------------------|--------------------------|-----------------------|----------------------------------------------------------------------------------|
| Country<br>CANADA                          | State/Province<br>N.W.T.       | Region / Division<br>WCBU         | District<br>NEW VENTURES | Field Name<br>Loon    | Field Code<br>0579                                                               |
| Surface Legal Location<br>O-6 65-10 127-00 |                                | API / UWI<br>200/O-06 6510 127000 |                          | License No.<br>EL 470 |                                                                                  |
| Orig KB/RT (m)<br>257.60                   | Ground Elevation (m)<br>252.40 | KB-Grd (m)<br>5.20                | KB-CF (m)<br>4.87        | KB-TF (m)<br>4.22     | Total Depth (mKB)<br>1,856.00<br>PBDT (All) (mKB)<br>Original Hole -<br>1,841.50 |

### JOB INFORMATION

|                                      |                                             |                               |                                                                                 |
|--------------------------------------|---------------------------------------------|-------------------------------|---------------------------------------------------------------------------------|
| Job Category<br>WELL INTERVENTION    | Primary Job Type<br>MICROSEISMIC MONITORING | Secondary Job Type<br>RIGLESS | Total Field Estimate (Cost)<br>725,593.50                                       |
| Objective<br>Microseismic Monitoring |                                             |                               |                                                                                 |
| Actual Start Date<br>1/30/2014 07:30 | End Date<br>2/17/2014 21:00                 | Abandon Date                  | Responsible Grp 1<br>coved<br>Responsible Grp 2<br>lagartn<br>Responsible Grp 3 |

### AFE COST SUMMARY

|                                 |                                         |                                                |                                           |                                         |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|
| AFE / RFE / Maint.#<br>10359371 | Total AFE Amount (Cost)<br>1,190,100.00 | Total AFE + Supp Amount (Cost)<br>1,190,100.00 | Total Field Estimate (Cost)<br>725,593.50 | AFE-Field Estimate (Cost)<br>464,506.50 |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|

### DAILY INFORMATION

|                                                                                                                                         |                                   |                                       |                                      |                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|
| Report Start Date<br>2/5/2014 07:30                                                                                                     | Report End Date<br>2/5/2014 18:00 | Daily Cost Total (Cost)<br>112,969.80 | Cumulative Cost (Cost)<br>234,952.80 | Personnel Regular Hours (hr)<br>60.00 |
| Daily Contacts<br>WS Superintendent, Derrick Cove, 780-831-1314; WS Supervisor, Justin Minault, 403-391-0714; Engineer, Theron Lagarde, |                                   |                                       |                                      | Rig                                   |
| Tubing Pressure (kPa)                                                                                                                   | Casing Pressure (kPa)<br>0        | Weather<br>Overcast                   | Temperature (°C)<br>-21              | Lease Condition<br>Snow Covered       |

### Last 24hr Summary

Move on Schlumberger Microseismic crew and equipment, Hold Pre-Job Safety meeting with all personnel, rig in and make up Microseismic tool string. RIH and conduct Vent flow Identification checks at depths as per program. Position final shuttle depths @ 1630.0 mKB (bottom) - 1300 mKB (Top), clamp off cable, secure well and rig out Crane.

### 24hr Forecast

Move in Veretas Surface Land Vibration equipment, conduct and record all findings.

### DAILY TIME LOG

| Start Time | End Time | Dur (hr) | Time P-T-X | Operation                                                                                                                                                                                                                                                                                                                              |
|------------|----------|----------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 07:30      | 08:00    | 0.50     | P          | Move Schlumberger Micro-Seismic equipment and Northern Crane onto location. Spot off to side of lease and conduct Pre-job safety meeting with all personnel. Review all personnel's tickets and CPC orientation, (all valid).                                                                                                          |
| 08:00      | 08:30    | 0.50     | P          | Spot equipment as per CPC. OH+S, and NEB Regulations.                                                                                                                                                                                                                                                                                  |
| 08:30      | 11:00    | 2.50     | P          | Remove 7 1/16" 10K top section, install 7 1/16" 10K x 7 1/16" 5K DSI. Make up VSIT-12 Tool String and start in hole.                                                                                                                                                                                                                   |
| 11:00      | 16:30    | 5.50     | P          | Conduct Function test at surface. O.K. RIH and correlate on depth with SLB COMP Neutron Log.<br><br>Conduct Vent Identification stops at the following stations:<br><br>#1 - 529.0 - 829.0 mKB<br>#2 - 544.0 - 874.0 mKB<br>#3 - 890.0 - 1220.0 mKB<br>#4 - 905.0 - 1235.0 mKB<br>#5 - 1250.0 - 1580.0 mKB<br>#6 - 1265.0 - 1595.0 mKB |
| 16:30      | 17:00    | 0.50     | P          | Shuttles positioned @ 1300.0 mKB (Top Shuttle) - 1630.0 mKB (bottom shuttle). Anchor tool and clamp cable.                                                                                                                                                                                                                             |
| 17:00      | 17:30    | 0.50     | P          | Rig down crane, secure well and equipment. SDFN.                                                                                                                                                                                                                                                                                       |

### FLUID SUMMARY

| Fluid | To lease (m³) | From lease (m³) | To well (m³) | From well (m³) | Left to recover (m³) |
|-------|---------------|-----------------|--------------|----------------|----------------------|
|       |               |                 |              |                |                      |

### DAILY COST

| BU Desc                                  | Vendor                      | Activity Code | Amount (Cost) |
|------------------------------------------|-----------------------------|---------------|---------------|
| Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs) | ROKE TECHNOLOGIES LTD       | M220          | 1,850.00      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED | K100          | 5,559.90      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED | K100          | 5,559.90      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED | K100          | 100,000.00    |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m³) |
|------|-------------------------|
|      |                         |

### FORATIONS

| Date     | Zone                      | Top (mKB) | Btm (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|-----------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00  | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00  | 20.0                | Suspended      |
| 3/3/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00  | 20.0                | Suspended      |



# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 4  
Report Date: 2/6/2014  
Final Job Status:  
Final Report? Yes

### ELL HEADER INFORMATION

|                                            |                                   |                           |                          |                       |                                              |
|--------------------------------------------|-----------------------------------|---------------------------|--------------------------|-----------------------|----------------------------------------------|
| Country<br>CANADA                          | State/Province<br>N.W.T.          | Region / Division<br>WCBU | District<br>NEW VENTURES | Field Name<br>Loon    | Field Code<br>0579                           |
| Surface Legal Location<br>O-6 65-10 127-00 | API / UWI<br>200/O-06 6510 127000 |                           |                          | License No.<br>EL 470 |                                              |
| Orig KB/RT (m)<br>257.60                   | Ground Elevation (m)<br>252.40    | KB-Grd (m)<br>5.20        | KB-CF (m)<br>4.87        | KB-TF (m)<br>4.22     | Total Depth (mKB)<br>1,856.00                |
|                                            |                                   |                           |                          |                       | PBTD (All) (mKB)<br>Original Hole - 1,841.50 |

### JOB INFORMATION

|                                      |                                             |                               |                                           |
|--------------------------------------|---------------------------------------------|-------------------------------|-------------------------------------------|
| Job Category<br>WELL INTERVENTION    | Primary Job Type<br>MICROSEISMIC MONITORING | Secondary Job Type<br>RIGLESS | Total Field Estimate (Cost)<br>725,593.50 |
| Objective<br>Microseismic Monitoring |                                             |                               |                                           |
| Actual Start Date<br>1/30/2014 07:30 | End Date<br>2/17/2014 21:00                 | Abandon Date                  | Responsible Grp 1<br>coved                |
|                                      |                                             | Responsible Grp 2<br>lagarhn  | Responsible Grp 3                         |

### AFE COST SUMMARY

|                                 |                                         |                                                |                                           |                                         |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|
| AFE / RFE / Maint.#<br>10359371 | Total AFE Amount (Cost)<br>1,190,100.00 | Total AFE + Supp Amount (Cost)<br>1,190,100.00 | Total Field Estimate (Cost)<br>725,593.50 | AFE-Field Estimate (Cost)<br>464,506.50 |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|

### DAILY INFORMATION

|                                                                                                                                         |                                    |                                       |                                      |                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|
| Report Start Date<br>2/6/2014 00:00                                                                                                     | Report End Date<br>2/17/2014 07:30 | Daily Cost Total (Cost)<br>204,969.80 | Cumulative Cost (Cost)<br>439,922.60 | Personnel Regular Hours (hr)<br>76.00 |
| Daily Contacts<br>WS Superintendent, Derrick Cove, 780-831-1314; WS Supervisor, Justin Minault, 403-391-0714; Engineer, Theron Lagarde, |                                    |                                       |                                      | Rig                                   |
| Tubing Pressure (kPa)                                                                                                                   | Casing Pressure (kPa)              | Weather                               | Temperature (°C)                     | Lease Condition<br>Snow Covered       |

### Last 24hr Summary

Monitor micro seismic activity during completions frac operations on E-76 65-10 126-45.

### 24hr Forecast

Pull out of hole geophones and rig out wireline equipment

### DAILY TIME LOG

| Start Time | End Time | Dur (hr) | Time P-T-X | Operation                                                                                           |
|------------|----------|----------|------------|-----------------------------------------------------------------------------------------------------|
| 00:00      | 07:30    | 271.50   | P          | Monitored down hole micro seismic activity during completions frac operations on E-76 65-10 126-45. |

### FLUID SUMMARY

| Fluid | To lease (m³) | From lease (m³) | To well (m³) | From well (m³) | Left to recover (m³) |
|-------|---------------|-----------------|--------------|----------------|----------------------|
|       |               |                 |              |                |                      |

### DAILY COST

| BU Desc                                  | Vendor                      | Activity Code | Amount (Cost) |
|------------------------------------------|-----------------------------|---------------|---------------|
| Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs) | ROKE TECHNOLOGIES LTD       | M220          | 1,850.00      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED | K100          | 5,559.90      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED | K100          | 5,559.90      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED | K100          | 192,000.00    |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m³) |
|------|-------------------------|
|      |                         |

### PERFORATIONS

| Date     | Zone                      | Top (mKB) | Btm (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|-----------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00  | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00  | 20.0                | Suspended      |
| 3/3/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00  | 20.0                | Suspended      |



# Daily Morning Report

## COPRC LOON CREEK O-06 65-10 127-00

Report #: 5  
Report Date: 2/17/2014  
Final Job Status:  
Final Report? Yes

### WELL HEADER INFORMATION

|                                            |                                |                                   |                          |                       |                                                 |
|--------------------------------------------|--------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------------------------------|
| Country<br>CANADA                          | State/Province<br>N.W.T.       | Region / Division<br>WCBU         | District<br>NEW VENTURES | Field Name<br>Loon    | Field Code<br>0579                              |
| Surface Legal Location<br>O-6 65-10 127-00 |                                | API / UWI<br>200/O-06 6510 127000 |                          | License No.<br>EL 470 |                                                 |
| Orig KB/RT (m)<br>257.60                   | Ground Elevation (m)<br>252.40 | KB-Grd (m)<br>5.20                | KB-CF (m)<br>4.87        | KB-TF (m)<br>4.22     | Total Depth (mKB)<br>1,856.00                   |
|                                            |                                |                                   |                          |                       | PBTD (All) (mKB)<br>Original Hole -<br>1,841.50 |

### JOB INFORMATION

|                                      |                                             |                               |                                           |
|--------------------------------------|---------------------------------------------|-------------------------------|-------------------------------------------|
| Job Category<br>WELL INTERVENTION    | Primary Job Type<br>MICROSEISMIC MONITORING | Secondary Job Type<br>RIGLESS | Total Field Estimate (Cost)<br>725,593.50 |
| Objective<br>Microseismic Monitoring |                                             |                               |                                           |
| Actual Start Date<br>1/30/2014 07:30 | End Date<br>2/17/2014 21:00                 | Abandon Date                  | Responsible Grp 1<br>coved                |
|                                      |                                             | Responsible Grp 2<br>lagartn  | Responsible Grp 3                         |

### AFE COST SUMMARY

|                                 |                                         |                                                |                                           |                                         |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|
| AFE / RFE / Maint.#<br>10359371 | Total AFE Amount (Cost)<br>1,190,100.00 | Total AFE + Supp Amount (Cost)<br>1,190,100.00 | Total Field Estimate (Cost)<br>725,593.50 | AFE-Field Estimate (Cost)<br>464,506.50 |
|---------------------------------|-----------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------------------------|

### DAILY INFORMATION

|                                                                                                                                         |                                    |                                       |                                      |                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|
| Report Start Date<br>2/17/2014 07:30                                                                                                    | Report End Date<br>2/17/2014 19:30 | Daily Cost Total (Cost)<br>285,670.90 | Cumulative Cost (Cost)<br>725,593.50 | Personnel Regular Hours (hr)<br>60.00 |
| Daily Contacts<br>WS Superintendent, Derrick Cove, 780-831-1314; WS Supervisor, Justin Minault, 403-391-0714; Engineer, Theron Lagarde, |                                    |                                       |                                      |                                       |
| Rig                                                                                                                                     |                                    |                                       |                                      |                                       |
| Tubing Pressure (kPa)                                                                                                                   | Casing Pressure (kPa)              | Weather<br>Overcast                   | Temperature (°C)<br>-32              | Lease Condition<br>Snow Covered       |

### Last 24hr Summary

Pulled out of the hole geophones. Installed wellhead and secured the well. Re-installed vent nanny onto SCVL.

### 24hr Forecast

Monitor SCVL flow through Roke vent nanny.

### DAILY TIME LOG

| Start Time | End Time | Dur (hr) | Time P.T.-X | Operation                                                                                                                                                                                                                                                    |
|------------|----------|----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 19:30      | 19:30    | 12.00    | P           | Held a daily safety and operations meeting. Spotted and readied crane. Checked pressure: SICP: 0 kPa. Pulled out of the hole geophones. Removed wireline flange and installed wellhead top sections. Secured well. Wellhead chained and locked (combo 6127). |

### FLUID SUMMARY

| Fluid | To lease (m³) | From lease (m³) | To well (m³) | From well (m³) | Left to recover (m³) |
|-------|---------------|-----------------|--------------|----------------|----------------------|
|       |               |                 |              |                |                      |

### DAILY COST

| BU Desc                                  | Vendor                               | Activity Code | Amount (Cost) |
|------------------------------------------|--------------------------------------|---------------|---------------|
| Surface Completion Equipment Rental      | CORNERSTONE OILFIELD SERVICES LTD    | Q300          | 7,920.00      |
| Surface Completion Equipment Rental      | CORNERSTONE OILFIELD SERVICES LTD    | Q300          | 7,920.00      |
| Surface Completion Equipment Rental      | CORNERSTONE OILFIELD SERVICES LTD    | Q300          | 1,500.00      |
| Surface Completion Equipment Rental      | CORNERSTONE OILFIELD SERVICES LTD    | Q300          | 4,760.00      |
| Surface Completion Equipment Rental      | CORNERSTONE OILFIELD SERVICES LTD    | Q300          | 4,760.00      |
| Trucking/Hauling/ Hot Shot Services      | MCKAY EXPEDITING AND LOGISTICS LTD   | P100          | 24,530.00     |
| Trucking/Hauling/ Hot Shot Services      | MCKAY EXPEDITING AND LOGISTICS LTD   | P100          | 2,531.10      |
| Trucking/Hauling/ Hot Shot Services      | NCSG CRANE & HEAVY HAUL SERVICES LTD | P100          | 26,780.00     |
| Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs) | ROKE TECHNOLOGIES LTD                | M220          | 1,850.00      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED          | K100          | 5,559.90      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED          | K100          | 5,559.90      |
| Electric Line Servs on Drilling Ops.     | SCHLUMBERGER CANADA LIMITED          | K100          | 192,000.00    |

### CUMULATIVE JOB FLARED GAS BY ZONE

| Zone | Volume Gas Total (E3m³) |
|------|-------------------------|
|      |                         |

### PERFORATIONS

| Date     | Zone                      | Top (mKB) | Btm (mKB) | Shot Dens (shots/m) | Current Status |
|----------|---------------------------|-----------|-----------|---------------------|----------------|
| 3/2/2013 | Basal Lower Canol, Ori... | 1,769.00  | 1,770.00  | 20.0                | Suspended      |
| 3/3/2013 | Middle Lower Canol, O...  | 1,727.00  | 1,728.00  | 20.0                | Suspended      |
| 3/2/2013 | Upper Lower Canol, Or...  | 1,692.00  | 1,693.00  | 20.0                | Suspended      |

**III. Final Completions Schematic**



# Current Schematic

## COPRC LOON CREEK O-06 65-10 127-00

|                                               |                                |                                                                                                                          |                          |                       |                               |
|-----------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|-------------------------------|
| Interface Legal Location<br>J-6 65-10 127-00  |                                | API / UWI<br>200/O-06 6510 127000                                                                                        |                          | License No.<br>EL 470 |                               |
| Country<br>CANADA                             | State/Province<br>N.W.T.       | Region / Division<br>WCBU                                                                                                | District<br>NEW VENTURES | Field Name<br>Loon    | Field Code<br>0579            |
| Orig KB/RT (m)<br>257.60                      | Ground Elevation (m)<br>252.40 | KB-Ground Distance (m)<br>5.20                                                                                           | KB-CF (m)<br>4.87        | KB-TF (m)<br>4.22     | Total Depth (mKB)<br>1,856.00 |
| VERTICAL - Original Hole, 5/7/2014 9:21:02 AM |                                | <b>WELLHEADS</b>                                                                                                         |                          |                       |                               |
| MD (mKB)<br>( )                               | Incl (°)                       | Type<br>Screw On Bowl                                                                                                    |                          |                       | Install Date<br>1/31/2013     |
| Vertical schematic (actual)                   |                                | Des                                                                                                                      | Make                     | Model                 | WP (kPa)                      |
| <b>WELL CONFIG: VERTICAL</b>                  |                                | Screw On Casing Bowl                                                                                                     | STREAM FLOW              | SOW                   | 34,500                        |
|                                               |                                | <b>CASING STRINGS</b>                                                                                                    |                          |                       |                               |
|                                               |                                | Csg Des                                                                                                                  | OD (mm)                  | Wt/Len (kg/m)         | Grade                         |
|                                               |                                | Surface                                                                                                                  | 244.5                    | 53.574                | K-55                          |
|                                               |                                | Production                                                                                                               | 177.8                    | 38.692                | P-110                         |
|                                               |                                | <b>PBTDs</b>                                                                                                             |                          |                       |                               |
|                                               |                                | Date                                                                                                                     | Type                     | Depth (mKB)           | KO MD (mKB)                   |
|                                               |                                | 2/26/2013                                                                                                                | Float Collar             | 1,841.50              |                               |
|                                               |                                | <b>PERFORATIONS</b>                                                                                                      |                          |                       |                               |
|                                               |                                | Date                                                                                                                     | Top (mKB)                | Btm (mKB)             | Zone                          |
|                                               |                                | 3/3/2013                                                                                                                 | 1,692.00                 | 1,693.00              | Upper Lower...                |
|                                               |                                | 3/3/2013                                                                                                                 | 1,727.00                 | 1,728.00              | Middle Lower...               |
|                                               |                                | 3/2/2013                                                                                                                 | 1,769.00                 | 1,770.00              | Basal Lower...                |
|                                               |                                | <b>OTHER IN HOLE</b>                                                                                                     |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 3/22/2013                                                                                                                | Casing Patch             | 1,767.56              | 1,771.43                      |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 155.2                                                                                                                    | 139.7                    | Core-lab              | X-Span                        |
|                                               |                                | Comment<br>Isolating ``Basal`` Lower Canol Perforations from 1769.0 to 1770.0 mKB                                        |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 3/22/2013                                                                                                                | Casing Patch             | 1,725.96              | 1,729.83                      |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 155.2                                                                                                                    | 139.7                    | Core-lab              | X-Span                        |
|                                               |                                | Comment<br>Isolating ``Middle`` Lower Canol Perforations from 1727.0 to 1728.0 mKB                                       |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 3/22/2013                                                                                                                | Casing Patch             | 1,690.56              | 1,694.43                      |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 155.2                                                                                                                    | 139.7                    | Core-lab              | X-Span                        |
|                                               |                                | Comment<br>Isolating ``Upper`` Lower Canol Perforations from 1692.0 to 1693.0 mKB                                        |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 3/22/2013                                                                                                                | Barrier - Fluid          | 125.00                | 1,856.00                      |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 155.2                                                                                                                    |                          | Fresh water           | TDS<4000 ppm                  |
|                                               |                                | Comment<br>Fresh water containing TDS<4000 ppm                                                                           |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 3/22/2013                                                                                                                | Barrier - Fluid          | 100.00                | 125.00                        |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 155.2                                                                                                                    |                          | Propylene Glycol      | Mixed with 30 % H2O           |
|                                               |                                | Comment<br>Propylene Glycol Mixture to winterize wellhead                                                                |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 1/31/2014                                                                                                                | Retrievable Bridge Plug  | 1,687.50              | 1,688.90                      |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 159.4                                                                                                                    |                          | Smith                 | M-CW                          |
|                                               |                                | Comment<br>Smith M-CW retrievable bridge plug. Pinned for slickline retrieval. 1 pin @ 2000lbs shear.<br>CE @ 1688.20mkb |                          |                       |                               |
|                                               |                                | Run Date                                                                                                                 | Description              | Top Depth (mKB)       | Bottom Depth (mKB)            |
|                                               |                                | 1/31/2014                                                                                                                | Retrievable Bridge Plug  | 1,676.10              | 1,677.50                      |
|                                               |                                | OD (mm)                                                                                                                  | ID (mm)                  | Make                  | Model                         |
|                                               |                                | 159.4                                                                                                                    |                          | Smith                 | M-CW                          |
|                                               |                                | Comment<br>Smith M-CW retrievable bridge plug. Pinned for slickline retrieval. 1 pin @ 2000lbs shear.<br>CE @ 1676.8mkb  |                          |                       |                               |



**IV. Completions Daily Activity and Cost Summary**

# Daily Activity and Cost Summary

## COPRC LOON CREEK O-06 65-10 127-00

|                                 |                                                |                                     |                                           |                                         |
|---------------------------------|------------------------------------------------|-------------------------------------|-------------------------------------------|-----------------------------------------|
| b Category<br>WELL INTERVENTION | Primary Job Type<br>MICROSEISMIC<br>MONITORING | Secondary Job Type<br>RIGLESS       | Actual Start Date<br>1/30/2014 07:30      | End Date<br>2/17/2014 21:00             |
| AFE / RFE / Maint.#<br>10359371 | Total Job AFE Amount (Cost)<br>1,190,100.00    | AFE+Supp Amt (Cost)<br>1,190,100.00 | Total Field Estimate (Cost)<br>725,593.50 | AFE-Field Estimate (Cost)<br>464,506.50 |

Objective  
Microseismic Monitoring

|            |             |          |
|------------|-------------|----------|
| Contractor | Rig Name/No | Rig Type |
|------------|-------------|----------|

### DAILY ACTIVITY & COST SUMMARY

| Report No. | Start Date      | Daily Cost Total (Cost) | Cum Cost (Cost) | Last 24hr Sum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------|-----------------|-------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | 1/30/2014 07:30 | 47,646.00               | 47,646.00       | Attended main safety meeting with medics and all services. All workers filled out medical forms. Travel to location with services. Held PJHA 01302014C with Schlumberger, Canol, IES, Peregrine on hazard associated with tasks to be performed. Perform lease walk around with services prior to spotting equipment. Remove tarps from heating wellhead. Check well pressures (slight vac). IES removed master valve, installed adapter flange and schlumberger flange using genie and crane. Spot, rig in Schlumberger E-line truck c/w full lube, bops and tool trap, picker and pressure truck. Purge and pressure test lube with propylene glycol. RIH with 154.5mm gauge ring/ccl. Tag top to Owens X-span csg patch at 1690.9mkb. Fluid level @ 80m. Log collars on way up to correlate. Did not see any restrictions on way in or out of hole. Rig off lube and secure well for night. |
| 2          | 1/31/2014 07:30 | 74,337.00               | 121,983.00      | Held PJHA #832126 with Schlumberger, Canol picker and Peregrine pressure truck on hazards with overhead loads, setting wireline plugs and pressure testing. Spot, rig in services. RIH with Smith M-CW 10K, 159.4mm retrievable bridge plug c/w HSN elements. 1 shear pin set for 2000lbs. Log onto and confirm depth. Set Plug @ 1688.20mkb at 13:15pm. Re-build firing head. Make up second plug and tool string. RIH with second Smith M-CW 10K, 159.4mm retrievable bridge plug c/w HSN elements. 1 shear pin set for 2000lbs. Log onto and confirm depth. Set plug @1678.80mkb. Rig down E-line, install master valve and secure well. Install fence around well.                                                                                                                                                                                                                         |
| 3          | 2/5/2014 07:30  | 112,969.80              | 234,952.80      | Move on Schlumberger Microseismic crew and equipment, Hold Pre-Job Safety meeting with all personnel, rig in and make up Microseismic tool string. RIH and conduct Vent flow Identification checks at depths as per program. Position final shuttle depths @ 1630.0 mKB (bottom) - 1300 mKB (Top), clamp off cable, secure well and rig out Crane.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4          | 2/6/2014 00:00  | 204,969.80              | 439,922.60      | Monitor micro seismic activity during completions frac operations on E-76 65-10 126-45.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5          | 2/17/2014 07:30 | 285,670.90              | 725,593.50      | Pulled out of the hole geophones. Installed wellhead and secured the well. Re-installed vent nanny onto SCVL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**V. Completions End of Job QC Summary**



# End Of Job QC Summary

## COPRC LOON CREEK O-06 65-10 127-00

|                                        |  |                                |  |                                |  |                                       |  |                                       |  |
|----------------------------------------|--|--------------------------------|--|--------------------------------|--|---------------------------------------|--|---------------------------------------|--|
| Region / Division<br>WCBU              |  | District<br>NEW VENTURES       |  | Field Name<br>Loon             |  | API / UWI<br>200/O-06 6510 127000     |  | License No.<br>EL 470                 |  |
| Original KB/RT Elevation (m)<br>257.60 |  | Ground Elevation (m)<br>252.40 |  | KB-Ground Distance (m)<br>5.20 |  | KB-Casing Flange Distance (m)<br>4.87 |  | KB-Tubing Hanger Distance (m)<br>4.22 |  |

|                                               |          |                                                                       |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|-----------------------------------------------|----------|-----------------------------------------------------------------------|--------------------------------------|----------------------------------------|---------------------------------------------|------------------------------------------|-----------------|------|-------|---------|-----------|
| VERTICAL - Original Hole, 1/9/2014 3:00:00 PM |          | JOB INFORMATION                                                       |                                      |                                        |                                             |                                          |                 |      |       |         |           |
| MD (mKB)                                      | Incl (°) | <p><b>WELL CONFIG: VERTICAL</b></p>                                   | Job Category<br>COMPLETIONS          | Primary Job Type<br>INITIAL COMPLETION | Actual Start Date<br>2/22/2013 08:00        | End Date<br>1/9/2014 15:00               |                 |      |       |         |           |
|                                               |          |                                                                       | Final Report?<br>Yes                 | Final Job Status<br>SUSPENDED          | Responsible Grp 1<br>coved                  | Responsible Grp 2<br>lagartn             |                 |      |       |         |           |
|                                               |          |                                                                       | AFE / RFE / Maint.#<br>10345055      | AFE+Supp Amt (Cost)<br>2,575,863.00    | Total Field Estimate (Cost)<br>2,810,365.37 | AFE-Field Estimate (Cost)<br>-234,502.37 |                 |      |       |         |           |
|                                               |          |                                                                       | TIME LOG SUMMARY SUMMARIZED BY P-N-T |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          |                                                                       | Time P-T-X                           | Dur (hr)                               | % Total Time (%)                            |                                          |                 |      |       |         |           |
| 5.2                                           | 0.5      | P                                                                     | 811.75                               | 97.74                                  |                                             |                                          |                 |      |       |         |           |
| 6.0                                           | 0.5      | T                                                                     | 18.75                                | 2.26                                   |                                             |                                          |                 |      |       |         |           |
| 100.0                                         | 0.5      | RIG INFORMATION                                                       |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Nabors, 414                                                           |                                      |                                        |                                             |                                          |                 |      |       |         |           |
| 125.0                                         | 0.5      | Rig Accept Date<br>2/22/2013 15:00                                    |                                      | Rig Release Date<br>3/24/2013 19:00    |                                             |                                          |                 |      |       |         |           |
| 156.0                                         | 0.3      | CASING STRINGS                                                        |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Csg Des                                                               | OD (mm)                              | Wt/Len (kg/m)                          | Grade                                       | Top Thread                               | Set Depth (mKB) |      |       |         |           |
| 567.0                                         | 0.3      | Surface                                                               | 244.5                                | 53.574                                 | K-55                                        | LTC                                      | 597.00          |      |       |         |           |
| 600.0                                         | 0.9      | Production                                                            | 177.8                                | 38.692                                 | P-110                                       | LTC                                      | 1,856.00        |      |       |         |           |
| 1,362.0                                       | 0.6      | CURRENT PBTD                                                          |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Date                                                                  | Type                                 | Depth (mKB)                            |                                             |                                          |                 |      |       |         |           |
| 890.6                                         | 1.8      | 2/26/2013 00:00                                                       | Float Collar                         | 1,841.50                               |                                             |                                          |                 |      |       |         |           |
| 1,692.0                                       | 1.8      | SCVF (SURFACE CASING VENT FLOW)                                       |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Date                                                                  | Typ                                  | Detection                              |                                             |                                          |                 |      |       |         |           |
| 1,693.0                                       | 1.9      | 2/26/2013 09:30                                                       | SCVF                                 | No                                     |                                             |                                          |                 |      |       |         |           |
| 1,694.4                                       | 1.9      | 3/24/2013 12:00                                                       | SCVF                                 | Yes                                    |                                             |                                          |                 |      |       |         |           |
|                                               |          | 4/4/2013 07:30                                                        | SCVF                                 | Yes                                    |                                             |                                          |                 |      |       |         |           |
| 1,726.0                                       | 2.4      | 2/26/2014 12:00                                                       | SCVF                                 | Yes                                    |                                             |                                          |                 |      |       |         |           |
| 1,727.0                                       | 2.4      | PERFORATIONS                                                          |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Date                                                                  | Top (mKB)                            | Btm (mKB)                              | Zone                                        | Type                                     | Current Status  |      |       |         |           |
| 1,728.0                                       | 2.4      | 3/3/2013                                                              | 1,692.00                             | 1,693.00                               | Upper Lower C...                            | Perforated                               | Suspended       |      |       |         |           |
| 1,729.8                                       | 2.4      | 3/3/2013                                                              | 1,727.00                             | 1,728.00                               | Middle Lower C...                           | Perforated                               | Suspended       |      |       |         |           |
| 1,767.6                                       | 3.1      | 3/2/2013                                                              | 1,769.00                             | 1,770.00                               | Basal Lower Ca...                           | Perforated                               | Suspended       |      |       |         |           |
| 1,770.0                                       | 3.1      | STIMULATION AND TREATMENTS                                            |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Date                                                                  | Stim Treat Co                        | Type                                   | Proppant Design (kg)                        | Proppant Frm (kg)                        | Zone            |      |       |         |           |
| 1,841.5                                       | 3.1      | TUBING STRING                                                         |                                      |                                        |                                             |                                          |                 |      |       |         |           |
| 1,856.0                                       | 1.0      | Tubing Description                                                    |                                      | Run Date                               | Pull Date                                   | String Length (m)                        | Set Depth (mKB) |      |       |         |           |
|                                               |          | Comment                                                               |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Jts                                                                   | Item Des                             | OD Nominal (mm)                        | Nominal ID (mm)                             | Wt (kg/m)                                | Grade           | Make | Model | Len (m) | Top (mKB) |
|                                               |          |                                                                       |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | OTHER IN HOLE                                                         |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Run Date                                                              | Description                          | Top Depth (mKB)                        | Bottom Depth (mKB)                          |                                          |                 |      |       |         |           |
|                                               |          | 3/22/2013                                                             | Casing Patch                         | 1,767.56                               | 1,771.43                                    |                                          |                 |      |       |         |           |
|                                               |          | OD (mm)                                                               | ID (mm)                              | Make                                   | Model                                       |                                          |                 |      |       |         |           |
|                                               |          | 155.2                                                                 | 139.7                                | Core-lab                               | X-Span                                      |                                          |                 |      |       |         |           |
|                                               |          | Comment                                                               |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Isolating "Basal" Lower Canol Perforations from 1769.0 to 1770.0 mKB  |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Run Date                                                              | Description                          | Top Depth (mKB)                        | Bottom Depth (mKB)                          |                                          |                 |      |       |         |           |
|                                               |          | 3/22/2013                                                             | Casing Patch                         | 1,725.96                               | 1,729.83                                    |                                          |                 |      |       |         |           |
|                                               |          | OD (mm)                                                               | ID (mm)                              | Make                                   | Model                                       |                                          |                 |      |       |         |           |
|                                               |          | 155.2                                                                 | 139.7                                | Core-lab                               | X-Span                                      |                                          |                 |      |       |         |           |
|                                               |          | Comment                                                               |                                      |                                        |                                             |                                          |                 |      |       |         |           |
|                                               |          | Isolating "Middle" Lower Canol Perforations from 1727.0 to 1728.0 mKB |                                      |                                        |                                             |                                          |                 |      |       |         |           |



# End Of Job QC Summary

## COPRC LOON CREEK O-06 65-10 127-00

