

Interpreting Call Detail with Cell Site (Digger Reports)

T-Mobile uses a resource named Digger to produce Call Detail Records (CDR). Our query results in an Excel file with multiple columns. Each row represents one call on the T-Mobile network. Multimedia Messages (MMS) and text messages sent as MMS do not appear on this record. Standard text messages do appear on this list. The columns present on your CDR may be:

NAME ON YOUR REPORT	DESCRIPTION
Calling Number	Subscriber who made the call
Called Number	Subscriber who received the call
Queried Number	Subscriber to be billed (this may be a duplicate so numbers with this value other than the target are deleted)
Destination Number	The final destination number to which the network has connected the call (might be different from the one dialed by subscriber if network translation was applied)
Dialed Number	Dialed digits
Date	Date format mm/dd/yyyy
Time	24 hour time format - hh:mm:ss
Timezone	Timezone
Timezone Type	Timezone type: S = switch timezone ; T = Tower timezone
Duration	Duration hh:mm:ss
Direction	Direction of call: 0 = outgoing; 1 = incoming
LAC	1 st LAC value in decimal
Cell ID	1 st Cell Site ID value in decimal
Enode	Enode (LAC, Cell ID, Sector for LTE sites)
TRoute	Terminating Route: LAC CI value. This is a combination of the Last LAC and CI.
Answer Status	Answer Status: 1 = Unanswered; 2 = Answered
Completion Code	Completion code: 0 = completed successfully; 3 or 4 = abnormal completion (network interruption)
Service Codes	11 Calling line identification presentation 12 Calling line identification restriction 13 Connected Line ID Presentation 20 All Call Forwarding Services 21 Call Forwarding Unconditional (CFU) 28 All Cond Call Forwarding Services 29 Call Forwarding on Mobile Subscriber Busy (CFB) 2A Call Forwarding on No Reply (CFNRy) 2B Call Forwarding on Not Reachable (CFNRc) 31 Explicit Call Transfer (ECT) 41 Call waiting 42 Call Hold 51 Multi-Party (MPTY)
1 st LAT	Location: Latitude of 1 st cell tower used.
1 st LONG	Location: Longitude of 1 st cell tower used.
1 st Azimuth	Location: Azimuth orientation of antenna serving user if available
1 st Address	Street Address of the 1 st serving tower if available
1 st City	City of the 1 st serving tower if available
1 st State	State of the 1 st serving tower if available
1 st ZIP	ZIP of the 1 st serving tower if available
Last LAT	Location: Latitude of last cell tower used.
Last LONG	Location: Longitude of last cell tower used.

Interpreting Call Detail with Cell Site (Digger Reports) (continued)

NAME ON YOUR REPORT	DESCRIPTION
Last Azimuth	Location: Azimuth orientation of antenna last serving user if available
Last Address	Street Address of the last serving tower if available
Last City	City of the last serving tower if available
Last State	State of the last serving tower if available
Last Zip	ZIP of the last serving tower if available
Switch Name	MSC name of the switch that handled the transaction
Transaction Type	Type of call: callForwarding = Forwarded Call; mSOriginating = Outgoing Voice Call; mSTerminating = Incoming Voice; mSOriginatingSMSinMSC = Outgoing SMS; mSTerminatingSMSinMSC = Incoming SMS
IMSI	IMSI if present
IMEI	IMEI if present
Disconnecting Party	0 = Calling Party; 1 = Called Party; 2 = Network

A NOTE ON AZIMUTH: The azimuth listed is the center compass degree facing of the identified sector of the tower. Generally, the coverage of a tower is circular and divided in three equal pieces (each 120 degrees wide). Due north is 0, due south is 180. However, not every tower is aligned with the first sector starting at 0. Using the listed azimuth, rough direction from the tower can be calculated for a call. The center degree of the sector's facing is indicated in this field. For example, if a facing has a listed orientation of 90, the center of the coverage is pointed at 90 degrees but the sector will cover traffic from roughly 60 degrees on either side (thus 30 to 150 degrees in this example).