### Figure 1. Mandatory content in ISO gmd:MD\_Metadata record for NGDS deployment of Tier 3 services from GDR data. The onlineFunctionCode element is required for XML schema validation. [Note—these are updated in version 2 (this version) reflecting testing during implementation].

<!—in the keywords section of gmd:MD\_DataIdentification, a usgincm: namespace keyword identifying the content model; these keywords are summarized at <https://github.com/usgin-models/exchangecatalog/blob/master/keywordsNamespacesContentModel.csv> ; keywords are not case sensitive -->

<gmd:descriptiveKeywords>  
 <gmd:MD\_Keywords>  
 <gmd:keyword>  
 <gco:CharacterString>usgincm:well log observation</gco:CharacterString>  
 </gmd:keyword>  
 <gmd:type>  
 <gmd:MD\_KeywordTypeCode codeList="http://standards.iso.org/ittf/PubliclyAvailableStandards/ISO\_19139\_Schemas/resources/Codelist/gmxCodelists.xml#MD\_KeywordTypeCode" codeListValue="theme">theme</gmd:MD\_KeywordTypeCode>  
 </gmd:type>  
 </gmd:MD\_Keywords>  
 </gmd:descriptiveKeywords>

…

<!-- The DigitalTransferOptions element may be in a gmd:transferOptions or gmd:distributorTransferOptions property -->  
 <gmd:MD\_DigitalTransferOptions>  
 <gmd:onLine>  
 <gmd:CI\_OnlineResource>  
 <gmd:linkage>  
 <gmd:URL>**http://url to get csv file**</gmd:URL>  
 </gmd:linkage>

<gmd:applicationProfile>

<!-- uri for the content model from <http://schemas.usgin.org/contentmodels.json>; MUST identify the version -->  
 <gco:CharacterString>

**http://stategeothermaldata.org/uri-gin/aasg/xmlschema/welllog/0.8**</gco:CharacterString>  
 </gmd:applicationProfile>

<!—Client applications MUST identify the proper distribution by searching for “NGDS Tier 3 Data, csv format” VERBATIM, in the online resource name element. -->  
 <gmd:name>  
 <gco:CharacterString>**NGDS Tier 3 Data, csv format**:nmwelllog.csv</gco:CharacterString>  
 </gmd:name>  
 <gmd:function>  
 <gmd:CI\_OnLineFunctionCode codeList="http://www.isotc211.org/2005/resources/Codelist/gmxCodelists.xml#CI\_OnlineFunctionCode" codeListValue="download">download</gmd:CI\_OnLineFunctionCode>  
 </gmd:function>  
 </gmd:CI\_OnlineResource>  
 </gmd:onLine>  
 </gmd:MD\_DigitalTransferOptions>