

IDENTIFICATION OF THE OIL-WELL GAS FLAIR GROUP AS A UNIQUE INFRASOUND SOURCE USING I31KZ DATA

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IS 31 "Aktyubinsk" IMS infrasound station has been operating in North-East Kazakhstan since 2001. The data from the station has been transmitted in the real-time mode to the Kazakh National Data Center (KNDC), Almaty, since 2003.

All infrasound data coming to KNDC has been automatically processed by the PMCC method since March 2005. Processing results are presented in infrasound events bulletins. Analysis of the detected event azimuthal distribution proves presence of a number of permanent infrasound sources around the station. Most of them are quarry blasts. Registration of those signals by seismic stations in the short run confirms this fact. We interpreted satellite images and localized most of those sources.

However, there are some directions (e.g. 185-190 degrees) where we cannot find a quarry on the satellite images. Signals from this direction have unusual duration. We registered this signals at any time during the day throughout a week in windless weather. Accurate interpretation of the satellite image shows that there is the Zhanazhol Oil and Gas Field located 235 km south of the station. It is well known that during the crude oil production, operators burn huge amount of associated gas. Infrasound must be generated in such circumstances.

Results of correlation between gas flairs burning regime and signal registration changing are presented.