

CASE STUDY – SANTHAL VILLAGE, ONGC BLOWOUT

Prof. Vibhakar Desai

M.E Environment, BE Civil

Swami Sachchidanand Polytechnic College Visnagar, Gujarat.

ABSTRACT: This paper highlights the case study of a blowout occurred in Kasalpura Village, Mehsana district, Gujarat India. An analysis of the blowout was carried out which includes well configuration and details, effect of environment surrounding area, mechanical equipment used for controlling the blowout, why gas leakage difficult to control. The effect of exploration of gas on the property and surrounding area of environment were also discussed. Efficient drilling and safety procedures were recommended to prevent further blowouts in future. The recommendations presented will be prevent damage to the environment.

Keywords: Environmental Impact, Blowout, Safety Procedures.

I. INTRODUCTION

A mysterious blast took place at ONGC's well near Kasalpur village near Mehsana taluka during the night. After which there was a rush due to gas leakage. Following the incident, the people of the village started to have inflammation in their throats and throats. So the system was rushed to the scene. The health department teams have started a survey inside the village. Also, all the roads leading to the ONGC well have been closed. The people of the village were woken up by a sudden loud bang at night. Later it was found that the line broke and the gas had spread. So people started panicking. It was difficult to breathe. Due to this problem, many people fled to the fields. The entire village was awake at night due to the incident. The pressure was 40 to 50 feet up.

II. WHY GAS LEAKEGE & ITS DIFFICULT TO CONTROL

Sometimes the pressure balance in well may be disturbed. The reason behind blowout include simple lack of attention, poor workmanship, bad maintenance etc..

The control of blowout depend on two things. 1 The size of well. 2. The pressure of gas. A blowout is an uncontrollable flow of oil and gas from an oil well when the pressure control systems fail. Types of blowout is surface blowout under water blowout, Underground Blowouts,

III EFFECT ON ENVIRONMENT/ SURROUNDING AREA

An untenable situation was created in the surrounding areas of up to 2 kilometers. ONGC teams were on the job. But no control came. The sound of the blast was heard for 4 kilometers. This effect was seen in nearby 10 to 12 villages including Santhal, Jotana. Dr. Vinod Patel, working in the Mehsana Health Department, said that 4 teams from the present Kasalpur village were employed, apart from this, there were health teams in Jotana as well. More than 130 patients were affected. When after one or two days continuity of gas blowout local people have complained like irritation in eye, difficulty in breathing and headache. Blowout also effect on surrounding pet animal and birds. Some local social worker help in all the things. A team from ONGC provide face mask and other necessary tools to protect workers while they work in blowout area. Around 2000 people at kasalpura village. Children and old aged people have been evacuated to relief campus. ONGC has kept an ambulance with paramedical staff on standby.



REFERENCES

1. Research on A Case Study on Blowout and Its Control in Krishna-Godavari (KG) Basin, East Coast of India: Safety and Environmental
2. <https://www.bop-products.com/blog/blowout-preventers/what-causes-a-blowout-on-an-oil-rig/#>
3. https://en.wikipedia.org/wiki/2020_As_sam_gas_and_oil_leak



CONCLUSION

Efficient and reliable equipment and well educated and trained drilling crews are the best options for blowout prevention in order to avoid environmental damage. An in depth knowledge of the geological setting of the site is required before drilling wells in shallow or deep gas reservoirs in any area.

Blowouts can be disastrous when not controlled. Oil rig operators can now use blowout preventers (BOP) on their systems to stop flow from happening. When a blowout occurs, the BOP system shut off the valves, controlling the oil well fluids from gushing to the surface.