Comparison of Different Bore Well Rescuing Operation

Prof. Jigar S. Patel
Assistant professor, GTU

Ajay P. Shevale
U.G student, GTU

Shailesh A. Bihola
U.G student, GTU

Abstract- *Children often fall down in the bore well which have been left uncovered and get trapped. The rescue of these trapped children is not only difficult but also risky. A small delay in the rescue can cost the child life. To lift the child out of the narrow confines of the bore well is also not very easy. The fire force and medical team find it difficult to rescue children due to unknown levels of humidity, temperature and oxygen in the depths of the bore well. The time taken is long enough to kill a precious life. Even if rescued the child may die due to injuries sustained. This has created an open challenge to the field of medicine, rescue and the whole human society.*

1. INTRODUCTION

Today's major problem faced by human society is water scarcity, which leads to a large number of bore wells being sunk. Bores which yielded water and subsequently got depleted are left uncovered. A suitably strong cap of bright colour to cover the mouth of the bore will avoid such accidents. Small children without noticing the hole dug for the bore well slip in and get trapped. Human search of water finally has ended in disaster.

Methods to keep a child alive in a bore should take in to consideration the lack of oxygen, increased temperatures and humidity, which produces hyperthermia. These problems are addressed with fresh air delivery with or without delivery of oxygen. A hand-powered equipment to deliver fresh air inside bore is being designed. This method brings down temperature and delivers fresh air. Though we have separate electric vacuum machineries, these are kept as stand by as sites may not have electrical point nearby

Visualizing the child is made possible with infrared waterproof CCD cameras and a portable high resolution TV Monitor. The camera is suspended in a 200 feet cable. The equipment is designed to operate off the 12-volt battery of the rescue vehicle.

Pulling up the child is made possible by special graspers, which can lock on shoulder area – wrist or ankle of the child. These have been specially designed and fabricated to provide open close control at one end and facility to extend it by adding additional pipe lengths. Currently we have equipments to work up to 100 feet. Stabilizing the ground around the bore and spreading the weight of equipment have been considered and a platform to achieve this is also made.

2. METHOD OF RESCUING

- The first step is to visualize the child this is done by lowering the underwater search Camera inside the bore well.
- With the aid of camera the location (depth) and position of the child can be determined.
- Using the blower fresh air is supplied to the child through hoses.

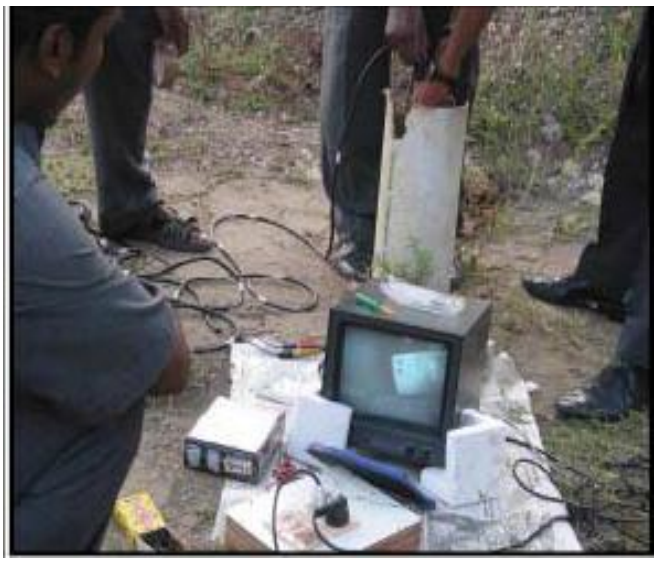

Fig: 2.1 Waranga l-year old boy falls in bore well [4]

- Assembling the mechanical unit for the required depth.

- With the aid of both visualizing and mechanical unit the child can be clamped.
- After clamping, the child can be rescued.
- After the rescue, first aid is to be provided to the child by the medical team.

3. RESCUING METHODS

- Avoid rushing everybody to the bore – well
- Fix the platform on the well so that the central hole of the platform is above the well.
- Don't allow more than two or three persons to stand on the platform
- Guide the 12' long pipe attached to the blower in to the well and admits fresh air into the well.
- Guide the Camera attached with the wire into the well carefully, till it reaches the child, watching the monitor carefully. The marking on the wire of the camera gives the depth at which the child is trapped, and the image on the monitor gives the position in which the child is entrapped.
- The position of entrapping advises you the type of the grasper to be used in the rescue.
- Lift the camera up and fit it on the CLAMP.
- Attach the connecting pipe, connecting rod and the safety belt to them clamp.
- Allowonly1two persons on the platform and carefully guide the whole assembly in the well Watching the position of the child on the monitor, make the grasper to hold the body position of the child, guiding it from platform by operating the connecting rod assembly. Now the grasper clasps the child safely and delicately and the child is lifted up to safety. The whole operation takes about 10 minutes time to complete.

3.1 The girl, Bipasha, fell into the ditch Amarpur village.

Fig: 3.1.1The girl, Bipasha, fell into the ditch Amarpur village [1]

A small girl Bipasha fall in to 120 feet deep bore well she was rescued by rescuing team. The rescue team had to dig a parallel ditch next to the one into which the girl had fallen. The Bipasha was rescued by team, made a big pit nearest to bore well she was at 25 feet deep. The team made a horizontal boring and rescued Bipasha.

3.2 Prince rescued in Haryana

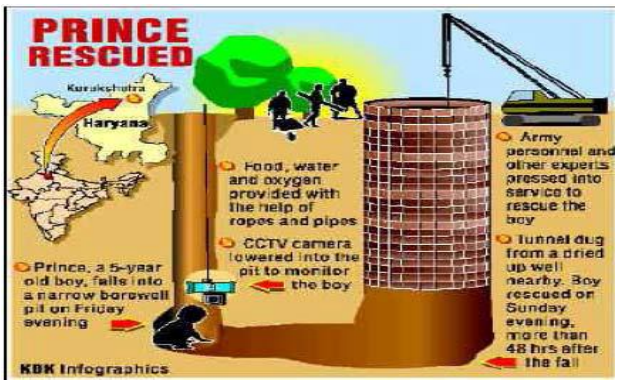

Fig: 3.2.1 Prince rescued in Haryana [1]

In this rescue the prince is saved by rescue by 48 hour work. Here the height at which the prince was rescued is less. In this rescue the team made great effort. The extra pit is done by crane and after it is the simple way the prince. The prince is saved by 48 hours by rescue team. The prince is removed from bore well safely and alive.

3.3 Robot for bore well rescue

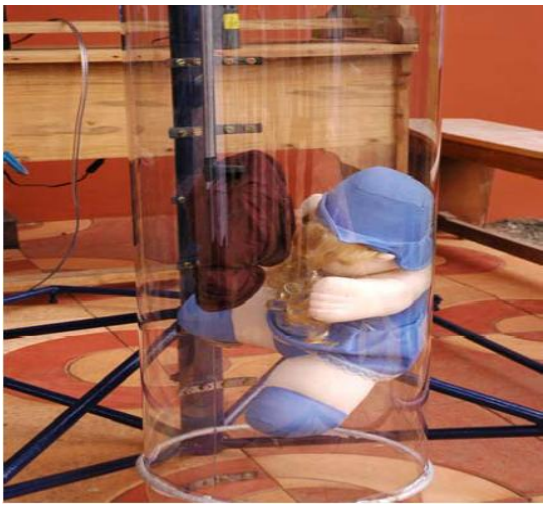

Fig: 3.3.1 Robot rescue [2]

Fig: 3.3.2 Robot rescue [2]

Fig: 3.3.3 Robot rescue [2]

Fig: 3.3.4 Robot rescue [2]

The robot is used to rescue operation. In this method the balloon is used to hold and grip the child the balloon is passed bellow the child, then air is filled in the balloon. It provides a grip or sitting arrangement to the child. The balloon provides a supporting platform to lift a child. By using this robot the lives of little child around two to three years old can be saved

4. STATUS OF LIFE DURING THE RESCUE OPERATION

Table no.1

SR NO.	NAME OF CHILD	AGE	PLACE OF INCIDENT	SAVE LIFE OR NOT
1	Dilraj kaur	3	Chandigardh dheera village	Not alive
2	Darawat h Prasad	1.5	Warang at a.p	Not alive
3	Pankaj	4	Bhilwara rajasthan	Not alive
4	Ankit mawada	2.5	m.p Bhopal	Not alive
5	Dewar nimbi	4	Bijap u.r	Not alive
6	karthik	6	A.p India	Not alive
7	Prince	8	Harayana	Live
8	Ajay	3	Ahmedabad gujarat	Not a live
9	Sandhya	2	Bellary	Live
10	ramchandriyah	11	Hydrabad	Not alive
11	Kariya	7	Devangre	Not alive
12	Tamiz hmani	5	Chennai	Not alive
13	d.dinesh	2	Hydrabad	Not alive
14	Sonu	2	Agra	Not alive
15	chintu	6	Jaipur	Not alive
16	Deivaraj	6	Dindugal	Not alive
17	Sandip	9	Banglore	Not alive
18	Ajith	3	Dhrama puri	Not alive
19	Ranjit	4	Salem	Not alive
20	Timma	6	Chitradurga	Not alive

5. CONCLUSION

From this paper we can conclude that none of the methods can save life 100%. The work done still a day is not sufficient in this field. Something new must be innovated**.**

6. FUTURE WORK

In case of bore well rescue operation many/different mechanism can be develop to rescue the child.

7. REFERENCES

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