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ANALYSIS AND EVALUATION OF SAFETY CULTURE PERFORMANCE IN DRILLING ACTIVITIES AT PT XYZ UPPER MILE GAS SOUTH SUMATERA THROUGH IMPLEMENTATION OF OCCUPATIONAL SAFETY OBSERVATION (PEKA)

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Abstract:
PT XYZ, as one of the drilling companies engaged in the upstream oil and gas industry, has developed a PEKA (Occupational Safety Observation) system used to monitor the risk of work accidents. This study aims to analyze the performance of safety culture in drilling activities at PT XYZ through the level of PEKA implementation using multiple linear regression analysis. The results of this study indicate that unsafe conditions are more dominant than unsafe actions at PT. XYZ in the period 2022 to 2024. The anomaly of unsafe actions compared to dangerous conditions at PT. XYZ is suspected to be due to biased observations or reporting. However, in general, the performance of safety culture in drilling activities at PT. XYZ upstream oil and gas in South Sumatra, as measured through the implementation of PEKA, has been running quite well. This is indicated by the results of multiple linear regression analysis, which are significant simultaneously and partially, and the level of safety culture of each variable, which is at the pro-active level.

Keywords: PEKA, Safety, Accident, Drilling, Risk

INTRODUCTION

High-level work accident risks surround drilling activities in the upstream oil and gas industry, thus requiring further supervision of the safety and health of workers and their environment. These risks are related to drilling work, workover rigs, mechanical, electrical, confined spaces, heavy-duty vehicles, and equipment installation. Therefore, the drilling environment must prioritize the implementation of Occupational Safety and Health (K3) (Paramitha & Wijayanto, 2012).

The implementation of Occupational Safety and Health (K3) in drilling activities plays an important role in the work environment so that there are no financial losses in the business process, disability of workers' limbs, or even loss of workers' lives. This can be minimized by paying attention to and controlling the risks that can cause potential work accidents in a series of drilling activities. This implementation can create a comfortable, safe work environment and avoid work accidents or zero accidents (Patradhiani, 2013).

Work accident statistics data from the 2022 Republic of Indonesia Manpower Performance Report shows that the incidence of work accidents in upstream oil and gas business activities in Indonesia tends to experience a downward trend from year to year, both in the light, moderate, severe, and fatal categories. However, the indicator commonly used to measure the level of work accidents in a company or industry is the Total Recordable Injury Rate (TRIR). This indicator is calculated based on fatalities, lost work days, restricted work days, and medical treatment cases. Data from the International Association of Oil and Gas Producers (IOGP) in 2022 shows that the

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Total Recordable Injury Rate (TRIR) based on companies and contractors in 2022 was 0.9 incidents per million working hours. This figure has increased by 22 percent when compared to the 2020 TRIR of 0.7 incidents per million working hours. The increase in TRIR over the three years was supported by a 58 percent increase in the fatality rate, from 14 worker deaths in 2020 to 19 deaths in 2022. The International Association of Oil & Gas Producers (2020) stated that the top three factors causing fatal incidents were inadequate: (a) hazard identification and risk assessment, (b) inappropriate decision-making or lack of careful consideration, and (c) supervision. Therefore, companies must maintain consistency in implementing K3, especially in upstream oil and gas activities.

Data from PT Pertamina EP in 2018 showed that human factors caused more than 80 percent of incidents that occurred due to at-risk behavior, aspects of facilities and equipment at the plant, and caused by work processes. Wadsworth and Smith (2009) stated that over the past few years, the Company's safety culture factor has still been a contributing factor to accidents. Therefore, managing the human aspect and safety culture factors is important to prevent accidents, so it is necessary to improve the company culture from the proactive level to the generative level.

PT XYZ is a state-owned company engaged in the oil sector. This Company exploits and produces Oil and Gas (Oil and Gas). PT. XYZ has adopted work accident risk management in accordance with Good Oil & Gas Practices standards. The risk management that has been implemented includes administrative aspects through organizational work systems, training, inspections, and audits. Although it has become a mandatory company culture, the number of work accidents remains a major challenge for employees in every Company.

PT XYZ has a system called PEKA (Occupational Safety Observation). Every worker can use this systemEvery worker can use this system to intervene, report, and record any safe or unsafe conditions and behaviors in the company environment. Reporting can be done through the Company's internal website, namely PEKA PT XYZ and through manual recording by area supervisors. PEKA is a PT XYZ HSSE program with the aim of forming a personal sensitivity attitude towards the work environment and the people around them so that workers can always be aware of unsafe behavior and conditions that can be done unknowingly. The implementation of PEKA is expected to create a work environment that is free from risks that can endanger the environment and people at the work site. Drilling rig Safety Performance data shows that the number of PEKA reports as a whole has always increased every year from 2022 to 2024. This indicates that the level of worker prevention of actions and conditions around them has also increased. PEKA noted that unsafe actions often occur due to a lack of knowledge and skills, so they fail to warn the work environment, fail to secure the work environment, fail to identify hazards and fail to follow work procedures. Unsafe actions have increased, so companies must maintain the existence of PEKA as a tool to monitor and maintain work safety.

Based on the description above, this study aims to analyze the performance of safety culture in drilling activities at PT XYZ Hulu Migas through the level of PEKA implementation. This analysis is expected to be a reference for evaluating the PEKA program, reducing the risk of work accidents starting from each worker's personal to the surrounding environment, and becoming one of the Company's steps to increase the level of safety culture at the generative level.

METHODS

This study was conducted at two oil well locations owned by PT XYZ located in Prabumulih Regency, South Sumatra. The subjects of this study were workers and partners of the drilling rig in the production well. Sampling used the purposive sampling method, which is a logical sample generalization method that if something has happened to this sample, then it is likely to happen to

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other samples. This study is categorized as explanatory research. The characteristics of descriptive research are research that describes and explains the cause-and-effect relationship in developing existing information and data (Priyono, 2016). The data collected in this study are primary and supporting data. Primary data is in the form of HSSE Performance of PT XYZ from 2019-2024, observations, questionnaires, and interviews with HSSE Officers and/or supervisors on the drilling rig, while supporting data is data taken from scientific sources, processed data, and other supporting data such as the results of SUPREME internal audits and scientific journals with similar topics and research objects. The analysis method used is the multiple linear regression method using one independent variable and five dependent variables. The dependent variable is the implementation of PEKA (Y1), while the independent variables are top management commitment (X1), communication and supervision in K3 (X2), worker training and competence (X3), worker involvement in K3 (X4), evaluation & audit (X5).

RESULT AND DISCUSSION

Overview of Unsafe Condition and Unsafe Action of PT XYZ Drilling Rig. The Domino Theory in Heinrich's research (1959) states that unsafe action is the cause of 88% of work accidents, while unsafe conditions cause the rest unsafe conditions to cause the rest. The theory illustrates that if one factor has occurred, it will have an impact on each other, which will be fatal. The study concluded that eliminating unsafe actions will prevent work accidents. However, the PT. XYZ Drilling Rig Safety Performance data in Table 1 shows results that contradict the theory.

Table 1. PT. XYZ Drilling Rig Safety Performance Data for 2022-2024

No.	Category	2024	%	2023	%	2022	%
1	Unsafe Action	3.868	**40**	3.351	**42**	3.065	**47**
2	Unsafe Condition	5.751	**60**	4.631	**58**	3.483	**53**
Total		**9.619**	**100**	**7.982**	**100**	**6.548**	**100**

Source: PT. XYZ (processed)

Table 1 shows that unsafe conditions were more dominant than unsafe actions at PT. XYZ in the period 2022 to 2024. This can be seen from the composition of unsafe conditions, which always contribute more than half of the safety performance each year, with figures that always show an increasing trend from year to year. The highly unsafe conditions at PT. XYZ can be caused by several things shown in TableTable 2.

Table 2. Causes of Unsafe Conditions at PT. XYZ in 2022-2024

No.	Unsafe Condition Category	2022	%	2023	%	2024	%
1	Bad Housekeeping	1.131	**32**	1.586	**34**	1.976	**34**
2	Bad work floor	1.067	**31**	1.344	**29**	1.734	**30**
3	Equipment and/or machinery is damaged	980	**28**	1.204	**26**	1.526	**27**
4	Other	305	**9**	497	**11**	515	**9**

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Total	**3.483**	**100**	**4.631**	**100**	**5.751**	**100**

Source: PT. XYZ (processed)

Table 2 shows that there are three main causes of unsafe conditions at PT. XYZ, namely (a) poor housekeeping with a composition of more than one-third, followed by (b) poor work floors and (c) damaged equipment and/or machines. These three causes have contributed more than 90 percent to unsafe conditions in the range of 2022 to 2024, while other factors cause the rest other factors to cause the rest.

In order to anticipate unsafe conditions, rig workers develop more adaptive and anticipatory behavior to avoid work accidents. This behavior comes from equipment, weather, lighting, noise, and other environmental conditions. The majority of rig workers stated that more careful observation of the work environment could reduce unsafe conditions to relatively fewer. In more detail, an independent survey conducted on rig workers showed four main points, namely (a) 40 percent of respondents considered that unsafe conditions occurred due to negligent personnel who often ignored the safety of the surrounding environment and lack of understanding and participation of personnel regarding HSSE aspects in the workplace; (b) 25 percent of respondents stated that the complexity of physical conditions and the work environment in the rig area caused many findings that could be reported; (c) 19 percent of respondents stated that there was a lack of maintenance and inspection of equipment and machinery; while the rest stated that unsafe conditions occurred due to extreme weather so that equipment could quickly become obsolete and unsafe conditions would cause unsafe activities.

Meanwhile, there are fewer unsafe actions compared to dangerous conditions at PT. XYZ is suspected to be due to biased observation or reporting. Unsafe actions can ideally be observed when manpower is working, both in low- and high-risk jobs. High-risk jobs should have more unsafe actions so that supervisors can directly intervene. In addition, unsafe actions pass more quickly or are not directly observed, so it is suspected that this causes reporting at PEKA to be at a low level.

Table 3. Causes of Unsafe Actions at PT. XYZ in 2022-2024

No.	**Unsafe Action Category**	**2022**	**%**	**2023**	**%**	**2024**	**%**
1	Procedure not available	990	**32**	1.034	**31**	1.200	**31**
2	Not using PPE	829	**27**	992	**30**	1,149	**30**
3	Improper placement and use of equipment/machines	645	**21**	702	**21**	786	**20**
4	Other	601	**20**	623	**19**	733	**19**
	Total	**3.065**	**100**	**3.351**	**100**	**3.868**	**100**

Source: PT. XYZ (processed)

Table 3 shows the causes of unsafe actions recorded in PEKA PT. XYZ. These unsafe actions can be recorded because they are carried out repeatedly, such as not using PPE (gloves, glasses, or helmets), not putting equipment in its place (scattered), and failing to follow and understand applicable procedures. The table above shows that the unsafe actions that contribute the most are (a) unavailable procedures, which contribute one-third of all actions; (b) actions not using PPE; and (c) improper placement and use of equipment/machines, contributing more than 20 percent; while other unsafe actions cause the rest.

Effectiveness of PEKA Implementation at PT. XYZ. The implementation of PEKA at PT. XYZ needs to be evaluated to see how effective this program is in forming an attitude of personal

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sensitivity to the work environment and the people around it. This is done so that workers at PT XYZ can always be aware of unsafe behavior and conditions that can be done unconsciously. Assessment of how effective the implementation of PT. XYZ has been conducted through a work safety culture survey in 2024 which stated that PT XYZ was at the proactive level with an average value of 4.25 out of 5.00 (PT Pertamina, 2025). In line with this level, IOGP HSE Tools and HSE Culture Level recommend evaluating safety culture at PT. XYZ uses 15 tools consisting of (1) reporting and recording HSE information (incidents & near); (2) incident investigation and analysis; (3) auditing; (4) human factors in design; (5) work practices and procedures; (6) HSE risk management; (7) HSE management systems; (8) HSE training and competence; (9) HSE appraisals; (10) situation awareness; (11) questionnaires and surveys; (12) observation intervention; (13) incentive schemes; (14) HSE communications; (15) other HSE tools. However, this research will only focus on using one of its tools at point 11, namely questionnaires and surveys. The questionnaire used is recommended to have four important points, namely HSSE climate surveys, HSSE culture diagnostics, personnel and their attitudes, and personality and team. The reason this research only focuses on using its tools at point 11, namely questionnaires and surveys, is because PT XYZ already has an HSSE management system, namely SUPREME. All items in the IAOGP HSE tools have become a program that is implemented continuously and is evaluated periodically through SUPREME audits. The explanation of the HSE tools that PT XYZ has implemented XYZ has implemented is as follows:

a) Reporting and Recording HSE Information. PT XYZ's HSE information has been recorded and reported using the Company's internal portal/website/application to facilitate both reporting monitoring and evaluation.

b) Incident Investigation and Analysis. When incidents and near misses occur during procedurally (TKO) investigated incidents, the CompanyCompany immediately creates an investigation team to follow up on the incident, such as reviewing the crime scene, collecting evidence and witnesses, sorting and matching testimonies and evidence, and reporting all investigation results.

c) Auditing. All results and recommendations from the SUPREME audit team will be recorded in a system known as action tracking to ensure that audit recommendations are followed up, evaluated, and approved by the Company's highest leadership.

d) Work Practice and Procedures. PT XYZ requires every job in the field to provide SIKA and JSA. SIKA or Safe Work Permit is a time-limited permit to carry out work according to the type of work and the risks that will be experienced while doing the work. JSA or Job Safety Analysis is a sequence of work procedures that will be carried out according to the risks, prevention, and how to deal with work accidents.

e) HSE Risk Management. PT XYZ always strives to ensure that all potential hazards have been identified, recorded, and also monitored through the risk register of all activities and all levels of risk. This is done to ensure updates related to the existing risk register so that when PT XYZ's operations experience changes (new activities), PT XYZ already knows the potential hazards so that they can be mitigated properly.

f) HSE Management System. PT. XYZ has a SUPREME Internal Audit Protocol (SIAP) as a guide for the SUPREME Internal Auditor Team to ensure that the HSSE Management System based on SUPREME has been implemented comprehensively and effectively by all levels of the organization, both at the holding/corporate level, sub-holding, subsidiaries/subsidiaries of the CompanyCompany and operating units).

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g) HSE Training and Competence. PT XYZ has a training matrix for all workers and work partners that must be met at all levels of these positions. This is a step to mitigate accidents due to the personnel's lack of competence. Training is implementedthe personnel's lack of competence. Training is implemented periodically according to needs and government regulations.

h) HSE Appraisal. PT XYZ has an HSE appraisal system to ensure that each employee's commitment to HSE is carried out through performance assessments, including a commitment from a leader regarding HSE aspects. Assessments are carried out on personnel from the management level to the frontline level.

i) Situation Awareness. PT XYZ has a program that is implemented to assess the situation just before working or carrying out operational activities. A worker will conduct a self-hazard assessment to ensure the potential hazard that will occur if an activity is carried out, known as the KARIB (Personal Risk Assessment) program.

j) Observation and Intervention. PT XYZ requires workers to fill out the SWC (Safe Work Check) form for critical jobs such as lifting, excavation, confined space, and work at height. The form aims to review the critical work area and whether it is in accordance with applicable procedures and standards. If there is a discrepancy, the supervisor and area owner must intervene to stop the work until the work area is declared safe and in accordance with the applicable SOP. This is called SWA (Stop Work Authority).

k) Incentive Schemes. PT XYZ has an Organizational Work System (TKO) reward and consequences for workers and partners in achieving HSE performance as a reference in giving awards or punishments to its workers.

l) HSE Communications. The HSE communication method at PT XYZ is called the SAVE Method (Speak up, Apply 3-way communication, Verbal confirmation, Eyes on task) every time before doing work or Pre-Job Safety Meeting. One of them is a monthly safety meeting on the first Wednesday of the week. The material presented includes all Occupational Health and Safety (K3) and Environmental Protection (LL) such as HSSE Golden Rules, Corporate Life Saving Rules (CLSR), Amanah-Kompeten-Harmonis-Loyal-Adaptif-Kolaboratif (AKHLAK), and HSSE management policies. PT XYZ also has a product campaign in the form of Hand Finger Injury Free (HFIF), 3P (People-Plant-Procedure), Zero LTI banners, and so on.

Inferential Analysis. Inferential statistics involves concluding a population based on sample data using probability theory to measure uncertainty in the findings (Montgomery, D. C., & Runger, G. C., 2018). This study uses inferential analysis to determine the effect of the five independent variables mentioned earlier on the implementation of PEKA at PT. XYZ. The total number of research objects was 199 people from two drilling rigs. However, the number of samples to be taken was only 160 respondents, with a division of 79 respondents from rig 1 and 81 respondents from rig 2.

The first stage will be a validity and reliability test. The validity test is used to determine whether the number of questionnaire data samples used is appropriate as a measuring tool in this study and whether the sample can be a guideline for similar data in the future. Meanwhile, the reliability test is used to determine whether the research sample is consistent and whether the results of measuring the same sample at different times will remain the same or not.

Table 4. Validity test results

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No.	r-count	r-table	Decision	No.	r-count	r-table	Decision
P001	0.523	0.155	VALID	P024	0.598	0.155	VALID
P002	0.568	0.155	VALID	P025	0.568	0.155	VALID
P003	0.609	0.155	VALID	P026	0.593	0.155	VALID
P004	0.573	0.155	VALID	P027	0.583	0.155	VALID
P005	0.559	0.155	VALID	P028	0.659	0.155	VALID
P006	0.582	0.155	VALID	P029	0.586	0.155	VALID
P007	0.524	0.155	VALID	P030	0.585	0.155	VALID
P008	0.54	0.155	VALID	P031	0.637	0.155	VALID
P009	0.588	0.155	VALID	P032	0.679	0.155	VALID
P010	0.615	0.155	VALID	P033	0.64	0.155	VALID
P011	0.698	0.155	VALID	P034	0.669	0.155	VALID
P012	0.676	0.155	VALID	P035	0.628	0.155	VALID
P013	0.703	0.155	VALID	P036	0.528	0.155	VALID
P014	0.613	0.155	VALID	P037	0.559	0.155	VALID
P015	0.705	0.155	VALID	P038	0.503	0.155	VALID
P016	0.663	0.155	VALID	P039	0.604	0.155	VALID
P017	0.677	0.155	VALID	P040	0.626	0.155	VALID
P018	0.611	0.155	VALID	P041	0.582	0.155	VALID
P019	0.666	0.155	VALID	P042	0.628	0.155	VALID
P020	0.685	0.155	VALID	P043	0.49	0.155	VALID
P021	0.488	0.155	VALID	P044	0.669	0.155	VALID
P022	0.606	0.155	VALID	P045	0.593	0.155	VALID
P023	0.572	0.155	VALID	P046	0.558	0.155	VALID

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The validity test using the Pearson Product-Moment Correlation Coefficient test shows all r-calculations are greater than the r-table (0.155). Riyanto (2020) stated that the correlation value of this research data is positive if the r-calculation value is greater than the r-table. Therefore, all questionnaire data in this study can be declared valid and can be an appropriate measuring tool and guideline for predicting similar data in the future. Meanwhile, reliability testing using SPSS produced a Cronbach's Alpha value of 0.96. Ghozali (2005) stated that if Cronbach's Alpha value is greater than 0.6, the data can be declared reliable (worthy) to be a measuring tool in this study. Therefore, the data used in this study is proven to be statistically reliable. The next stage is the formation of a multiple linear regression model. Multiple linear regression test analysis is used to determine the variables of top management commitment (X1), communication and supervision (X2), competence and training (X3), worker involvement (X4), and evaluation and audit (X5) affecting the implementation of PEKA (Y) in PT XYZ drilling rigs, both simultaneously and partially. Table 5 shows the model that has been formed.

Table 5. Multiple Linear Regression Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.8059	1.4084	1.9923	0.0481
X1	0.2023	0.0480	4.2167	0.0000
X2	0.2401	0.0349	6.8769	0.0000
X3	0.2027	0.0452	4.4850	0.0000
X4	0.2551	0.0471	5.4130	0.0000
X5	0.2555	0.0454	5.6335	0.0000
R-squared	0.8546	Mean dependent var	40.6938	
Adjusted R-squared	0.8498	S.D. dependent var	3.6875	
S.E. of regression	1.4289	Akaike info criterion	3.5884	
Sum squared resid	314.4204	Schwarz criterion	3.7038	
Log-likelihood	-281.0747	Hannan-Quinn criteria.	3.6353	
F-statistic	180.9846	Durbin-Watson stat	1.9633	
Prob (F-statistic)	0.0000			

Before concluding the results of the multiple linear regression analysis above, the model that has been formed must be tested simultaneously and partially. Simultaneous testing aims to determine whether the variables of top management commitment (X1), communication and supervision (X2), competence and training (X3), worker involvement (X4), and evaluation and audit (X5) simultaneously affect the implementation of PEKA (Y) on the PT XYZ drilling rig. Meanwhile, the partial test aims to determine the effect of each independent variable on the dependent variable. Simultaneous testing is carried out using the F test, while partial testing uses the t-test. The p-value of both tests will be compared with $\alpha = 5\%$. The conclusion to reject H0 is taken when the p-value of each test is smaller than $\alpha = 5\%$. The Prob value (F-statistic) or p-value of the F test shows a figure

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of 0.0000, which is smaller than α = 5%. So, statistically, all variables are proven to have a simultaneous effect on the implementation of PEKA on the PT. XYZ rig. Meanwhile, the p-value of the t-test is indicated by the Prob. A P-value of all variables shows the number 0.0000 (except C as a constant). Therefore, statistically, all variables are proven to have a partial influence on the implementation of PEKA in the PT. XYZ rig.

The multiple regression test analysis above produces a coefficient for each variable and can be arranged into multiple linear equations as below: Y = 2.8059 + 0.2023X_1 + 0.2401X_2 + 0.2027X_3 + 0.2551X_4 + 0.2555X_5. The explanation of the equation above can be described as follows:

a. The regression coefficient X_1 = 0.2023 indicates that a one-unit increase in the top management commitment variable (X1) will increase the drilling rig workforce's implementation of PEKA (Y) by 0.2023 units.
b. The regression coefficient X_2 = 0.2401 indicates that a one-unit increase in the communication and supervision variable (X2) will increase the implementation of PEKA (Y) of drilling rig workers by 0.2401 units.
c. The regression coefficient X_3 = 0.2027 indicates that a one-unit increase in the competence and training variable (X3) will increase the implementation of PEKA (Y) of drilling rig workers by 0.2027 units.
d. The regression coefficient X_4 = 0.2551 indicates that a one-unit increase in the worker involvement variable (X4) will increase the implementation of PEKA (Y) of drilling rig workers by 0.2551 units.
e. The regression coefficient X_5 = 0.2555 indicates that a one-unit increase in the evaluation and audit variable (X5) will increase the implementation of PEKA (Y) of drilling rig workers by 0.2555 units.

The coefficient of determination (Adjusted R-squared) is 0.8498. This number means that the variables of top management commitment (X1), communication and supervision (X2), competence and training (X3), worker involvement (X4), and evaluation and audit (X5) together are able to explain the implementation of PEKA (Y) by 84.98 percent. At the same time, other variables outside the model explain the rest.

Table 6. Safety Culture Level of Each Variable

No.	Code	Variables	Safety Culture Level	Information
1	X1	Top Management Commitment	4,59	Pro-Active
2	X2	Communication And Supervision	4,50	Pro-Active
3	X3	Competence And Training	4,58	Pro-Active
4	X4	Worker Involvement	4,42	Pro-Active
5	X5	Evaluation And Audit	4,41	Pro-Active

The results of testing the influence of the five dependent variables on the implementation of PEKA at PT. XYZ is supported by the safety culture level shown in Table 6. The table shows that all variables are at the Pro-Active level. A more detailed explanation of each variable is as follows:

a. The Proactive level at X1 shows that workers on the drilling rig have the same understanding and responsibility that occupational safety and health are important aspects of drilling rig activities. Management invests various efforts in socialization and refreshment programs for occupational safety and health aspects (Hudson, 1999).

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b. The Proactive level at X2 shows that the drilling rig has seen bad news and made incidents and accidents a learning opportunity (lesson learned). Safety messages have been conveyed well through various delivery methods. Supervision of work is a must or called no supervision, no job. The drilling rig has invested various efforts in socialization and refreshment programs for occupational safety and health aspects (Hudson, 1999).
c. The Proactive Level at X3 shows that the drilling rig workforce has worked according to skills and competencies with good standards. The selected qualifications are people who are competent in the field of drilling rigs and have good occupational safety training. The Company Company has invested various efforts in recruiting workers who comply with occupational safety and health aspects (Hudson, 1999).
d. Proactive Level at X4 shows that the workforce is process-oriented (not the result) and not just limited to theory. The workforce also feels that their existence is always taken into account. The Company Company has invested various efforts in training and reminding workers to comply with occupational safety and health aspects (Hudson, 1999).
e. The Proactive Level at X5 shows that evaluation and audit aim to manage occupational safety for the future based on past events. Future possibilities can be prevented by taking periodic evaluation steps so that people who care and are careful in their actions are created. The Company has invested various efforts in evaluating and auditing occupational safety and health aspects (Hudson, 1999).

CONCLUSION

After going through various stages of research and data analysis, this study concluded that the performance of safety culture in drilling activities at PT. XYZ upstream oil and gas in South Sumatra, as measured through the implementation of occupational safety observation (PEKA), has been running quite well. This is indicated by the results of multiple linear regression analysis, which are significant simultaneously and partially, and the level of safety culture of each variable, which is at the pro-active level. Therefore, this study proposes several suggestions, namely:

a. Conduct periodic PEKA socialization on each drilling rig because drilling rigs are jobs with the most workforce absorption (work partners). Supervisors or management are always expected to refresh PEKA materials or HSSE aspects of PT XYZ so that safety culture can increase to a generative level.
b. Increasing observations on unsafe actions because this indicator is the closest risk to a work accident that can occur afterward.
c. Further research can examine the occurrence of work accidents, making this study a reference for determining the factors that influence the incident or injury.
d. Further research is suggested to examine the influence of various other safety cultures on occupational safety and health at PT XYZ.

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