

Analysis of the Influence of Work Compensation and Work Environment on Employee Performance Through Job Satisfaction as an Intervening Variable at PT Antam Geomin Unit, East Halmahera Nickel Exploration Team

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Abstract. *This study aims to analyze the effect of compensation and work environment on employee performance through job satisfaction as a mediating variable among employees of the Geological Work Unit of PT ANTAM Tbk Geomin Unit East Halmahera Nickel Exploration Team. The study was motivated by a decline in employee performance influenced by changes in company policies, compensation systems, and work environment conditions in the mining exploration industry, which is characterized by fieldwork with high-risk levels. This research employs a quantitative approach using a survey method. The sample consists of 100 employees, including prospectors and geologists, selected using a purposive sampling technique. Data were collected through a questionnaire distributed via Google Forms using a 1–5 Likert scale. The data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with SmartPLS-4. The results show that compensation and work environment have a positive and significant effect on job satisfaction. Job satisfaction also has a positive and significant effect on employee performance. In addition, the work environment has a positive and significant effect on employee performance, while compensation does not have a significant direct effect on employee performance. Furthermore, job satisfaction is proven to mediate the relationship between compensation, work environment, and employee performance. In conclusion, the work environment and job satisfaction are important factors in improving employee performance. Therefore, the company needs to create a conducive work environment and ensure an appropriate compensation system to enhance job satisfaction and optimize employee performance.*

Keywords: *Compensation; Environment; Performance; Work.*

1. Introduction

The nickel mining industry in Indonesia has experienced significant growth in recent years, driven by increasing global demand for nickel as the main raw material for electric vehicle batteries. (CREA & CELIOS, 2024) Indonesia itself has the world's largest nickel reserves,

reaching 17.7 billion tons of ore and 5.2 billion tons of metal, making it a key player in the global nickel supply chain.(Personal, 2023; Wirawan, 2024). PT ANTAM Tbk, or PT Aneka Tambang Tbk as one of the leading mining companies in Indonesia, has a strategic role in exploiting nickel potential, one of which is through the Geomin Unit which conducts nickel exploration in East Halmahera, North Maluku(Wirawan, 2024)Therefore, improving employee performance at PT ANTAM's East Halmahera Nickel Exploration Geomining Unit is crucial to support the growth of the national nickel industry and meet global market demand.(Sururan et al., 2024).

Human resources that are able to demonstrate good performance are an important aspect in supporting the sustainability and success of an organization.(Sururan et al., 2024),including the mining sector. The high performance of prospectors and geologists is a reflection of the effectiveness and efficiency of employees in carrying out their duties, which is measured through productivity, quality, efficiency, and competence.(Basri et al., 2024)In nickel exploration, optimal prospector and geologist performance is crucial to ensure smooth operations, achievement of work targets, and the success of exploration projects, especially in collaboration with investors.(Sururan et al., 2024). Therefore, PT ANTAM East Halmahera Nickel Exploration Geomining Unit needs to invest in appropriate efforts and policies to improve the quality of employee performance at all levels of the organization. The following table shows the achievement of drilling sample targets in 2024 and 2025, which is also used to measure the performance level of prospectors and geologists at PT ANTAM East Halmahera Nickel Exploration Geomining Unit:

Table Geological Activity Progress in 2024 and 2025

Geological Activities	2024 Natural Resources Target	2024 Natural Resources Realization	2024 Natural Resources (%)	2025 Natural Resources Target	2025 Natural Resources Realization	2025 Natural Resources (%)	2025 NKA Target	2025 NKA Realization	2025 NKA (%)
Geological Mapping (ha)	1,283.50	951.18	74%	790	983.61	125%	269	133.81	49.74%
Surface Pilot (sample)	26	30	115%	26	26	100%	12	0	0%
Core Pilot	117,050	81,674	69.78%	88,800	73,077	82.29%	21,285	13,531	63.57%
Logging Core	97,542.00	75,596.50	77.50%	74,000	66,120.87	89.35%	19,350	12,181.50	62.95%
Average Performance (%)	–	–	84.07%	–	–	99.16%	–	–	44.56%

Source: Data processing of PT ANTAM Geomin Unit, East Halmahera Nickel Exploration Team (2026)

Table Comparison of Performance in 2024 and 2025

Year	Running Program	Performance (%)	Change vs. Previous Year
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2024	Natural Resources	84.07%	—
2025	Natural Resources, Natural Resources	71.86%	▼ -12.21%

Source: Data processing of PT ANTAM Geomin Unit, East Halmahera Nickel Exploration Team (2026)

Tables illustrate operational performance by measuring the achievements of geological work units, such as geological mapping, core sampling, and core logging. Geological work progress data for 2024 and 2025 shows significant fluctuations in prospector and geologist performance. In 2024, the average performance was 84.07%, demonstrating high effectiveness in exploration activities. This then declined in 2025, with the average performance dropping to 71.86%, a 12.21% decrease from the previous year.

This decline in performance indicates several greater operational challenges in 2025, both in terms of workforce numbers, effective work duration, and the more complex environmental factors of nickel exploration. While some activities still show excellent performance, overall, several declines significantly impacted performance in 2025. This figure indicates that prospector and geologist performance in 2025 faces several stronger obstacles and pressures than in the previous year.

The right steps and policies to improve performance are work compensation and work environment.(Andriany, 2019; Hermansyah & Sina, 2024)Fair and competitive compensation can encourage employee job satisfaction, which in turn will motivate prospectors and geologists to work harder and deliver better results.(Andriany, 2019).This compensation includes both extrinsic and intrinsic compensation. Extrinsic compensation includes salaries, work allowances, incentives, and holiday allowances. Intrinsic compensation, on the other hand, includes work completion, achievements, education and training, and increased experience and responsibility. A conducive nickel exploration environment, both physically and psychologically, also plays a crucial role in creating a comfortable and supportive work environment, ensuring prospectors and geologists feel comfortable, safe, and motivated to improve their performance.(Dewi & Frianto, 2020)Therefore, PT ANTAM Geomin Unit needs to seriously consider both aspects to provide an ideal working environment for prospectors and geologists.

However, the reality on the ground shows a gap between employee expectations and the company's current situation. This situation is inextricably linked to the internal dynamics of PT ANTAM's Geomin Exploration Unit, East Halmahera Nickel, which are characterized by issues related to work compensation, the work environment, employment stability, and employee job satisfaction. The performance of prospectors and geologists is influenced by the interaction between individual and organizational factors, including the company's reward or compensation system and working conditions.(Robbins & Judge, 2024).

Changes in company policy, particularly regarding compensation, are one of the causes of declining employee engagement. According to equity theory, employees compare their contributions with the compensation they receive, and this perceived imbalance can decrease motivation and work commitment.(Adams, 1965)For example, annual bonuses as part of

financial compensation have a strategic role in increasing motivation, especially for prospectors and geologists who work in high-risk conditions.(Milkovich et al., 2014).

Furthermore, the reduced implementation of symbolic and appreciative non-financial compensation, previously perceived as a form of recognition for employee loyalty, suggests a decline in company attention to employee well-being. Theoretically, non-financial rewards, which have become part of an organization's motivation system, can support job satisfaction and increase employee engagement.(Dessler, 2017).

From a nickel exploration environmental perspective, the operational location, which is remote from urban centers and located in forested areas, creates unique challenges for prospectors and geologists. Limited access to supporting facilities, particularly for daily consumption needs, forces employees to rely entirely on company supplies. In the long term, the less-than-conducive nickel exploration environment can also negatively impact job satisfaction, particularly for prospectors and geologists who work on rotational work systems and relatively long work hours.

Furthermore, project-based work contracts and company targets that can be terminated upon project completion have exacerbated job insecurity among prospectors and geologists at PT ANTAM's Geomin Unit, East Halmahera Nickel Exploration Team. This uncertainty can psychologically reduce affective commitment and impact employee satisfaction and performance.(Greenhalgh & Rosenblatt, 1984)in(Luthans et al., 2019). Although this policy can be understood as a form of organizational flexibility in responding to project dynamics.

These various conditions cannot be understood in isolation, but rather need to be viewed comprehensively within the framework of the relationship between work compensation, work environment, job satisfaction, and employee performance. Therefore, research activities are important to conduct, in order to examine the extent to which work compensation and the nickel exploration environment influence job satisfaction and its implications for the performance of prospectors and geologists. The research results are expected to not only broaden the development of knowledge in the field of human resource management conceptually, but also provide a basis for consideration for PT ANTAM Geomin Unit East Halmahera Nickel Exploration Team in formulating better, fairer, and more sustainable policies.

Many researchers have previously examined the relationship between work compensation, the work environment, and employee performance, but significant gaps have been identified in the context of nickel exploration. Most studies have focused on other industrial sectors, thus providing less in-depth insight into the specific dynamics of the nickel exploration and mining industry, particularly in remote locations like East Halmahera, North Maluku.

In previous research, it was found that job satisfaction functions as an intervening variable between compensation and work environment, with employee performance.(Dewi & Frianto, 2020; Jufrizen & Safani Sitorus, 2021). This means that compensation balanced with a good

working environment does not automatically improve employee performance, but rather through increasing job satisfaction first.(Mantauv, 2014)Those who are satisfied with their work tend to be more motivated, committed, and productive.(Dewi & Frianto, 2020).

Several previous studies have shown a gap between studies in which work compensation and work environment do not have a significant effect on employee performance.(Kakinsale et al., 2015). The same thing applies to research(Ismail HA et al., 2023)which reveals that the work environment partially has no positive and significant effect on employee performance. Other research findings by(Nurhidayati & Anggraini, 2021)It also proved that compensation did not influence job satisfaction, and the work environment also showed no effect on prospector and geologist performance. Furthermore, job satisfaction was not able to act as an intervening variable in the relationship between compensation and performance or the relationship between the work environment and performance.

However, the findings of other studies reveal that compensation and work environment have a significant influence and show a positive influence on employee performance.(Ikhsan Sahlan et al., 2015). These findings are in line with research(Rahmadani & Sampeliling, 2023)which shows that a good work environment can significantly improve employee performance. Furthermore, the work environment has a positive and significant influence on job satisfaction. Job satisfaction is then proven to contribute positively to improving employee performance. Furthermore, job satisfaction can act as an intervening variable in the relationship between the work environment and employee performance. The differences in empirical findings create a gap that needs to be reexamined. The inconsistency in research results is thought to be influenced by several differences in respondent characteristics, organizational context, work conditions, and employee psychological factors that have not been fully accommodated in previous research models. Therefore, further research is needed to explain this relationship more comprehensively.

The role of job satisfaction in this study is as a mediating variable that links compensation and the work environment to employee performance. By including job satisfaction as a mediating variable, this study is expected to be able to explain whether compensation and the nickel exploration environment indirectly affect employee performance through the level of job satisfaction. Therefore, it is important to understand the role of job satisfaction as a mediator in the relationship between these factors and the performance of prospectors and geologists at PT ANTAM Geomin Unit, East Halmahera Nickel Exploration Team, whether it will have a significant impact or not on performance.

However, research on the role of job satisfaction as an intervening variable in Nickel Exploration work is still limited. In fact, several other studies have shown that implementing compensation such as wages or salaries, incentives, benefits, and facilities without job satisfaction, with work assignments appropriate to skills and experience, and timely salaries, does not improve employee performance.(Ilmawan et al., 2017)Most studies have focused on the industrial sector or mining companies in general, without considering the unique

characteristics of nickel exploration work in remote areas. Therefore, this study aims to fill this gap by conducting a case study at PT ANTAM Geomin Unit, focusing on the balance of compensation and work environment as factors influencing employee job satisfaction and performance.(Ramadhan et al., 2015).

2. Research Methods

This study adopted a quantitative approach to analyze the relationship between work compensation, work environment, job satisfaction, and prospector and geologist performance at PT ANTAM Geomin Unit. The quantitative approach was chosen because of its ability to objectively measure and test relationships between variables using numerical data. According to(Creswell & Creswell, 2018)This method is very appropriate for testing theories or hypotheses using statistical analysis. This study aims to explore the influence of work compensation and work environment on job satisfaction, as well as its impact on the performance of prospectors and geologists. In addition, this study will also examine the mediating role of job satisfaction in the relationship between these two independent variables and employee performance. The variables to be tested include work compensation and work environment as independent variables, while employee performance serves as the dependent variable. Job satisfaction will act as an intervening variable that connects both independent variables with employee performance. Through path analysis, this study is expected to provide strong empirical evidence regarding the relationship between variables, as well as produce relevant recommendations for the management of PT ANTAM Unit Geomin in an effort to improve employee satisfaction and performance.(Sugiyono, 2017)And(Neuman, 2014).

3. Results and Discussion

3.1. Respondent Description

Respondents in this study were employees of PT ANTAM Geomin Unit, East Halmahera Nickel Exploration Team, in the period 2024-2026, specifically in the geological work unit consisting of prospectors and geologists. The study was conducted by distributing online questionnaires via WhatsApp using Google Forms from February 22 to February 28, 2026. With a total of 100 respondents selected according to predetermined criteria. All distributed questionnaires were completed completely by respondents, so that all collected data can be further analyzed and assessed to adequately represent the respondents' conditions. The description of respondents in this study is further presented based on their characteristics.

1) Gender

Sample characteristics in terms of gender can be seen in Table.

Table Sample Characteristics Based on Gender

No	Gender	Amount	%
1	Man	85	85%

2	Woman	15	15%
Amount		100	100%

Source: Primary data processing (2026)

The table above shows that the respondents in this study were dominated by male prospectors and geologists (85%), while female respondents were 15%. This composition indicates that the majority of the workforce at PT ANTAM's Geomin Exploration Unit for Nickel in East Halmahera is still dominated by men, which is in line with the characteristics of the mining industry and field work which generally involve physical roles and high mobility. Nevertheless, the involvement of women is still present in certain proportions as part of the organizational structure.

2) Age

Information on sample characteristics based on age is presented in Table.

Table Sample Characteristics Based on Age

No	Age	Amount	%
1	> 40 years	4	4%
2	20–30 years	80	80%
3	31–35 years	12	12%
4	36–40 years	4	4%
Amount		100	100%

Source: Primary data processing (2026)

Based on the table above, the age distribution of respondents shows that the majority of prospectors and geologists are in the 20-30 age range, amounting to 80%. The 31-35 age group accounts for 12%, while the 36-40 and >40 age groups have the same percentage, at 4%. This finding indicates that the majority of respondents are in their early productive years, which are synonymous with relatively high levels of energy and work motivation. This predominance of young age also reflects the characteristics of exploration work, which requires mobility and good physical endurance.

3) Last education

Sample characteristics based on last education are presented in Table.

Table Sample Characteristics Based on Last Education

No	Last education	Amount	%
1	Bachelor degree)	22	22%
2	High School/Vocational School	78	78%
Amount		100	100%

Source: Primary data processing (2026)

These educational characteristics indicate that respondents with a high school/vocational high school background dominate at 78%, while respondents with a bachelor's degree (S1) comprise 22%. This illustrates that most operational field work in nickel exploration units can

be carried out by technical personnel with vocational education, while analytical and managerial roles are mostly filled by higher education graduates. This composition aligns with the competency structure required in the mining exploration sector.

4) Position

Sample characteristics based on position are presented in Table.

Table Sample Characteristics Based on Position

No	Position	Amount	%
1	<i>Geologist</i>	9	9%
2	Prospector	91	91%
Amount		100	100%

Source: Primary data processing (2026)

Based on position, respondents from the geology work unit with the position of prospector dominated with 91%, while geologists were at 9%. This is because in nickel exploration activities the number of workers is more focused on prospectors, then geologists as the person in charge or PIC field, because most of the Geomin Unit's operational activities are more focused on the process of searching, collecting, and recording geological data carried out intensively in the field. Meanwhile, the position of geologists is fewer in exploration activities because they act as experts with more specific analytical competencies at a certain level.

5) Length of work

Respondent characteristics based on length of service are presented in Table.

Table Sample Characteristics Based on Length of Service

No	Length of work	Amount	%
1	1–5 years	66	66%
2	5–10 years	4	4%
3	Less than 1 year	27	27%
4	More than 10 years	3	3%
Amount		100	100%

Source: Primary data processing (2026)

In terms of tenure, the majority of respondents were in the 1–5 year group at 66%, followed by prospectors and geologists with less than 1 year of tenure at 27%. Meanwhile, respondents with 5–10 years of tenure were only 4%, and those with more than 10 years of tenure were 3%. This distribution indicates that the majority of prospectors and geologists are in the early to mid-term stages of their tenure, which may reflect the high demand for new personnel, the dynamics of job mobility, or the regeneration structure of PT ANTAM East Halmahera Nickel Exploration Geomin Unit. The low proportion of prospectors and geologists with long

tenure indicates that exploration work has a relatively high turnover or rotation characteristic.

6) Respondent Rate to Questionnaire

Table Respondent Rate

Information	Amount	%
Employees who are the population	159	100%
Distributed questionnaire (Google Form)	100	62.9%
Returned questionnaire	100	100%
Unusable questionnaire	0	0%
Questionnaires that can be used	100	100%

Source: Primary data processing (2026)

Based on Table, the population in this study was 159 employees. Of this total population, the researchers distributed 100 questionnaires via Google Form to respondents who met the research criteria. All distributed questionnaires were returned complete, resulting in a 100% response rate.

Furthermore, all returned questionnaires were usable in the analysis process because there was no damaged or incomplete data. Therefore, the number of questionnaires that could be processed was 100, or 100% of the total distributed. This high return rate indicates that respondents were enthusiastic and committed to participating in the research.

In this study, descriptive statistical analysis was used to describe the general picture of respondents' responses to the variables of work compensation, work environment, job satisfaction, and prospector and geologist performance. The analysis was conducted by examining the average (mean) value of each indicator to determine the tendency of respondents' perceptions of the research variables before conducting further testing using PLS-SEM. The classification of mean values used a Likert scale of 1–5, divided into low, medium, and high categories.

In this study, hypothesis testing was conducted using the bootstrapping method in PLS-SEM analysis using SmartPLS-4 software. This test aims to determine the significance of the relationship between variables through the path coefficient, T-statistic, and P-value. According to Hair et al. (2011), a hypothesis is accepted if the T-statistic is greater than 1.96 and the p-value is less than 0.05 at a significance level of 5%.

Table Total Effect Test Results

Total effects - Mean, STDEV, T values, p values					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Kepuasan Kerja -> Kinerja Karya...	0.543	0.550	0.130	4.185	0.000
Kompensasi Kerja -> Kepuasan ...	0.324	0.334	0.101	3.194	0.001
Kompensasi Kerja -> Kinerja Kar...	0.214	0.211	0.137	1.556	0.120
Lingkungan Kerja -> Kepuasan K...	0.585	0.576	0.094	6.209	0.000
Lingkungan Kerja -> Kinerja Kary...	0.418	0.415	0.142	2.953	0.003

Source: Primary data processing with SmartPLS 4.1.1.8 (2026)

Table Hypothesis Test Results

Hypothesis	Variable Relationship	Path Coefficient	T-statistic	P-value	Decision
H1	Job Compensation → Job Satisfaction	0.324	3,194	0.001	Accepted
H2	Work Environment → Job Satisfaction	0.585	6,209	0.000	Accepted
H3	Job Satisfaction → Employee Performance	0.543	4.185	0.000	Accepted
H4	Work Compensation → Employee Performance	0.214	1,556	0.120	Rejected
H5	Work Environment → Employee Performance	0.418	2,953	0.003	Accepted

Source: Primary data processing (2026)

1) Hypothesis 1: The Effect of Job Compensation on Job Satisfaction

The first hypothesis test yielded an original estimate of 0.324, indicating a positive effect of work compensation on job satisfaction. The t-statistic of 3.194, which is above the t-table (1.96), further supports this finding. The p-value of 0.001, which is less than 0.05, indicates a positive and significant effect of work compensation on job satisfaction. Therefore, the first hypothesis in this study is accepted.

In this study, work compensation was measured using several indicators: adequate salary or wages, appropriate compensation for workload, fair bonuses and incentives, and benefits and work facilities. Meanwhile, job satisfaction was measured using indicators such as enjoyment of work and responsibilities, rewards and recognition, high work morale, career opportunities, and work-life balance.

The work compensation indicator with the highest loading value is "suitability of compensation to workload," indicating that this aspect is the most dominant element in representing the work compensation construct. On the other hand, the job satisfaction indicator with the highest loading value is "enjoyment of work and responsibility," indicating that job satisfaction *prospector* and geologistThis is primarily reflected in their sense of pleasure, comfort, and positive involvement in carrying out their duties and responsibilities. These results indicate that when the compensation provided is in line with the workload they bear, *prospector* and geologist, this directly contributes to increased feelings of enjoyment and satisfaction in carrying out work. This means that appropriate compensation is not only perceived as a form of appreciation, but also encourages a positive attitude toward work, increases motivation, and ultimately strengthens overall job satisfaction.

In contrast, the work compensation indicator with the lowest loading value was "decent salary or wages," while the job satisfaction indicator with the lowest loading value was "career development opportunities." These results indicate that although decent salary is an important component of compensation, this aspect is not the main factor determining job satisfaction in this study. Similarly, career development opportunities are not a primary

indicator in reflecting job satisfaction, compared to enjoyment of work and responsibilities. Nevertheless, these two indicators still contribute to shaping perceptions. *prospector* and geologist on the quality of their compensation and job satisfaction.

The research findings indicate that work compensation has a positive effect on job satisfaction. This result is consistent with previous research by (Limbono & Harjanti, 2021) which states that compensation in a company can increase job satisfaction. According to Hasibuan (2017) in (Kasmawati et al., 2024) Compensation is all income in the form of money or goods received by prospectors and geologists as remuneration for work performed. Therefore, the fairer, more competitive, and better the compensation provided, the higher the level of job satisfaction experienced by prospectors and geologists, because they feel appreciated for their contributions to the organization. (Robbins & Judge, 2024). Thus, the results of this study are in line with and can support the results of previous studies which stated that work compensation has a positive effect on job satisfaction. (Andriany, 2019), (Hidayat, 2021), (Limbono & Harjanti, 2021)

2) Hypothesis 2: The Influence of Work Environment on Job Satisfaction

Based on the results of the second hypothesis test, the original sample estimate of 0.585 indicates a positive influence of the work environment on job satisfaction. This finding is supported by a t-statistic of 6.209, exceeding the t-table value of 1.96, and a p-value of 0.000, which is below 0.05. Therefore, the work environment can be stated to have a positive and significant influence on job satisfaction, thus accepting the second hypothesis of the study.

In this study, the work environment was measured using indicators such as physical conditions, job security and safety, work relationships (support from colleagues and superiors), work facilities, and work communication. Meanwhile, job satisfaction was measured using indicators such as enjoyment of work and responsibilities, rewards and recognition, high work morale, career development opportunities, and work-life balance.

The work environment indicator with the highest factor loading is "work facilities," indicating that the availability of adequate facilities is a dominant element in representing the work environment construct. On the other hand, the job satisfaction indicator with the highest loading is "enjoyment of work and responsibility," which illustrates that the job satisfaction of prospectors and geologists is greatly influenced by a sense of comfort, enthusiasm, and positive feelings towards the work being carried out. This indicates that the better the work facilities provided by PT ANTAM East Halmahera Nickel Exploration Geomining Unit, the greater the sense of pleasure and satisfaction felt by prospectors and geologists in carrying out their duties.

The work environment indicator with the lowest factor loading was "job safety and security," while the job satisfaction indicator with the lowest loading was "career development opportunities." These results indicate that job security and career development opportunities remain important aspects of the work environment and job satisfaction, although they are

not the dominant factors and constructs of this study. However, improving job safety and security aspects can still contribute to the well-being of prospectors and geologists, which can also directly affect job satisfaction. Similarly, although career development opportunities are not the primary indicator, providing them still has the potential to increase long-term satisfaction among prospectors and geologists.

The results of this study indicate that the better the nickel exploration work environment at PT ANTAM Geomin Unit, East Halmahera Nickel Exploration Team, the higher the job satisfaction level of prospectors and geologists. This is in line with the opinion of (Dewi & Frianto, 2020) in his research, he stated that the work environment has a positive and significant influence on job satisfaction, where the high quality of the work environment will lead to job satisfaction. *prospector* and geologist experienced an increase. The results of this study also support several previous studies which stated that the work environment has a positive and significant effect on job satisfaction. (Rahmadani & Sampeliling, 2023), (Ikhsan Sahlan et al., 2015), (Suryanti et al., 2018).

3) Hypothesis 3: The Effect of Job Satisfaction on Employee Performance

Based on the results of the third hypothesis test, the original sample estimate value of 0.543 indicates a positive influence of job satisfaction on employee performance. This finding is supported by a t-statistic value of 4.185, which exceeds the t-table of 1.96, and a p-value of 0.000, which is below 0.05. Therefore, job satisfaction can be stated to have a positive and significant influence on the performance of prospectors and geologists, thus accepting the third hypothesis of the study.

Conversely, the job satisfaction indicator with the lowest loading value was "career development opportunities," while the employee performance indicator with the lowest loading value was "achieving work targets." Although both are related to job satisfaction, these aspects are not the most dominant elements in describing each construct in this study. However, improvements in both aspects can still contribute to job satisfaction and achievement. *prospector* and geologist.

The results of this study indicate that job satisfaction has a positive and significant effect on performance. *prospector* and geologist, so that it can support several previous studies which also state that Job satisfaction has a positive and significant impact on employee performance. The higher the job satisfaction felt by employees, the higher the employee's performance will be. (Dewi & Frianto, 2020), (Limbono & Harjanti, 2021), (Rahmadani & Sampeliling, 2023). This is in line with the opinion (Robbins & Judge, 2024) which states that job satisfaction is an individual's positive attitude toward work that can influence work behavior and employee performance within an organization. Therefore, the higher the level of job satisfaction an employee experiences, the higher the level of performance they produce. PT ANTAM Geomin Unit East Halmahera Nickel Exploration.

4) Hypothesis 4: Influence Work Compensation for Employee Performance

Based on the results of the fourth hypothesis test, the original sample estimate of 0.214 indicates a positive relationship between work compensation and employee performance. However, the t-statistic of 1.556, which is below the t-table of 1.96, and the p-value of 0.120, which exceeds 0.05, indicate that the effect is insignificant. Therefore, the fourth hypothesis in this study is rejected.

The results of this study indicate that work compensation does not significantly impact prospector and geologist performance, where the work compensation provided by the company has not been able to directly improve prospector and geologist performance. This indicates that improved prospector and geologist performance is influenced not only by financial factors, but also by other factors related to the psychological conditions and work environment of nickel exploration.

5) Hypothesis 5: Influence Work Environment on Employee Performance

Based on the results of the fifth hypothesis test, the original sample estimate value of 0.418 indicates a positive influence of the nickel exploration environment on the performance of prospectors and geologists. This finding is supported by a t-statistic value of 2.953, which exceeds the t-table of 1.96, and a p-value of 0.003, which is below 0.05. Therefore, the nickel exploration environment is declared to have a positive and significant influence on the performance of prospectors and geologists. Therefore, the fifth hypothesis in this study is accepted.

The results of this study indicate that the nickel exploration work environment has a positive and significant effect on the performance of prospectors and geologists at PT ANTAM's Geomin Unit, East Halmahera Nickel Exploration. A conducive nickel exploration environment can help prospectors and geologists carry out their work more effectively and efficiently because they work in comfortable conditions and are supported by adequate work facilities. This is in line with the opinion of Robbins and Judge (2017) who explained that a conducive work environment can encourage increased productivity and employee performance, because it creates a sense of comfort and motivation in working. In addition, the findings in this study can also support the results of previous studies that also stated that the work environment has a positive and significant effect on employee performance. (Dewi & Frianto, 2020), (Madyoningrum & Azizah, 2022), (Madyoningrum & Azizah, 2022).

In this study, prospector and geologist performance was measured using indicators such as work target achievement, work quality, punctuality in completing tasks, attendance rates, and contributions to the team and company. These indicators reflect the prospector and geologist's ability to carry out assigned tasks and their contribution to achieving exploration targets.

6) Indirect Effect Hypothesis

Table Specific Indirect Effects Test Results

Specific indirect effects - Mean, STDEV, T values, p values					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O /STDEV)	P values
Kompensasi Kerja → Kepuasan Kerja → Kinerja Karyawan	0.176	0.182	0.069	2.545	0.011
Lingkungan Kerja → Kepuasan Kerja → Kinerja Karyawan	0.317	0.317	0.094	3.391	0.001

Source: Primary data processing with SmartPLS 4.1.1.8 (2026)

Table Results of the Indirect Effect Hypothesis Test

Variable Relationship	Path Coefficient	T-statistic	P-value	Decision
Job Compensation → Job Satisfaction → Employee Performance	0.176	2,545	0.011	Accepted
Work Environment → Job Satisfaction → Employee Performance	0.317	3,391	0.001	Accepted

Source: Primary data processing (2026)

1) The Influence of Work Compensation on Employee Performance through Job Satisfaction

Based on the results of the hypothesis testing, the original sample estimate value of 0.176 indicates an indirect effect of work compensation on prospector and geologist performance through job satisfaction. This finding is supported by a t-statistic value of 2.545, which exceeds the t-table of 1.96, and a p-value of 0.011, which is below 0.05. Therefore, job satisfaction can be stated as being able to mediate the effect of work compensation on prospector and geologist performance positively and significantly, so that the research hypothesis is accepted.

This study demonstrates that the influence of work compensation on employee performance can occur through job satisfaction as a mediating variable. This means that the compensation provided by the company does not directly improve the performance of prospectors and geologists, but rather first increases the job satisfaction experienced by prospectors and geologists, which ultimately impacts their performance.

In this study, the compensation received by prospectors and geologists, such as salaries, allowances, incentives, and other forms of recognition, can increase the team's sense of appreciation. Prospectors' and geologists' perceptions of compensation commensurate with their work contributions can lead to higher job satisfaction, which in turn increases morale and the quality of their performance.

Based on research findings, work compensation is known to contribute to improved prospector and geologist performance through job satisfaction. These results support the view of Robbins and Judge (2017), who stated that providing fair and competitive

compensation can encourage job satisfaction, which in turn improves employee performance.

2) The Influence of Work Environment on Employee Performance through Job Satisfaction

Based on the results of the hypothesis testing, the original sample estimate value of 0.317 indicates an indirect influence of the nickel exploration environment on the performance of prospectors and geologists through job satisfaction. This finding is supported by a t-statistic value of 3.391 which exceeds the t-table of 1.96 and a p-value of 0.001 which is below 0.05. Therefore, job satisfaction can be stated as being able to mediate the influence of the nickel exploration environment on the performance of prospectors and geologists positively and significantly, so that the research hypothesis is accepted.

Research findings indicate that job satisfaction plays a mediating role in the relationship between the nickel exploration environment and prospector and geologist performance. A favorable work environment can provide comfort and support for prospectors and geologists, thereby increasing job satisfaction.

In this study, the work environment encompasses several aspects, such as the comfort of the exploration location, adequate work facilities, working relationships between employees, and the relationship between employees and management. When the work environment within an organization is in good and conducive conditions, employees will feel more comfortable at work and experience higher levels of job satisfaction. This job satisfaction can then motivate prospectors and geologists to perform better, thereby improving their performance within the organization.

The research results support Sedarmayanti's (2017) view that a good work environment can increase employee job satisfaction and ultimately influence improved employee performance.

4. Conclusion

Job compensation has a positive and significant effect on job satisfaction. This means that the better the compensation provided, especially if it matches the workload as the dominant indicator, the higher the job satisfaction level of prospectors and geologists. They tend to feel more appreciated and have a positive emotional connection to their work when compensation is perceived as fair and proportional. The work environment has a positive and significant effect on prospector and geologist performance. Work facilities are the strongest indicator of the nickel exploration environment in influencing job satisfaction. This indicates that a conducive physical and social exploration environment can increase prospectors' and geologists' enjoyment and comfort in carrying out their tasks. The work environment has been shown to have a stronger influence than compensation in carrying out variations in job satisfaction. Job satisfaction has a positive and significant effect on employee performance. The indicator of punctuality in completing tasks is the main indicator of prospector and

geologist performance, while enjoyment of work is the most dominant indicator of job satisfaction. This indicates that prospectors and geologists who are satisfied with their work tend to be more disciplined, productive, and able to consistently demonstrate optimal performance. The results of the study indicate that job compensation does not significantly affect prospector and geologist performance. Although the relationship is positive, compensation has not been able to have a direct impact on performance improvement. This suggests that performance improvement is also influenced by other factors, such as prospector and geologist motivation and job satisfaction. This study demonstrates that the nickel exploration environment has a positive and significant impact on prospector and geologist performance. A comfortable, safe, and adequately equipped nickel exploration environment can help prospectors and geologists work more effectively, resulting in optimal performance.

5. References

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