ABSTRACT

The research objective was to determine the EOQ method in controlling oil and gas production material inventories and obtain a comparison between the total inventory cost (TIC) of the EOQ method and the existing total inventory cost (TIC) method at PT. Pertamina EP. The company used as the object of research is an oil and gas company with output in the form of crude oil and natural gas. The study was conducted by analyzing the primary and secondary data, namely material inventory report data downloaded from SAP, by examining the inventory stock with EOQ where quantities will be ordered, order frequency, safety stock, ROP, maximum inventory, and total inventory cost (TIC) in order to reduce the number of low and off production. The results showed that the EOQ method can be used by companies as one of the methods for planning optimal material inventory control to reduce low and off production and the comparison between the total inventory cost (TIC) of the existing EOQ method and the total inventory cost (TIC) is 40% more small EOQ method. To save material inventory costs, the company is advised to minimize the amount of material that is not used.

Keywords: low and off production, EOQ, order frequency, safety stock, ROP, maximum inventory, and TIC (Total Inventory Cost).

ABSTRAK

Tujuan penelitian untuk mengetahui metode EOQ dalam mengendalikan persediaan material produksi Migas dan mendapatkan perbandingan antara *total inventory cost (TIC)* metode EOQ dengan *total inventory cost (TIC)* metode eksisting di PT. Pertamina EP. Perusahaan yang dijadikan objek penelitian merupakan perusahaan Migas dengan *ouput* berupa minyak bumi (*crude oil*) dan gas bumi (*natural gas*). Penelitian dilakukan dengan menganalisa data primer (*interview*) dan sekunder yaitu data laporan persediaan material yang diunduh dari SAP, dengan meneliti *inventory stock* dengan EOQ dimana akan diketahui jumlah (*quantity*) yang dipesan, frekuensi pemesanan, *safety stock*, ROP, *maxsimum inventory*, dan TIC (*Total Inventory Cost*) supaya menurunkan angka *low and off production*. Hasil penelitian mengetahui metode EOQ dapat digunakan perusahaan sebagai salah satu metode untuk perencanaan pengendalian persediaan material yang optimal untuk menurunkan *low and off production* dan perbandingan antara *total inventory cost* (TIC) metode EOQ dengan *total inventory cost* (TIC) metode eksisting adalah sebesar 40% lebih kecil metode EOQ. Untuk penghematan biaya persediaan material maka perusahaan disarankan untuk meminimalkan jumlah persediaan material yang tidak digunakan.

Kata kunci: *low and off production,* EOQ, frekuensi pemesanan, *safety stock, ROP, maxsimum inventory,* dan *TIC (Total Inventory Cost)*