Opinion No. 154-B; Opinion and Order on Remand

(issued June 28, 1985)

Before Commissioners: Raymond J. O’Connor, Chairman; Georgiana Sheldon, A. G. Sousa and Charles G. Stalon.

[Note: Opinion No. 154-A, Opinion and Order Denying Rehearing, issued January 31, 1983, appears at 22 FERC ¶61,086.]

Introduction

On March 9, 1984, the United States Court of Appeals for the District of Columbia Circuit affirmed in part and remanded in part the Commission’s opinion in Phase I of this proceeding. 1

The purpose in Phase I of this proceeding is to devise generic principles for the setting of just and reasonable oil pipeline rates. One essential ingredient in this task is to adopt rate base and rate of return methodologies which will operate together to produce a just and reasonable return allowance. In making this determination the Commission must also determine the proper method for computing the tax expense component of an oil pipeline’s cost-of-service. 2

Background

This proceeding began in 1972 when various shippers (Mid-Continent Shippers) using the Williams Pipe Line Company (Williams) challenged the lawfulness of Williams’ rates before the Interstate Commerce Commission (ICC). The ICC found those rates to be just and reasonable under its traditional criteria of an overall rate of return of 10 percent on a valuation rate base. 3 The Mid-Continent Shippers appealed to the United States Court of Appeals for the District of Columbia Circuit.

In 1977, while that appeal was pending, Congress transferred regulatory authority over oil pipelines to this Commission. 4 In 1978, at the Commission’s request so that it could begin its “regulatory duties . . . with a clean slate,” the court remanded the case to the Commission for reconsideration. 5 The court wanted to allow the Commission “to build a viable modern precedent . . . that not only reaches the right result, but does so by way of ratemaking criteria free of the problems that appear to exist in the ICC’s approach.” 6

In 1982, the Commission issued Opinion No. 154. 7 In that opinion, the Commission retained the valuation rate base but adopted a new rate of return methodology. 8 The Mid-Continent Shippers and the United States Department of Justice (Justice), among others, challenged the opinion.
Upon review of the opinion, the court remanded certain aspects of it. In its opinion, the court concluded that none of the Commission’s explanations for its rejection of an original cost rate base was satisfactory, that the Commission "did not offer a reasoned explanation for adhering to an admittedly antiquated and inaccurate formula [valuation], but rather a host of unconvincing excuses that fail to add up to a rational choice," that it could not "locate the rhyme nor reason of [the] rate of return methodology," and that the Commission "made no attempt to estimate the risks involved with oil pipeline operations." Finally, the court asked the Commission to once again inquire into the proper ratemaking method for oil pipelines. To help make that inquiry, the court furnished the Commission with some "important and basic guideposts." In sum, it advised:

Most fundamentally, FERC’s statutory mandate under the Interstate Commerce Act requires oil pipeline rates to be set within the "zone of reasonableness"; presumed market forces may not comprise the principal regulatory constraint. Departures from cost-based rates must be made, if at all, only when the non-cost factors are clearly identified and the substitute or supplemental ratemaking methods ensure that the resulting rate levels are justified by those factors. In

addition, the rate of return methodology should take account of the risks associated with the regulated enterprise. It should not be forgotten, too, that the choice of a proper rate of return is only part of what should be an integrated ratemaking method, and accordingly FERC must carefully scrutinize the rate base and rate of return methodologies to see that they will operate together to produce a just and reasonable rate.

Summary of the Commission’s Decision

It is evident that oil pipeline rates as a general rule must be cost-based. After re-examining the record in this proceeding, the Commission concludes that with the exception of the starting rate base, as discussed below, a rate base methodology derived from original cost rate making models should be adopted. As the court observed, original cost is a "proven alternative." Its obvious advantage, as the Commission has observed, is that "the language of American finance is an original cost language" for American industry reports its earnings on net book investment. Hence, original cost is the best yardstick to compare an oil pipeline to other oil pipelines, to other industrial companies, to other industries, and to the entire American economy in order to approximate the oil pipeline’s cost of capital. For oil pipelines, for the reasons given below, the Commission adopts net depreciated trended original cost (TOC) as the model for calculating rate bases, and therefore, determining revenue requirements.

Next, the Commission concludes that rate of return should be determined on a case-specific basis with reference to the particular pipeline’s risks and its corresponding cost of capital. Moreover, as discussed below, the Commission shall use the usual approach of using embedded debt costs and setting a rate of return on equity capital. And the Commission shall use a pipeline’s or its parent’s actual capital structure but will allow participants on a case-specific basis to urge the use of some other capital structure. Lastly, for the reasons given below, the Commission shall adopt a starting rate base for existing assets consisting of the sum of a pipeline’s debt ratio times book net depreciated original cost and the equity ratio times the reproduction cost portion of the valuation rate base depreciated by the same percentage as the book original cost rate base has been depreciated.

With respect to taxes, the Commission adopts normalization for oil pipelines rather than flow-through of the benefits of income tax deferrals.

The Association of Oil Pipe Lines (AOPL), supported by Texas Eastern Transmission Corporation and Sun Pipe Line Company, asks that the Commission reopen the Phase I record to receive more evidence on several topics. The Marathon Pipe Line Company in a petition also indicates a desire to submit more evidence. None of that supplemental evidence requested by those parties is required for the Commission to reach its decision herein. Hence, the AOPL’s motion and Marathon’s petition are denied.
Rate Base--General

As stated earlier, the Commission adopts TOC as the form of a cost-based rate base rather than net depreciated original cost. Thus, all new pipeline assets will be added to the rate base at original cost and trended as described below. However, for existing assets that are currently valued under the valuation formula, a one time adjustment will be necessary to arrive at an appropriate base to be trended for the future. The formula the Commission has decided to employ for this one time adjustment to bridge the transition from valuation to TOC is described below in the

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section called "Starting Rate Base." Before discussing the reasons for the decision, the Commission shall describe the TOC model.

TOC works as follows. First, TOC, just like net depreciated original cost, requires the determination of a nominal (inflation-included) rate of return on equity that reflects the pipeline’s risks and its corresponding cost of capital. Next, the inflation component of that rate of return is extracted. This leaves what economists call a “real” rate of return. The real rate of return times the equity share of the rate base yields the yearly allowed equity return in dollars. The inflation factor times the equity rate base yields the equity rate base write-up. That write-up, like depreciation, is written-off or amortized over the life of the property.

The following example illustrates TOC. Assume a new pipeline with an original equity investment of $1,000. Also assume that a just and reasonable overall rate of return on equity would be 16 percent and that 7 percent of that represents inflation. This leaves 9 percent as the so-called “real” rate of return. In its first year of service, the pipeline would be entitled to earn $90 (9 percent times $1,000) and $70 (7 percent times $1,000) would be capitalized into its equity rate base to be amortized over the life of the property starting in the first year, along with the depreciation on the $1,000. If that life were twenty years, in addition to the return of $90, the pipeline would be entitled to recover, in the first year, $3.50 as amortization ($70 divided by 20), $50 as depreciation ($1,000 divided by 20), its embedded debt cost, and depreciation associated with debt investment. This process would continue over the life of the property until the rate base (assuming no salvage value) hit zero. Unless changed in a rate case, the real rate, which should be relatively stable, would be 9 percent each year. The inflation rate would vary as the chosen inflation index varies.

It is important to emphasize that TOC and net depreciated original cost are, as recognized by Justice, essentially the same except for their treatment of inflation. TOC reflects inflation through an automatic adjustment to rate base. Net depreciated original cost reflects estimated inflation in the nominal rate of return. This difference between them results in a different timing of the recovery of the cost of equity capital, when inflation exists, over the life of the property. But, and this is crucial, as Justice admits, “[t]heoretically, TOC results in the same discounted value of the earning stream for the investor as does "untrended" original cost.” The Commission concludes that TOC is an acceptable cost-based rate base alternative to net depreciated original cost. True, Justice and the Mid-Continent Shippers raise objections to TOC. They state that there could be problems with developing a rate of return, including selecting an inflation factor to be extracted from the nominal rate. As discussed below, those objections are really aimed at the mechanics of TOC and are not impediments to the adoption of TOC.

The Commission adopts TOC over net depreciated original cost because it is a theoretically acceptable alternative that after the switch from valuation will help newer pipelines with higher rate bases to compete with older pipelines with lower rate bases and will help them compete with other modes of oil transport and so will tend to foster competition generally. This is so because TOC mitigates the front-end load problem for new pipelines.

The Commission discussed in detail the front-end load problem in Opinion No. 154 and reaffirms what was said there. In brief, a front-end load occurs under net depreciated original cost because under that
rate base declines over time. Hence, the company’s allowed return for its equity cost of capital declines over time.

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This means that the company’s allowed equity return is bunched in the early years of its property’s life when its rate base is still large. The problem is that owing to competition a pipeline may not be able to charge rates high enough to recover that bunched income. And those lost revenues are gone forever. TOC, on the other hand, defers income until later years by capitalizing the inflation factor into the equity rate base. As time goes by and competitors’ prices rise because of inflation, the company under TOC can raise its rates to recover the deferred income and still compete. In Opinion No. 154, the Commission recognized the front-end load problem but retained valuation as the inflation-sensitive rate base. But, the Commission stated that a rate base linked to inflation, such as TOC, would be the simplest and perhaps best approach. The Commission now takes that approach.

Moreover, TOC’s different time pattern for the recovery of the cost of equity capital also has other advantages. TOC comes closer to duplicating pricing in unregulated enterprises, and provides for greater intergenerational equity by providing relatively constant cost of equity capital charges in real terms (adjusted for inflation) to ratepayers over the life of the regulated property. Under TOC, the successive generations of ratepayers will be paying more in dollars but they are paying in cheaper dollars because of inflation.

Rate Base—the Mechanics

Dr. Myers recommended that the inflation index for TOC be the actual change in the construction price index used in the ICC’s valuation formula. Justice suggested that the Commission look to the U.S. Treasury bill rate or some other long-term corporate bond index. The Mid-Continent Shippers see problems with all indices. Justice and the Mid-Continent Shippers also point out that the derivation of real rates of return will be difficult. The Commission concludes that the choice of index should be resolved on a case-specific basis. What is important is that the index used to decrease the nominal equity rate of return is also used to increase the equity rate base. Finally, as to the determination of the initial real rate of return, all that involves is the finding of the nominal rate and the extraction of the inflation component. The Commission sees nothing unusual about the determination of nominal rates. This is the standard practice for gas pipeline and electric companies. Moreover, changes in the real rate will also be determined by reference to changes in the nominal rate.

As noted, Dr. Myers recommended the setting of an overall real rate of return and the trending of the entire rate base. We have chosen to trend only the equity portion of the rate base. We have done this in order to ensure that the equity holder will not benefit from a write-up of the rate base with respect to assets financed by debt. The equity holder will only be compensated for the inflation to the extent that assets are financed by equity.

Starting Rate Base

Because the Commission is switching oil pipelines from a valuation rate base to a TOC rate base, it must adopt a starting or transition rate base in dollars for existing plant. The industry argues that the starting rate base should be a pipeline’s most recent valuation. The industry’s adversaries argue that book net depreciated original cost should be the starting rate base.

In selecting a starting rate base, the Commission gave consideration to the rate base which is minimally disruptive but comports with the newly adopted ratemaking approach. The Commission also gave much weight to its previously stated view that

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However, the Commission is concerned about the long reliance of pipeline investors on the previous rate base method and, as a result, has sought a middle ground that is fair in light of investor expectations but without perpetuating the serious flaws of the previous method. The Commission believes that the appropriate starting rate base should be the sum of a pipeline’s debt ratio times net depreciated original cost and the equity ratio times the reproduction portion of the valuation rate base depreciated by the same percentage as the book original cost rate base has been depreciated. The Commission believes this formula, which is a middle ground between valuation and net depreciated original cost, is fair in view of pipeline investor reliance on a rate base which has been adjusted for inflation. The starting rate base will more closely approximate the TOC rate base that would have existed had the ICC not written-up debt. It will ensure that the equity holder does not benefit from the write-up of debt financed assets, as was the case with the ICC valuation rate base. It will also eliminate from valuation the unjustified 6 percent write-up for “going concern value.” The Commission observes that it regulates around ninety pipelines and the factual situation of each can be expected to differ. Hence, a participant in a rate case may raise this issue and attempt to prove that a particular company is not entitled to the instant starting rate base.

Capital Structure

The Commission must decide on the appropriate capital structure to use to determine a pipeline’s starting rate base and to thereafter compute the pipeline’s allowed return. The Commission recently expressed for gas pipelines a general policy of using actual capital structures rather than hypothetical capital structures. The Commission believes that this approach is appropriate for oil pipelines. The actual capital structure could be the actual capital structure of either the pipeline or its parent. The Commission concludes that a pipeline which has issued no long-term debt or which issues long-term debt to its parent or which issues long-term debt guaranteed by its parent to outside investors should use its parent’s actual capital structure. However, a pipeline which issues long-term debt to outside investors without any parent guarantee should use its (the pipeline’s) own capital structure.

Relationship of Rate Base and Capital Structure

We describe the relationship between rate base and capital structure by an illustration. Assume a starting rate base of $1,200, a debt ratio of 70%, a debt cost of 8%, an equity ratio of 30%, a nominal equity cost of 16%, an inflation rate of 7%, and a real equity cost of 9%. A debt equity chart would be:

<table>
<thead>
<tr>
<th>Debt</th>
<th>70%</th>
<th>8%</th>
<th>5.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>30%</td>
<td>9%</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.3</td>
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The Commission has concluded that the equity rate of return should be determined on a case-specific basis with reference to the risks and corresponding cost of capital associated with the oil pipeline whose rates are in issue. Of course, one factor which may be included in any risk analysis is the competition faced by the pipeline.

Any pipeline may try to prove that it is entitled to additional compensation to reflect increased risk or other non-cost factors such as incentives to investment. This endeavor will yield a nominal rate of return on equity which will then be translated into a real rate by the extraction of inflation pursuant to an index determined in the particular case. The Commission observes again that rate base and rate of return must “operate together to produce a just and reasonable rate,” consequently, the Commission will pay particular
attention to the operation of the two elements together in each case. 51

Taxes

Two tax issues require attention. The first tax issue is the determination of the interest expense deduction to use in calculating a pipeline’s tax allowance. The usual method is to multiply the company’s weighted cost of debt times its rate base. This will not work for oil pipelines. This is so because under the TOC methodology adopted in this opinion the rate base includes an equity write-up. The Commission holds, therefore, that oil pipelines should use their actual interest expense.

The court suggested that the Commission reexamine the next tax issue: the proper ratemaking treatment of book and tax timing differences in the recognition of certain expenses. For example, oil pipelines may depreciate their properties for federal income tax purposes faster than they depreciate those properties for book or cost-of-service expense purposes. 52 The issue is whether their cost-of-service tax component should be calculated using the cost-of-service depreciation expense as a deduction from gross income (normalization) or using the greater tax depreciation expense (flow-through of tax savings). Opinion No. 154 permitted the pipelines to use normalization on the ground that "normalization facilitates the comparable analyses basic to the determination of appropriate rates of return." 53 The court questioned this decision because it found we had "effectively abandoned comparable earnings analysis" and thus had no further justification for using normalization. 54 The Commission has concluded in this opinion that an oil pipeline’s rate of return on equity should be determined with reference to its risk and corresponding cost of capital. The Commission has hence made comparable risks and earnings basic to the determination of rate of return. Accordingly, it adopts normalization rather than flow-through to accommodate its earnings analysis. 55 The Commission repeats what was said in Opinion No. 154:

[W]e opt . . . for normalization. The essential reason for that is that normalization facilitates the comparable earnings analyses basic to the determination of appropriate rates of return on oil pipeline . . . investments. Throughout the economy rates of return . . . are reported on a normalized basis. 56 This means that after-tax earnings are computed as though the "deferred taxes" had actually been paid. Hence the taxpayer’s actual after tax rate of return is higher than the version of that return given in its financial statements, reported to the Securities and Exchange Commission, and used by the financial community. 57

So a flow through rule for this field will make for mismatched rate of return comparisons between oil pipelines and other industries. Were we to insist on actual cash basis, after tax rates of return here, elaborate adjustments would be needed in order to compare those returns with actual cash basis, after tax rates of return elsewhere. That would be administratively difficult. And those difficulties would be pointless. Nothing of substance would be accomplished. 58

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The Commission still finds this reasoning sound. 59

Other Matters

The Commission reaffirms its policies set forth in Opinion No. 154 with respect to (1) test periods, throughput variations, and developmental losses, 60 (2) holding company problems, 61 and (3) working capital. 62 The Commission reverses its administrative policies set forth in Opinion No. 154 with respect to oil pipeline rate filings. 63 The limitations imposed upon the Commission and staff in oil pipeline cases before the Commission is being removed to help the Commission fulfill its statutory mandate under the Interstate Commerce Act to set oil pipeline rates that are just and reasonable.

Procedural Posture of This Opinion

On March 7, 1985, the Commission approved a settlement which resolved all issues in Phase II of this
The AOPL is concerned about the procedural posture of this case in light of that settlement. In particular, it states that “in the absence of any continuing case or controversy over Williams’ rates, this adjudicatory proceeding may no longer provide a proper vehicle for the resolution of the generic issues . . . pending in Phase I.” It believes the Commission should convert Phase I into a formal rulemaking under the Administrative Procedure Act. The Commission sees no reason to do that. Whatever its label, the Commission views this opinion as a statement in compliance with the court’s mandate that it fashion a “proper ratemaking method for oil pipelines.” The Commission is providing a guide to its action in future and pending oil pipeline cases. The Commission is establishing a methodology pursuant to which it will test the reasonableness of oil pipeline rates on a case-by-case basis. At that time, the Commission will determine whether the “end result” of this methodology produces just and reasonable rates. The Commission is not persuaded that at this late date in these proceedings any person’s rights will be prejudiced in such a way as to necessitate turning Phase I into a formal rulemaking. Hence, the AOPL’s motion is denied.


2 The FARMERS court stated that the Commission could consider the issue of cost allocation in Phase I. FARMERS at 1529. The Commission elects not to do that. That issue, also known as rate design, is best suited for case-specific treatment.

3 The 10 percent rate of return was used for refined products pipelines such as Williams. The rate of return for crude oil pipelines was 8 percent. The Mid-Continent Shippers lost before the full ICC. Petroleum Products, Williams Brothers Pipe Line Co., 355 ICC 479 (1976).


6 Id.

7 Supra note 1.

8 The valuation rate base formula is set out in Opinion No. 154, 21 FERC at p. 61,696 n.295 and in FARMERS at 1495 n.28. The rate of return methodology appears in Opinion No. 154 at 21 FERC at pp. 61,636-50 and in FARMERS at 1521-23.

9 FARMERS at 1512.

10 Id. at 1518.

11 Id. at 1522.

12 Id.

13 Id. at 1530.

14 Id.

15 Id.
16 Opinion No. 154, 21 FERC at p. 61,618 for the quote.

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17 Id. at p. 61,619.

18 The court upheld the Commission’s determination that rate base should be determined on a system-wide basis. FARMERS at 1529 n.79.

19 The Commission’s description is based on the testimony of Dr. Stewart Myers except that Dr. Myers would trend the entire rate base and set an overall return. Our description is simplified by assuming an equity rate base. See our discussion under the heading Relationship of Rate Base and Capital Structure, infra.

20 Dr. Myers viewed the capitalized inflation amount as reinvested income. Exhibit 21-1 at 18, 24. The Commission disagrees and finds that the rate base write-up represents deferred earnings on capital and not a return of capital. Justice’s expert witness agrees that a pipeline is entitled to collect those deferred earnings. Exhibit 201-5 at 19.

21 The equity rate base at the start of year two would be $1,016.50 ($1,000 - 50 + 66.50).

22 The Commission recognizes that in some situations TOC might present problems for new pipelines. The Commission is willing in such situations to consider any innovative solutions which are presented to it.

23 Justice’s Initial Brief at 98; Exhibit 201-5 at 3, 23.

24 Justice’s Initial Brief at 98.

25 Id.; Exhibit 21-1 at 23.

26 See Exhibit 21-1 at 44 and n.3.

27 Opinion No. 154, 21 FERC at pp. 61,628-30.

28 See Exhibit 8-1 at 46, 47 for a hypothetical illustration.

29 Id. at 61,630-31.

30 Exhibit 21-1 at 41, 75.

31 Exhibit 21-1 at 42, 43 and Exhibit 21-2 at 17 on fairness to shippers and consumers.

32 Exhibit 21-1 at 45, 47; Transcript at 3580.

33 Justice’s Initial Brief at 105.

34 Mid-Continent Shippers’ Reply Brief at 28.

35 Other choices would be the CPI and the GNP deflator. The inflation rate for the past year would be used as the estimated rate for the next year. Hence, the rate base would be written-up at the start of the year and not at the end of the year.

36 Cf. FARMERS at 1524-25.

37 On this point the Commission agrees with the Mid-Continent Shippers. Mid-Continent Shippers’
Of course, all new plant will be recorded at cost. Subject to reexamination in a particular case, oil pipelines may add to their rate bases as an allowance for funds used during construction an amount computed using their nominal overall cost of capital.

Opinion No. 154, 21 FERC at p. 61,616 and see p. 61,696 n.304.

In formula form we have:

\[
SRB = O(1-e) + R(e)
\]

Where:

\(SRB\) = starting rate base

\(O\) = book net depreciated original cost

\(R\) = net depreciated reproduction cost

\(e\) = ratio of equity to total capitalization

The reproduction part of "R" should be taken from the 1983 valuation when completed. "O" should be taken from the pipeline’s books on that date. The pipeline may add to its starting rate base the original cost of land, rights of way less book depreciation, working capital, and plant not included in the 1983 valuation at cost less book depreciation. For purposes of determining the depreciation to be applied to the reproduction portion of rate base, the same ratio should be applied as the ratio of depreciation to original cost. For example, if original cost has been 40 percent depreciated, this reproduction cost should be assumed to be 40 percent depreciated.

A pipeline’s existing book depreciated original cost rate base shall continue for cost-of-service depreciation expense purposes.

Arkansas Louisiana Gas Co., a Division of Arkla, Inc., 31 FERC ¶61,318 (1985).

Solely for the purpose of fixing the starting rate base, actual capital structure shall be the actual capital structure as of the date of this opinion.

Debt guaranteed by the parent should be included in the parent’s capital structure.

For cases pending before the Commission, the starting rate base should be determined as of the date the filed rates in question become effective, if that date is prior to the pipeline’s 1983 valuation.

\[\$1,200 \times 2.1\% \times (30\% \times 7\%) = \$25.20.\]

The Commission expects the cost of equity capital for oil pipelines will be determined by the use of either or both of the market-oriented or comparable earnings standards. Both focus on investor expectations and requirements with respect to earnings.

See FARMERS at 1508 n.50.

See id. at 1495 n.27, 1503 and 1530.

Moreover, on a case-specific basis, a pipeline will be permitted to argue that its parent company is entitled to compensation for any guarantees of the pipeline’s debt. Id. at 1521.
51 Id. at 1530.


53 Opinion No. 154, 21 FERC at p. 61,656.

54 FARMERS at 1530 n.80.

55 The court affirmed the Commission’s decision that oil pipelines must exclude all deferred tax amounts from their rate bases. FARMERS at 1529, 1530. The Commission notes that its decision that oil pipelines are entitled to the full benefit of investment tax credits was not appealed. Opinion No. 154, 21 FERC at p. 61,657, and p. 61,658.

56 See Accounting Principles Board Opinion No. 11, which adopted normalization for 1968 and subsequent years.

57 A comprehensive statistical demonstration of this phenomenon appears in Effective Corporate Tax Rates in 1980, A Special Supplement prepared by the Editors of Tax Notes, Arlington, Virginia (1982).

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58 21 FERC at p. 61,656.


60 Opinion No. 154, 21 FERC at p. 61,658, and p. 61,659.

61 Id. at p. 61,651, and p. 61,652.

62 Id. at p. 61,704 n. 386.

63 Id. at p. 61,612.


65 AOPL’s Motion at 2.


67 FARMERS at 1530.