PETROLEUM SWAPPING BETWEEN OIL GIANTS
"Exchanges": An Elephant In Our Living Room

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Introduction

It has been frequently observed that the petroleum industry is one of the most extensively reported, measured, and analyzed of modern industries. In spite of this, for more than a half century there has existed a singularly persistent and pervasive commercial practice (broadly institutionalized within the industry) which has largely escaped critical public scrutiny. That industry practice, and subject of this paper, is the systematic cooperative reciprocal barter (variously called "**swaps**" or "**exchanges**") of gargantuan bulk supplies of domestic and foreign petroleum between ostensibly-competing giant international oil companies.

How and why this practice has so long escaped critical public attention is a mystery when one considers that it not only affects daily many millions of barrels (and billions of dollars)of domestic and international oil commerce, but what is more, such petroleum exchanges have flourished continuously for over 75 years between virtually the same vertically-integrated industry giants.

This writer's first-hand knowledge of oil exchanges was gained as a 20-year veteran trial attorney in two of the largest Federal antitrust oil-industry cases since the landmark 1911 Standard Oil Case. These two later actions (by Justice in 1953,[1] and FTC in 1973,[2] were significant as the first to comprehensively challenge dominant oil companies' use of systematic exchanges as a vehicle for monopolizing petroleum commerce. After many years of trial preparation, for policy reasons, both major cases were inconclusively terminated by the Government without trial of issues.[3]

Although now long-retired from both Government and oil matters, this writer has retained an abiding curiosity about the unresolved question of petroleum exchanges. To the best of the writer's knowledge, the issue of oil giants' systematic exchanges has never again been comprehensively tested as a possible illegal trade restraint in any other antitrust proceeding since the two failed Government initiatives. (In 1993, an exceptional US Tax Court opinion meticulously examined exchanges between

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* Background: The writer has been retired from the Government since 1981.
1972 –1980: FTC Bureau of Competition trial attorney in case charging 8 major oil companies (viz., Exxon, Mobil, Chevron, Texaco, Gulf, Shell, Amoco, and Arco) with violation of Section 5 of the Federal Trade Commission Act (writer was one of 19 co-counsel co-authors and co-signers of FTC document entitled "Complaint Counsel's First Statement of Issues, Factual Contentions And Proof)"

1952- 1970: Justice Department Attorney Antitrust Division:
1952-1968: Trial attorney in civil litigation known as The International Oil Cartel Case, charging 5 major American. international oil company defendants (viz., Exxon , Mobil], Texaco, Chevron, and Gulf), and two non-defendant foreign co-conspirators (viz., BP and Shell) with violation of the Sherman Act.

***1968-1970*:** Staff attorney in Colonial Pipeline investigation; and in Justice statutory report on the Interstate Oil Compact Commission.

February 20, 1974 : Witness before the Senate Foreign Relations Committee's Subcommittee On Multinational Corporations (93rd Congress, Second Session), testimony concerning the International Oil Cartel Case (see "Multinational Corporations and United States Foreign Policy" Hearings, Part 7, pp 14—55D).

Exxon and Texaco, but only in the context of tax issues).[4]

Nor, to my knowledge, has this trade practice otherwise ever received the sustained rigorous academic analysis it would seem to warrant given its historical prevalence, and its potential economic and legal significance. The few occasional published treatments have generally been fragmentary and superficial. Apart from richly detailed – but rarely published -- revelations found in the Government's terminated antitrust cases, on the whole, the subject of exchanges has remained mostly arcane and shrouded in mystery. It is therefore gratifying to find this topic publicly mentioned as a subject for new FTC inquiry.

The following brief exposition does not presume to supply the deficiencies of prior treatments of this subject. Its more modest goal is simply to open the curtain to expose this enigmatic trade practice to the clear light of day. At the very least, it is hoped that this perspective may challenge a new generation of economic and legal scholars and investigators to take up the chase to hunt down and ensnare this elusive critter called "Exchanges"**:** The "elephant in our living room."

Need for Special Study

In this writer's opinion, there is urgent need for a fresh examination of the issue of **systematic reciprocal bulk petroleum exchanges between dominant vertically-integrated companies** ("**E**xchanges"),***** sui generis, as a species of contract or combination in restraint of trade, or an unfair trade practice, whose ultimate purpose and effect is to gain, maintain, or extend control of markets and prices by monopolizing petroleum supply.

Some idea of the scope of such **E**xchanges was suggested in this writer's 1975 note indicating that " An executive of one of these [FTC Case respondent] companies has estimated that such reciprocal exchanges account for approximately 15 to 20 percent of his company's total gasoline output (equivalent to about 160 million barrels or almost 7 billion gallons per year).[5]

The Commission already possesses a rich treasure trove of relevant information on **E**xchanges (both crude oil and refined products) in a significant 394-page pleading filed by the Bureau of Competition in the Commission's aborted case against 8 dominant American oil Companies. (see In the Matter of Exxon Corporation, et al., Docket No. 8934 , "**Complaint Counsel's First Statement of Issues, Factual Contentions and Proof**," dated October 31, 1980). That document ("CounselDoc") is extensively annotated to copious company microform documents (530,000 pages) gathered during discovery. Such supporting company evidentiary documentation is probably still available within the Commission's own archives.

Although the CounselDoc is quite detailed and far-ranging, nevertheless, with respect to the phenomenon of **E**xchanges, the treatment is fragmented and unfocused.. A substantial number of **E**xchange references appear scattered throughout several topical sections,** but in the end there is no comprehensive assessment of this singularly pervasive trade practice in any larger economic and legal context.. The remainder of the present paper undertakes to fill that conceptual void in the CounselDoc.

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* The initial-cap **E** in "**E**xchanges" is used here to distinguish the boldly-defined class of exchanges from oil exchanges generally.

** Mention of "exchanges" appears on the following pages of the CounselDoc: 13, 37, 45-46,49-50, 54, 60, 63, 69-70, 74-75, 77, 102-105 (domestic crude oil), 124-127 (foreign crude), 138, 144-145, 161-163, 180-181 (pipeline terminals), 229, 257, 304-305, 329, 338 355, 365-366, 373-374.

Historical Antecedents

The precise origins of reciprocal oil barter, (like the origins of primitive human barter) are probably lost in antiquity. There is no way of knowing exactly when or under what circumstances petroleum barter was first utilized. Nor is that of any significance here. What is more important for present understanding is how, and for what purposes, large-scale, systematic reciprocal supply **E**xchanges first came into use among the largest oil companies with dominant positions in the industry. Here, history still has much to teach.

To answer this question, fortunately, there is an excellent published resource in the FTC's own landmark 1952 Report to a Senate Monopoly Committee entitled "The International Petroleum Cartel."[6] That Report (foundation for the previously noted Justice Department's International Oil Cartel Case [Cartel Case]), highlights a 1928 document drafted by three top executives of the world's then-largest oil companies, (now known as Exxon, Shell and BP).

What is significant about that document, (called "The Achnacarry Agreement") is that there for the first time the dominant Companies' expressed a clear written basic charter of principles, policies, and procedures for solidifying their joint control of international oil supplies and markets. And prominent among these grand plans were special provisions relating to **E**xchanges.

While world market conditions addressed by the Achnacarry Agreement may have substantially changed since 1928, and while all-encompassing cartel agreements like it may have been inhibited by Cartel Case consent decrees, nevertheless the fact remains that some of those original industry practices, like **E**xchanges still survive, though in a legal limbo (i.e., neither adjudicated nor specifically enjoined by Cartel Case consent decree). Furthermore, since the FTC's aborted 1973 case likewise failed to adjudicate its **E**xchange issues, the net result of both Government defaults has been a continuing green light for the practice of **E**xchanges.

Nevertheless, the 1952 FTC Report still stands as a classic historical illustration of powerful companies' candid strategic thinking about the role of supply **E**xchanges. Page 204 of the FTC Report highlights objectives of those **E**xchanges as contemplated by The Achncarry Agreement:

> *Reciprocal exchange of supplies.* – In addition to the establishment of a quota system for the division of markets… the Achnacarry Agreement also provided for a rather elaborate method of exchanging oil supplies among the various participants. The principle purposes of this exchange were to direct supplies to each market from "the nearest producing area.[19] thereby reducing transportation costs through the elimination of cross hauling, and to minimize the tendency to erect duplicate facilities. Avoidance of duplication was expected to result because the participants, in thus exchanging oil supplies, would tend thereby to share each other's existing facilities,[20] and would tend to limit the erection of new facilities to those "necessary to supply the increased requirements of petroleum products in the most efficient manner."[21]

A Model of Exchanges

In this writer's 1965 Justice memo,[7] I offered an expanded explanation for **E**xchanges as viewed from a broad historical and economic perspective. Most of my original thesis appears to have been confirmed by the CounselDoc analysis – however fragmented -- of documentary evidence discovered in the aborted FTC Case. Based on that tacit endorsement, I respectfully proffer the full text of my 1965 memorandum for consideration as a comprehensive model of the world of **E**xchanges. I do so however with three qualifications:

I. When I wrote in 1965, the US national crude oil situation was one of comparative surplus: (i.e., we still had considerable excess crude oil capacity that was still subject to State prorationing and Federal interstate controls as described in my memo). Since then, however, as most continental US reserves of relatively cheap crude were exhausted, the US has become crude short and more dependent on imported foreign crude. And OPEC has now supplanted the Texas Railroad Commission, as the ultimate controller of surplus crude production. Despite these transformations, I nevertheless believe that my 1965 model still holds as an explanation of the strategic private coordinating role of crude and product **E**xchanges among dominant vertically-integrated companies.

II. Also, at the time I wrote, for reasons suggested by my memorandum, there was no significant intermediate market system of brokers, etc. How much relatively recent development of commodity exchanges, futures trading, etc., may have altered the effectiveness of **E**xchanges I frankly do not know; (and with zero knowledge in that area, I will not presume to say). My hunch is that while those intermediate markets may have achieved some competitive loosening, the likelihood is that the formidable power of **E**xchanges moves inexorably onward.. Only sophisticated testing will tell.

III. Finally, and importantly, when I wrote in 1965, the largest vertically-integrated companies, were still corporately separate from each other (indeed, many like Mobil, Chevron, and Amoco having been split off from the original "Standard Oil Trust" by the 1911 Standard Oil decision). As separate corporate entities those major companies still had daylight between them. To avoid antitrust challenge (such as the FTC Oil case), they still had to tread cautiously using intricate, subtly-disguised contracts – like **E**xchanges – to achieve horizontal supply coordination between themselves. But with the recent spate of mega-mergers (such as Exxon-Mobil, et al), the need for such subtlety may have significantly evaporated. Now these new mega-giants are free to manage vast, once-separate company resources as a single intra-corporate enterprise. With the horse escaped from the barn, there is some reason to wonder about the value of now closing the door against **E**xchanges. This, too, will require sophisticated analysis.

In sum, it is an open question what impact all these changes in the industry's institutional landscape may have on the significance of **E**xchanges. The model in my following memorandum offers a baseline for comparative assessment.

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December 20, 1965

Subject: Interstate Oil Compact Report –
Possible Areas for Further Exploration

This memorandum sets forth some of my personal views, growing out of our discussions concerning the possible relevance to Attorney General's Compact Report of the system of nationwide barter (e.g. exchanges, reciprocal sales etc.) being utilized by major integrated oil companies throughout the U.S. in conjunction with their jointly and severally controlled pipeline systems.

In the oil industry, as in the case of agriculture, it appears that preservation of viable competition ultimately depends upon the maintenance of some form of constraint upon a vast supply potential which normally overhangs current demand, posing a perennial threat of ruinous price depression to the market. As compared with agriculture, however, overproduction in the oil industry has always presented a somewhat unique national problem inasmuch as oil, unlike agricultural commodities, is an unreplenishable natural resource that must be prudently husbanded against wasteful physical dissipation as well as improvident economic dumping if it is to continue to meet manifold national economic and security needs of the future.

In the United States, the problem of controlling the potential oversupply of oil has, since the chaotic experience of the 1930's been approached on two levels: one governmental, the other private – the first having the sanction of law, the second, however, posing serious questions of possible <u>infraction</u> of the law (viz., the antitrust laws).

The first, legally sanctioned type of supply control system, has been instituted by both State and Federal Governments seeking, within the general framework of an open market system, to avoid only the most extreme and destructive forms of economic dislocation. Basically such Government programs have undertaken to strike some rough kind of balance between current national demand and current supply.

In practice, this general balancing has been fostered by a combination of State conservation laws that impose production limitations, and federal laws which restrict foreign imports and regulate interstate shipments of "hot oil" illegally produced in excess of State production ceilings, This complex of Government programs has been quite successful in preventing historic extremes of physical and economic waste of irreplaceable oil resources, as well as the wasteful dissipation of substantial private investment therein.

While Government programs designed to maintain a national parity between crude oil supply and demand have inevitably generated a stabilizing flow [sic floor] under domestic crude prices, such controls should not of themselves necessarily militate toward rigid national or regional prices. This would seem to follow from the fact that such national supply/demand reconciliation is at best but a gross adjustment contingent upon variant prorationing policies of industrial oil producing States. Beyond that, however, within the broad supply limits thus fixed by State and Federal governmental programs, the actual disposition of crude oil still remains determined exclusively by the dynamic interplay of <u>private</u> actions of many different enterprises whose particular geographic and other economic circumstances, and responses thereto, may vary considerably.

Thus, for example, some integrated producer-refiners may own crude resources mainly in States where conservation policies from time to time compel the taking of crude in excess of, or poorly situated with respect to such companies' own refinery requirements These companies would accordingly be confronted with the problem of disposing of (or, to use the industry argot, of "finding a home" for) such crude surpluses. Conversely, other producer-refiners' crude whose producing reserves [are] in States having restrictive production policies, may be faced with making up refiner supply deficits from outside sources.

In short, it seems fairly evident that even within a system of gross, nationally balanced crude supply and demand, given an otherwise unrestricted free and open market, one might still anticipate dynamic price variation to reflect dynamically shifting surplus and deficit positions of particular enterprises engaged therein.

In the face of this, it is to be observed that the prior Attorney General's Interstate Oil Compact reports have rather consistently called attention to the long-run rigidity of United States crude prices, but have yet to penetrate deeply into what may ultimately prove the root cause of this market condition.

It is precisely here that the above-suggested second type of supply control mechanism of dubious legality becomes relevant. For within the <u>gross</u> supply/demand equilibrium fostered by State and Federal Government programs, there seems to have grown up over the course of many years a phantom, <u>private</u> mechanism for supply/demand reconciliation which apparently lies completely outside of any State or Federal Government program presently in effect. This system appears to be the product of widespread private commercial arrangements which, in the aggregate, effect a <u>cooperative</u>, <u>non-price</u>, balancing as between ostensibly competing enterprises, of those recurring surpluses and deficits which are either the result of the uneven impact of State and Federal control programs upon individual enterprise, or else natural concomitants of normal operation.

To put it another way, while State and Federal programs contemplated only a rather "coarse tuning" of national supply/demand imbalance as a stable base for wholesome private price competition in an open market, the dominant integrated industry factors apparently carried this process one step further, to development of an even "finer tuning" of their own <u>private</u> supply/demand imbalances <u>internally among themselves</u>. This approach presumably evolved with realization that notwithstanding the beneficient [sic] over-all stabilizing effects of Government conservation and import controls, basic crude prices (and, hence, ultimate profits) would still remain highly uncertain so long as naturally recurring <u>company</u> surpluses and deficits were left to the blind caprice of genuine free market.

That the industry's leading companies, after long period of experiment, may have largely succeeded in liberating their own basic crude supply from the vestigial tyranny of free market, can perhaps be surmised from the fact that notwithstanding the huge volumes that daily change hands between the majors throughout the United States at points well beyond the oil fields and refineries, indications are that very little of this is ever traded among them on a price basis. Furthermore, it appears that only an insignificant trickle of crude surplus ever finds its way into local "spot" markets, and there only a handful of transactions ever determine spot prices. As a consequence, spot prices (which generally influence posted prices and long-term open-price contracts) have remained relatively frozen, providing the ultimate bulwark of stability to crude prices and profits in the oil industry. (A combination of two factors explains why crude price has become the keystone of this industry's profit structure: (1) the basic stabilization and undergirding of crude prices fostered by State and Federal Government supply control, and (2) the substantial financial benefits accruing exclusively at the crude production level from liberal tax credits for depletion, depreciation, and foreign crude tax payments).

The mechanism by which the industry has achieved its finely tuned private equilibrium between supply and demand appears to embrace an elaborate and widespread network of <u>barter</u> transactions which ultimately and substantially involve major integrated oil companies (i.e. after tracing intermediate transfers to and from others.

Although the genesis of this pervasive barter system remains somewhat obscure, preliminary indications are that the economic implications of barter first dawned upon the leaders of the oil industry during the course of their participation in national war emergency programs dating back to World War I. Thereafter, the practice appears to have received further Federal Government encouragement under NRA pooling programs (subsequently held illegal in the Socony Vacuum case, 310 U.S. 150), and again under World War II, Korean, and Middle East emergency programs.

In mobilizing the oil industry for operation as a single cooperating unit, rather than as separate competitive elements, these national emergency programs inevitably recognized inter-company barter as a most effectual logistical tool for marshalling vast petroleum supplies at critical geographical points of demand, while conserving limited transportation and storage capacity and avoiding needless facility duplication. While such national emergencies thus provided their own obvious rationale for unitary operation of the oil industry it is equally clear that these premises ceased to have any validity in a free market setting once the Nation had returned to normal conditions. Unfortunately, however, the barter policies and practices generated and developed during this long succession of national emergencies remained so deeply and indelibly ingrained upon this industry as to have by now become endemic and practically institutionalized for lack of challenge.

The exclusive and inherently discriminatory aspect of the system of barter inevitably arises from the fact that the basic unit of exchange hereunder is the barrel of oil (crude or petroleum products) rather than a universally obtainable and freely convertible monetary unit, viz. the dollar, which is acceptable as the medium of exchange in virtually every other area of domestic commercial intercourse. Clearly, where oil rather than money is the indispensable medium of exchanges for a substantial volume of commerce, only those possessed both of ample and geographically dispersed resources of, as well as demands for, that esoteric medium will be in a position to enter the barter game on any substantial scale. The inevitable consequence of this is that the field of eligible barter participants is practically limited to the major integrated companies which boast dominant national positions in production, pipeline, transportation, and refining. Only such colossi with geographically dispersed sources of, and demands for both crude and refined petroleum, and controlling the vital means of its transport, are genuinely situated to reap the full fruits of a continental barter system. And what is more, only those lesser enterprises (whether producers or refiners) fortunate enough to be able to achieve barter alliances with these colossi stand any genuine chance of survival at all.

In all of this it appears reasonably certain that the burgeoning continental network of crude and products pipelines, owned and dominated by these major oil companies (either individually in varying combinations) has provided the indispensable linkage for integrating and effectuating this highly ramified barter-balancing system. For given such a physically-closed continental pipeline grid with its manifold gathering, distribution and interconnection potentialities, it is obvious that the major integrated companies share an unrivaled opportunity to explore the mutual advantages of shunting and rationalizing, as between themselves, vast regional supply surpluses and deficits while avoiding any disturbance of oil prices (notably those critical crude prices upon which their profitability as integrated enterprises, ultimately depends).

In sum then, the dominant integrated powers in the United States oil industry appear to have evolved an effectual private supply/demand balancing system embracing on the one hand essentially monopolistic pipeline transport media, and on the other hand a continentally pervasive mechanism of barter which taken together, must inevitably have far-reaching restraining effects upon interstate commerce in petroleum. Insofar as those major integrated companies and their pipelines account for the great bulk of interstate crude and product movements, the conclusion seems inescapable that but for the extensive barter arrangements existing between them, their normally recurring surpluses and their deficits would ultimately become prime movers and determinants of price in a genuinely dynamic market open to all comers (including non-integrated refiners, distributors, and brokers). Conversely, where substantial volumes of crude and products are, in fact, regularly diverted from, and circumvent any market price mechanism in virtue of widespread barter among the industry's principle oil producer-refiner-distributors, then it can surely be no exaggeration to infer a casual [sic causal] relationship between that condition and the prevailing thinness of spot markets and the relative rigidity of critical crude "benchmark" prices.

The fact that the Attorney General's Compact reports to date have repeatedly remarked the existence of just such crude price rigidity, coupled with the above-outlined indications that pipelines and barter (i.e. exchanges) may be inextricably linked root elements contributing to that condition suggest the need for a comprehensive examination of the actual workings of this system and its effects upon interstate commerce in petroleum.

Cautionary Observations

In conclusion I would offer a brief caution to the uninitiated who would venture into the hybrid economic-legal domain of **E**xchanges: It is a complicated, multifaceted domain which needs be approached with care. Though I am not an academic economist, nevertheless, my eclectic interdisciplinary explorations have yielded special insights into this complexity. That experience convinces me that similar awareness is essential for the analyst intent on serious work in this field.

The following points are offered only to suggest the scope and complexity of this subject:

- First, **E**xchanges needs to be understood both in detail and holistically.
    - the exchange phenomenon is <u>not</u> just one thing or combination of independent things. It is a manifold of several interrelated elements, that must be clearly differentiated and then understood together in relationship to each other.
    - exchanges display considerable diversity**:** they appear in many different forms, are utilized in many different situations, serve many different purposes, perform many different functions, and, hence, have many different consequences and effects.
    - <u>Typology</u> suggestive of functional variety might involve some combination of the following:

(1) Industrial vs. Financial
(e.g., logistical vs. Tax)
(2) strategic v. tactical
(3) Temporal vs. Spatial
(4) Long-term vs. Medium term
vs. Short term
(5) Local vs. Regional vs. Interregional
(6) Domestic vs. International
(7) Crude Oil vs. Refined Products
(8) Storage Terminal vs. Transportation
Terminal
(9) Bulk terminal vs. Wholesale distribution
terminal
(10) Simple vs. Complex
(i.e., two-party vs. multiparty, etc.)

- Secondly, because this exchange issue is multi-dimensional, it needs to be approached broadly from an interdisciplinary perspective.

  - <u>Relevant ECONOMIC Tools & Disciplines</u>

    Game theory,
    Regional Economics
    Spatial Competition
    Location theory

    Logistics
    Econometrics, model simulation,
    Operations research
    (linear programming)
    Optimization theory

  - <u>Relevant LEGAL Areas</u>

    Reciprocity
    Joint Venture
    Market Sharing
    Market Stabilization
    Division of Territories/
    Markets
    Shared Monopoly
    (Oligopoly, Oligopsyny)
    Conscious Parallelism
    Exclusive Dealing

    Refusal to Deal
    Tying Agreements
    Requirements Contracts
    Price Discrimination
    Basing-Point Pricing
    Foreclosure
    Barriers to Entry
    Vertical Integration

End Notes

[1] US v Standard Oil Co. (NJ) et al, US District Court for DC, April 21, 1953; subsequently transferred to US District Court for Southern District of NY.

[2] In the Matter of Exxon Corp. et al , FTC Docket 8934, July 18, 1973

[3] About **1968**, in the Cartel Case, the Government dismissed re: Mobil and Chevron, after prior Consent Decrees with Exxon, Texaco and Gulf. In **1983**, in the FTC Exxon Case, the Government dismissed as to all Respondent companies

[4] Exxon et al v. Commissioner of Internal Revenue, Tax Ct Memo Lexis 629, 66 T.C.M. (CCH) 1707, Dec. 22, 1993

[5] Personal Note: “Preliminary FTC Proposal for Economic Study,” June 10, 1975, p2

[6] “The International Petroleum Cartel: Staff Report to the Federal Trade Commission, submitted to the Subcommittee on Small Business, United States Senate, 82d Cong., 2d Sess., August 22, 1952

[7] Memorandum from David I Haberman to William J. Lamont, December 20, 1965