MONTE CRISTO PROPERTY

Eagle Springs Field

Railroad Valley

Nye County, Nevada

A PRELIMINARY ANALYSIS

David LeCount Evans
Consulting Geologist

Reno, Nevada
April 11, 1979

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Nye County, Nevada

A PRELIMINARY ANALYSIS

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

FOREWORD:

At the request of Mr. Laurence Atkinson of Minerals Management, Inc., this investigation was started on April 4, 1979, by a discussion with Mr. William Wright, President of Toiyabe Oil Company, at a present rig-site near Silver Peak, Nevada.

The writer's interest dates back to the late sixties when, on the basis of data then available, a first map study was completed in 1971.

In 1975 the effort was repeated, consisting of regional structural and thickness studies and on the premise that oil concentrations were tied to original porosity in the ash and limes, both stratigraphically trapped by formational pinch-outs against the Grant Range; and aided by gentle northwest-trending folding, interupted, locally, by random faulting.

Suggested, at the time, were similar pinch-out possibilities for the west flank of Railroad Valley.

Recent Trap Spring field activity has necessitated drastic re-evaluation. Good cores have established the "ash" unit as an impervious Ignimbrite (a volcanic, siliceous rock, locally called "welded tuff", without the porosity of a simple ash). Cores show oil confined to the fractures which lace the massive, impervious unit.

DAVID LeCOUNT EVANS, CONSULTING GEOLOGIST

The following, therefore, approaches the area of concern on a fracture-type reservoir basis, with "shattered units" parallel to the trend of the major and recognized Grant Range fault and replacing the simple faults which plagued operators as the field developed. The use of such units conforms to general Basin and Range thinking.

CONCLUSIONS:

This analysis concludes that:

(1) exploration and development for Eagle Springs has always been "hit or miss"; nearbye Trap Spring, a fracture-type reservoir, justifies a fresh approach to Eagle Springs;

(2) structural interpretations indicate northeast-southwest controls which open the door to fresh development; separate fracture systems, oil charged, would explain the excellent recoveries from wells, 640 feet apart, ie: 62-35 and 73-35;

(3) wells drilled from 1954 and 1964 (25 and 15 years of production) are all approaching economic limits; a program geared to salvaging "left-overs" has no inducements; reference is made to Decline Curves IX, X and XI;

(4) an expensive six miles of water-disposal line to accomodate two worn out producers would only add to assured losses;

(5) conversely, the emplacement of water into a "washed-out" and lower reservoir is an approach to repressuring which might improve production from adjoining up-dip wells (if on the same shattered unit);

(6) favorable geology invites a return to Toiyabe property development.

RECOMMENDATIONS:

Assuming that an equitable deal can be made, the following steps are recommended:

(1) approach buyers to verify a currently-reported increase of from $7.20 to $8.20/Bbl and push for a closer approach to the $10.20 of Trap Spring.

RECOMMENDATIONS:

(2) continue production from wells 62-35 and 35-35, water to be disposed of in 1-35; reconsider distant surface-disposal only after results from recommended drilling;

(3) before consumating any deal, examine Toiyobe's Cardwell rig and all other equipment being acquired from Toiyabe; a competent "tool-pusher" or equipment salesman is considered a "must";

(4) with reference to Plate VIII, proceed with drilling area A and Hole #1; assuming positive results proceed through steps A, B and C, as described below.

LOCATION:

Involved is the 240 acre block shown on all plan maps I thru VIII, in section 35, Township 9 North, Range 57 East, Nye County, Nevada.

The position of Eagle Springs and Trap Spring fields is shown on Plate I.

TITLE:

Acreage consisting of the W/2NE/4, E/2NW/4 andN/2SW/4, all of section 35, is the property of Toiyabe Oil Company, a public company, 54% owned by Monte Cristo Oil and 46% by other small investors. Mr. Wright owns 97½% of Monte Cristo which can be purchased.

HISTORY OF PROPERTY AND DISTRICT

Eagle Springs field was discovered in May 1954 by Shell Oil Company's # 1-35, drilling on a seismic anomaly. Continued drilling has not verified the original seismic results. Shell drilled three more producing wells; all four are on today's Toiyabe block. Production through 1978, for the four, totals 1,071,875 barrels of oil. Shell drilled 10 other dry holes throughout Railroad Valley.

HISTORY:

In May 1963 Texota Oil completed its 73-35, 640 feet east of Shell's 62-35, on a Shell farmout. Through 1967 Texota drilled five more producers and three dry holes. Production through 1978, for the six, totals 1,291,776 barrels of oil.

In February 1975, Western Oil Lands (Bill Pennington) extended the field 3/4 miles east with its Pennington Federal # 1. Since then Western has drilled three more completions and three dry holes. Production for the four through 1978 amounts to 916,429 barrels.

Shell Oil produced its property through December 1968. Its production had dropped to 22,722 BOPY, and Shell farmed it out to Davis. J.L. Davis's dates from January 1969 to March 1971. Davis's production for 1969 was 21,823 B.O, dropped to 5,409 B.O. for 1970 and was Nil from January to March 1971.

Records indicate that Davis leased to the Honolulu Oil Company from April 1971 to October 1973. The company produced 4,137 barrels in 1971 and nothing more until 1973 termination.

Toiyabe Oil has had the property since November 1973, producing 147,038 barrels of oil through 1978, a five year period.

Producers since Shell's withdrawal have shipped 178,407 B.O. , 16.6% of the total reported above for Shell's four holes.

Concerning Texota properties, the operator was changed to North American Resources Corporation in January 1969 and now operates as Ely Crude Oil Company.

November 1976 marked the discovery of new production, six miles northwest of the Eagle Springs field. Northwest Exploration Company's Trap Spring #1, followed by 13 other completions have provided 1,659,194 barrels of oil through 1978, the field's initial two years.

History:

Total production for the area (Nevada Division of Mineral Resources reports) totals 4,940,248 B.O. through 1978, divided between 1,659,194 (Trap) and 3,281,054 (Eagle). Total for Eagle on Plate I is a personal tabulation and 7000 short.

Eagle Springs oil has a paraffin base, but high asphaltine content, 75° pour points, gravity of 26 to 29°, sulphur content of 1.7% and low gas/oil ratio. Trap, as reported, has a 15° pour point, 19.5° gravity, and absolutely no gas.

GEOLOGY:

Earlier Thinking

1975, but now discarded, conclusions pictured "a regional strong synclinal structure (center of Railroad Valley) with production up-flank in porosity which pinches out against a steeply rising flank, on the east, the Grant Range."

Initial porosity in Oligocene tuff and Eocene Sheep Pass limestone. in combination with a gentle northwest-trending fold, were considered the factors responsible for reservoir locations.

1979 Approach

Oil occurs in the Oligocene Ignimbrite (welded tuff) and Eocene Sheep Pass limestone units, where shattering, following secondary structural lines, associated with and roughly parallel to the major Grant Range fault, provides the fractures for the porosity and permeability requirements of a reservoir.

67% of Eagle Springs production comes from the Oligocene unit and about 30% from Eocene Sheep Pass. Paleozoic oil has been reported but, if so, the amount is minimal

Relationships are shown on Plates VI and VII, both sections. Not shown on sections is the great thickness of valley fill, from surface to the impervious unconformity, lying atop the old surface. The unconformity seals off the oil in the units below.

With reference to Plates II, III, and IV, interpretive contouring at the top of the Oligocene, Eocene and Paleozoic, respectively, provides, not only a structural approach, but also, discontinuity possibilities which have been adopted for purposes of providing effective zones of shattering. Because of abrupt and unanticipated changes between drill locations, operators in the 50's and 60's attributed changes to "faulting"; positions which conform, more or less to our zones, as shown.

Data for the three units are as provided by Nevada Bureau of Mines Reports 18 (1968) and 29 (1977). Top of the Ignimbrite has always been unquestionable, and Paleozic tops, for the most part, has been definite. In a few cases, however, stratigraphic "picks" have suggested Eocene or Paleozoic. Those few have required interpretation.

Plate V, a thickness map of the Ignimbrite unit, shows distribution limited to the north half of section 35.

Considering all structural plates, whereas there are two anticlinal indications in section 36 and the E/2 E/2 of section 35, the occurence of better and exceptional production down flanks indicates that a structurally-high datum has nothing to do with best production.

Positively indicated is a northwesterly dipping monoclinal series of beds, interrupted by structural lines of major shattering, with dips of undetermined degree.

Reasoning implies that overall production will be divided into a series of producing units, the one separated from the other by a zone of major shattering.

On the strength of cores observed from adjoining Trap and because of the impervious nature of the Ignimbrite unit (and possibly Sheep Pass) , there is no alternative to a fracture source for oil concentration.

The premise would serve to explain the quandry of why the two major wells of the field, 640 feet apart, have not effected each other. 62-35 and 73-35 have produced 37% of Eagle Springs oil. The two lie on either side of one of our map's major units of fracturing.

The premise, too, would provide an "open door" to new exploration and development, since it suggests a reasonable expectancy for fracture conditions or units, to the southwest and northeast, and parallel to a principal zone.

DEVELOPMENT:

Development to date is provided by all plan maps. Production per well through 1978 is shown on Plate VIII.

Plates IX, X and XI, decline curves of all wells, provide production history, present production position and indications for the future. Considering future production, curves are not encouraging and, especially so in the case of Plate IX (Toiyabe).

As for future development, reference is made to Plate VIII and VII. Three programs are recommended, namely, A, B and C. "A" involves drilling on Section ES 1, starting with #1 (triangle) and followed by 2, 3, and 4, if number 1 so merits. Number 1 represents 7350 feet. The four would total 28,470 feet. Should #1 be negative, #2 would still be recommended. All hole proposals are denoted by triangle.

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

With "A" completed and new production assured, assuming that the W/2 NW/4 of section 35 could be leased, and possibly with dry-hole support from Ely Crude Oil Company, Project B is recommended, to extend the Ely Crude production of well 1-34.

Program C is designed to extend Toiyabe production to the northeast, but only if Project A is a success.

In the event "B" results are positive, other holes should be planned both for the leased eighty acres, and to the north and northwest.

OPERATING METHODS:

Toiyabe has drilled no Eagle Springs holes. Production is from old Shell wells 62-35 and 35-35, both on their way out. Hole 15-35, on the far west line of the property, has been too distant to fit into pumping and collecting proceedures.

At the demand of the BLM and USGS, water can no longer be disposed of in open pits on the property. Water is, therefore, returned to sub-surface porosity, through input well 1-35.

The alternative of building a six mile line to the center of the Playa for pit disposal exists but is not recommended unless Project A is a success; then it should be considered.

Kobe submersible pumps lift oil to surface tanks. The Kobe pumps have been of questionable merit and the cause of increasing down-time for repairs.

Oil is delivered at well head to Western Refinery of Salt Lake City. The company has been paying $7.20 per barrel . Mr Wright reports that Western Refinery has indicated an increase in price to $8.20. The difference between these prices and the $10.20 for Trap oil may be a problem of the oil's physical characteristics.

Toiyabe reports operating lease costs at $10,000 per month.

Mr. Wright reports that current drilling costs at Trap Spring amount to $165 per hour. Well depths are from 5000 to 6000 feet, and 21 days represents the average time to complete drilling. For 21 three tour days this would amount to only $83,000.

On the other hand Mr. Ken Stracke, Northwest's Director of Production, testified in 1977 that completed wellsin the Trap Spring field cost more than $450,000. A breakdown for this figure was not provided.

Excessive costs, such as Location at $50,000, clean-up about 75,000, flow lines (indirectly approaching tanks to preserve the ecology) maybe about $100,000 and supervision at $9,500, would provide a pre-completion estimate of $190,500.

This evaluation of Stracke figures is completely in line with a figure provided the writer in 1978 by Mr. William Pennington of Western Oil Lands. Mr. Pennington reported that Western's dry holes cost them $190,000.

Be aware that the estimated $83,000 for cutting hole does not include the cost of mud programs. drill stem testing, cementing and other charges.

Assuming an average hole depth of 6000 feet, Trap drilling would represent $13.83 per foot.

On the other hand, Bill Wright, currently moving from a location north of Silver Peak, cut 5700 feet of hole for a reported $85,000 or $14.91 per foot; and 32 days were required.

EQUIPMENT:

Toiyabe drilling equipment is listed by the company as shown on page 10. Other materials consist of a 1955 Peterbuilt water truck, a Dodge tractor and two semis, a 1978 Ford pickup, a 1976 Ford pickup and four Trailer Houses. All should be examined and evaluated.

DAVID LECOUNT EVANS, CONSULTING GEOLOGIST

Copy of Toiyabe drilling equipment has been misplaced.

Ask Mr. Wright for another such copy and insert as page 10

CONCLUDING THOUGHTS AND COMMENTS:

Targets

Purpose of this analysis has been to consider the geology, production history and decline curves, the possibilities for additional production sites, and the size of targets, assuming, of course that past production has not drained adjoining areas.

Holes 1 and 2 should explore the drainage contingency.

Considering the field, 14 wells producing 3,274,080 barrels of oil provide an average of 233,863 barrels per well.

Or, considering all holes clustered around programs A, B and C, 8 wells producing 2,236,863 barrels of oil provide a per well average of 279,565 barrels of oil.

Again, assuming no drainage, a target of 250,000 barrels per well becomes a possibility.

Decline Interpretation

With reference to the decline curves of Plates IX, X and XI, note the high production for, approximately, the first half of operation, followed by lower but steady returns for the second half.

Production life varies from 22 to 13 years. A study of annual figures indicates that 74% of produced oil was sold in the first 7 years.

Financial Requirements

Financial requirements will amount to the cost of acquiring the property, the number of tests drilled at $201,000** per test, the

** $190,000 plus 6%

cost of leasing additional property, et cetera.

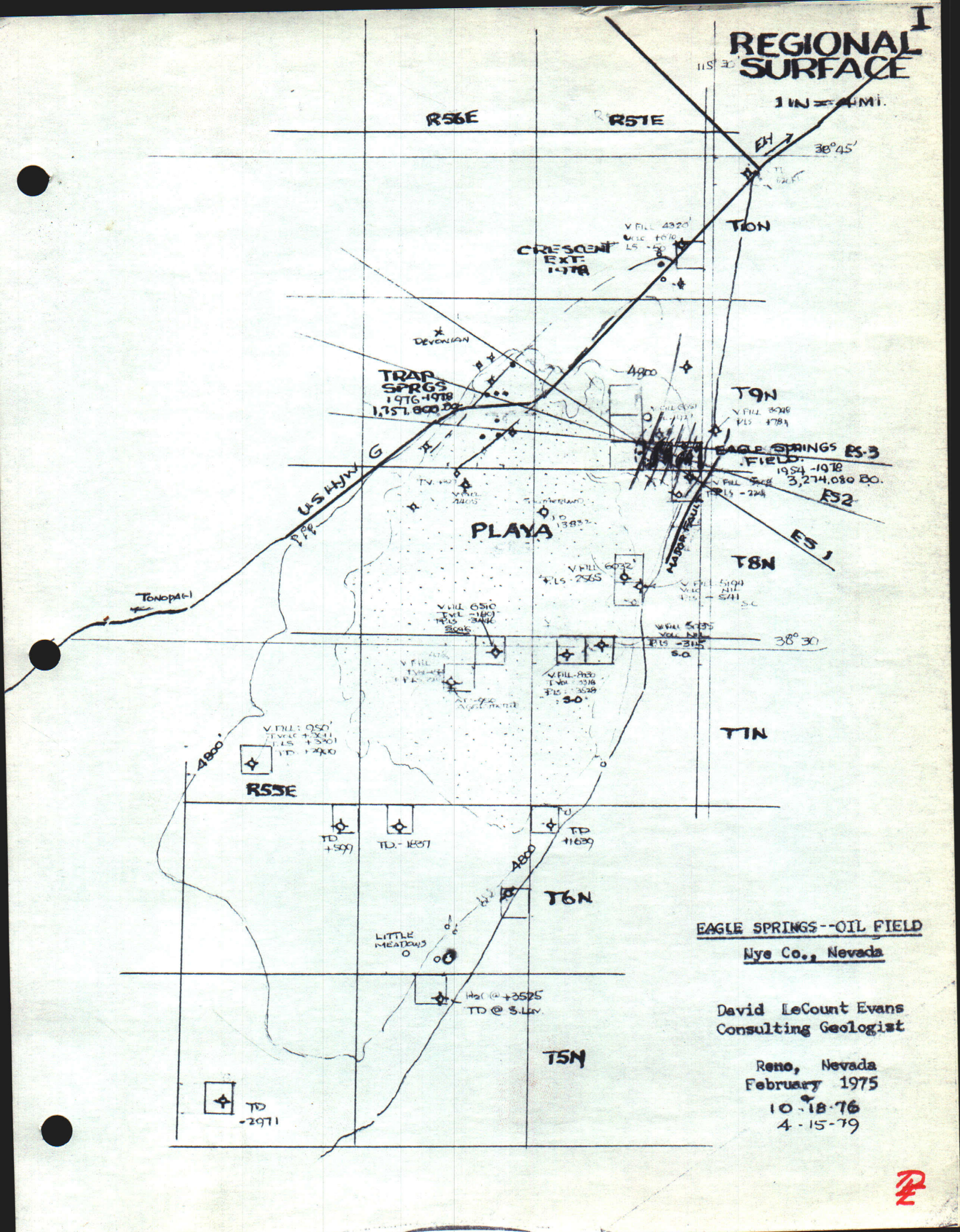
And finally, assuming success, completed oil wells would necessitate increasing the cost per hole to $505,600 or $450,000 plus two years of increasing the estimate at a rate of 6% per year.

Respectfully submitted,

David LeCount Evans

Consulting Geologist

Reno, Nevada
April 11, 1979



EAGLE SPRINGS--OIL FIELD

Nye Co., Nevada

David LeCount Evans
Consulting Geologist

Reno, Nevada

February 1975
10-18-76
4-15-79

EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

INTERPRETATION

TOP OF

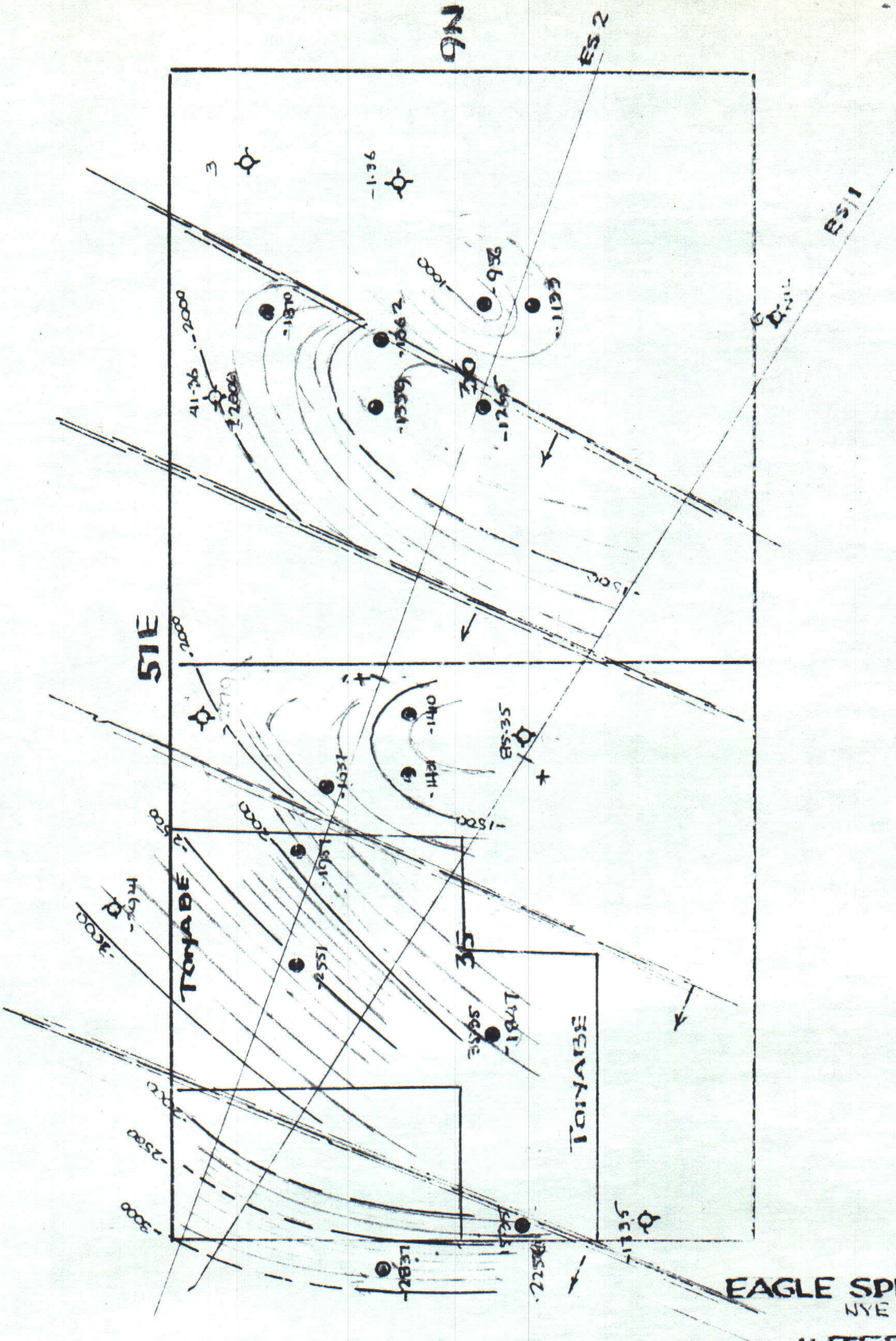
OLIGOCENE VOLCANICS

1" = 1427'

DAVID ALLOUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA

APRIL 1, 1970



EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

INTERPRETATION

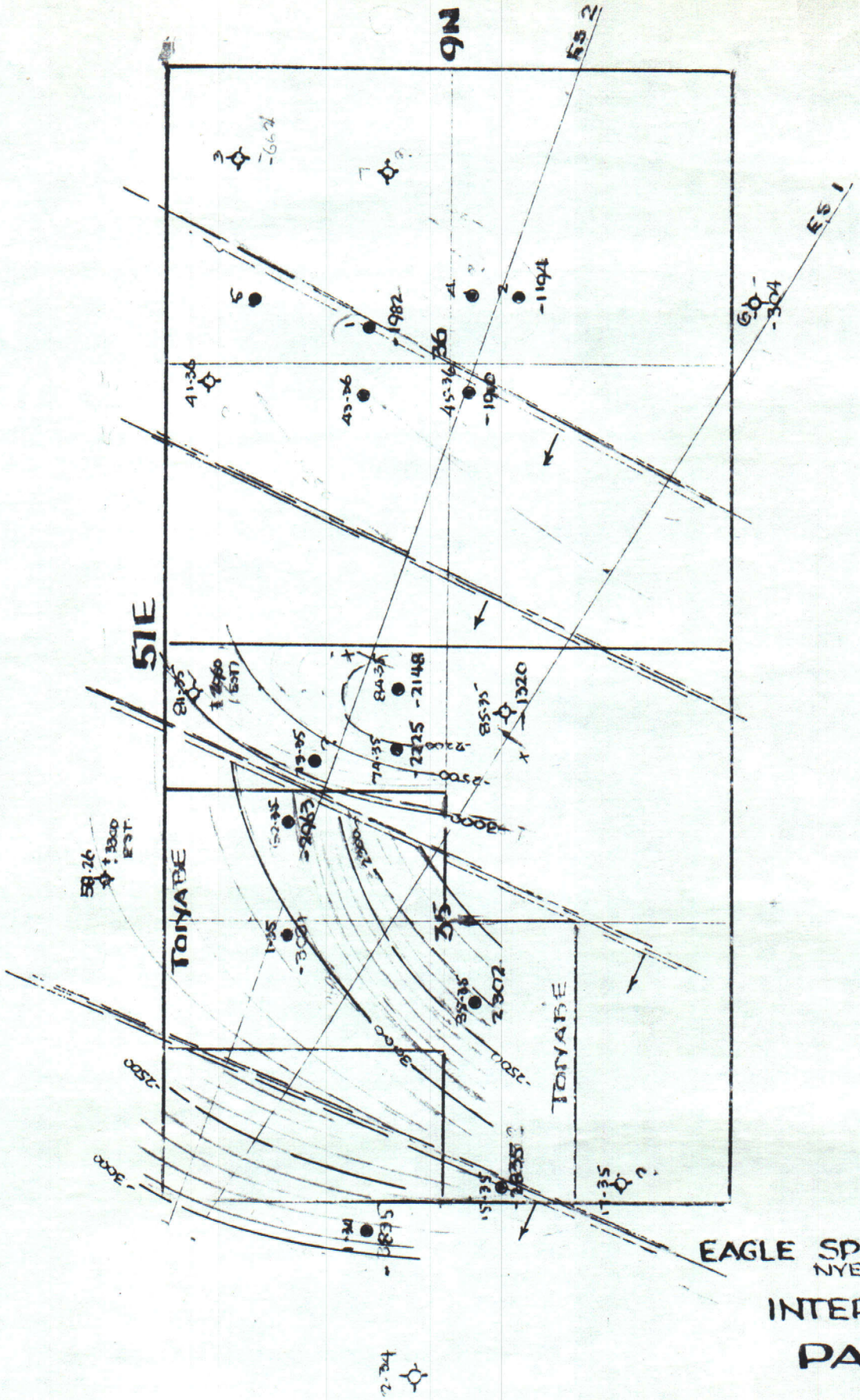
TOP OF

EOCENE SHEEP PASS

1" = 1427'

DAVID LeCOUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 6, 1979



EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

INTERPRETATION

TOP OF

PALEOZOICS

1" = 1427'

DAVID LeCOUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 1, 1979

EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

ISOPACHOUS

(THICKNESS)

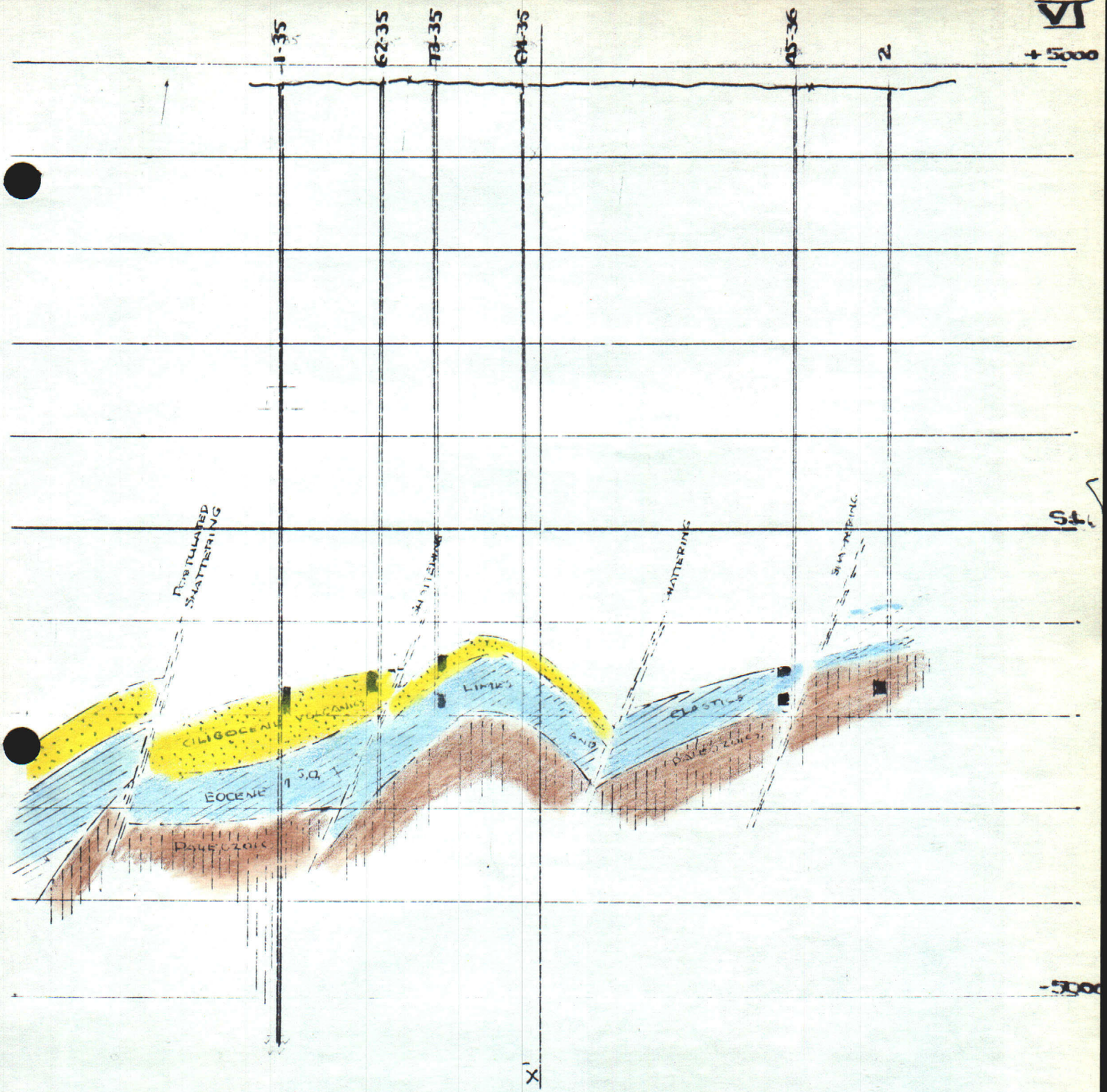
VOLCANICS

1" = 1427'

DAVID LEGRANT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 11, 1979

VI



EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

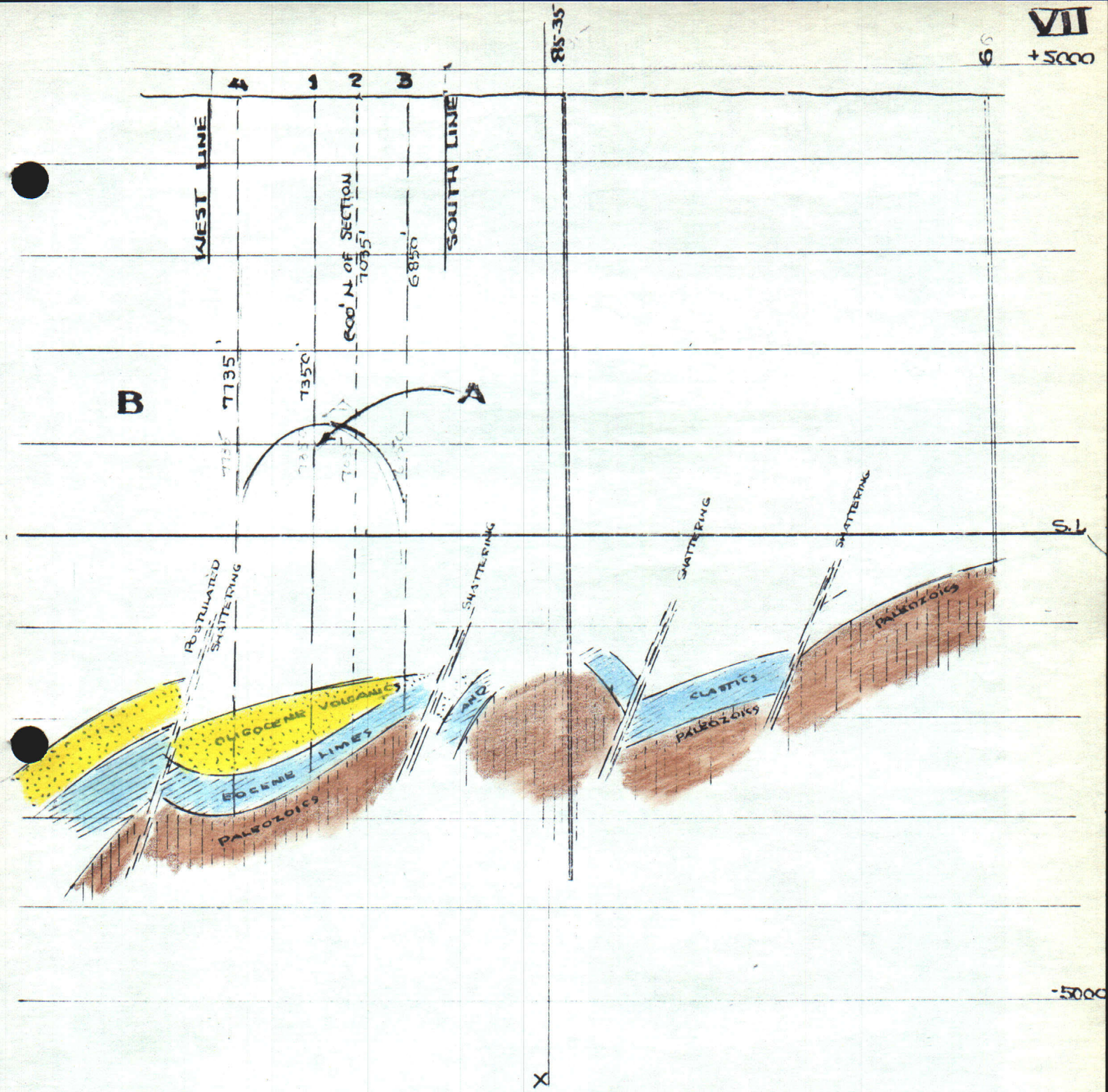
SECTION - ES2

1" = 1427'

DAVID LeGRANT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 11, 1979

VII



EAGLE SPRINGS OIL FIELD

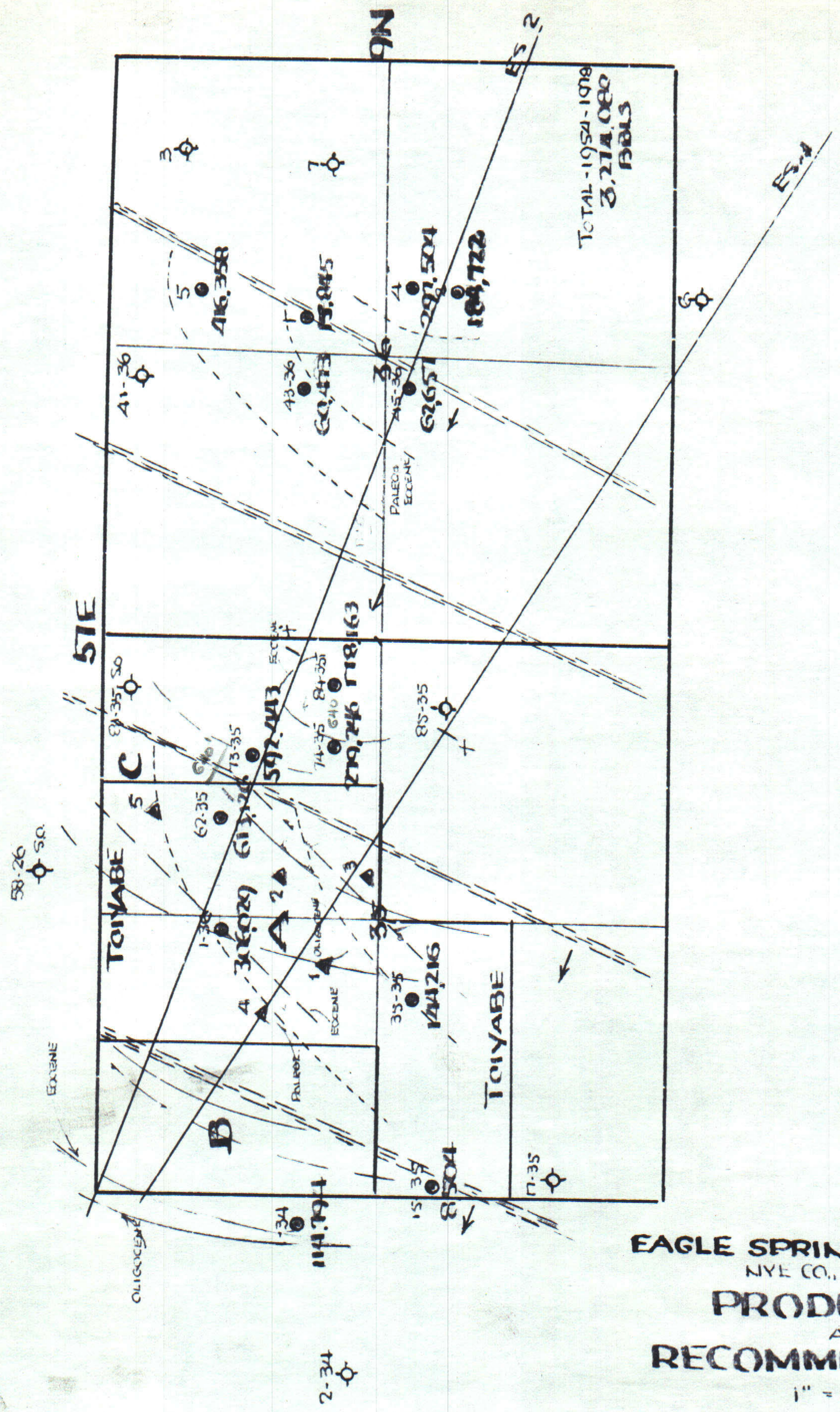
NYE CO., NEVADA

SECTION-ES 1

1" = 1427'

DAVID LeCOUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 11, 1979



EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

PRODUCTION AND RECOMMENDATIONS

1" = 1427'

DAVID LeCOUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 11, 1979

IX

EAGLE SPRINGS OIL FIELD

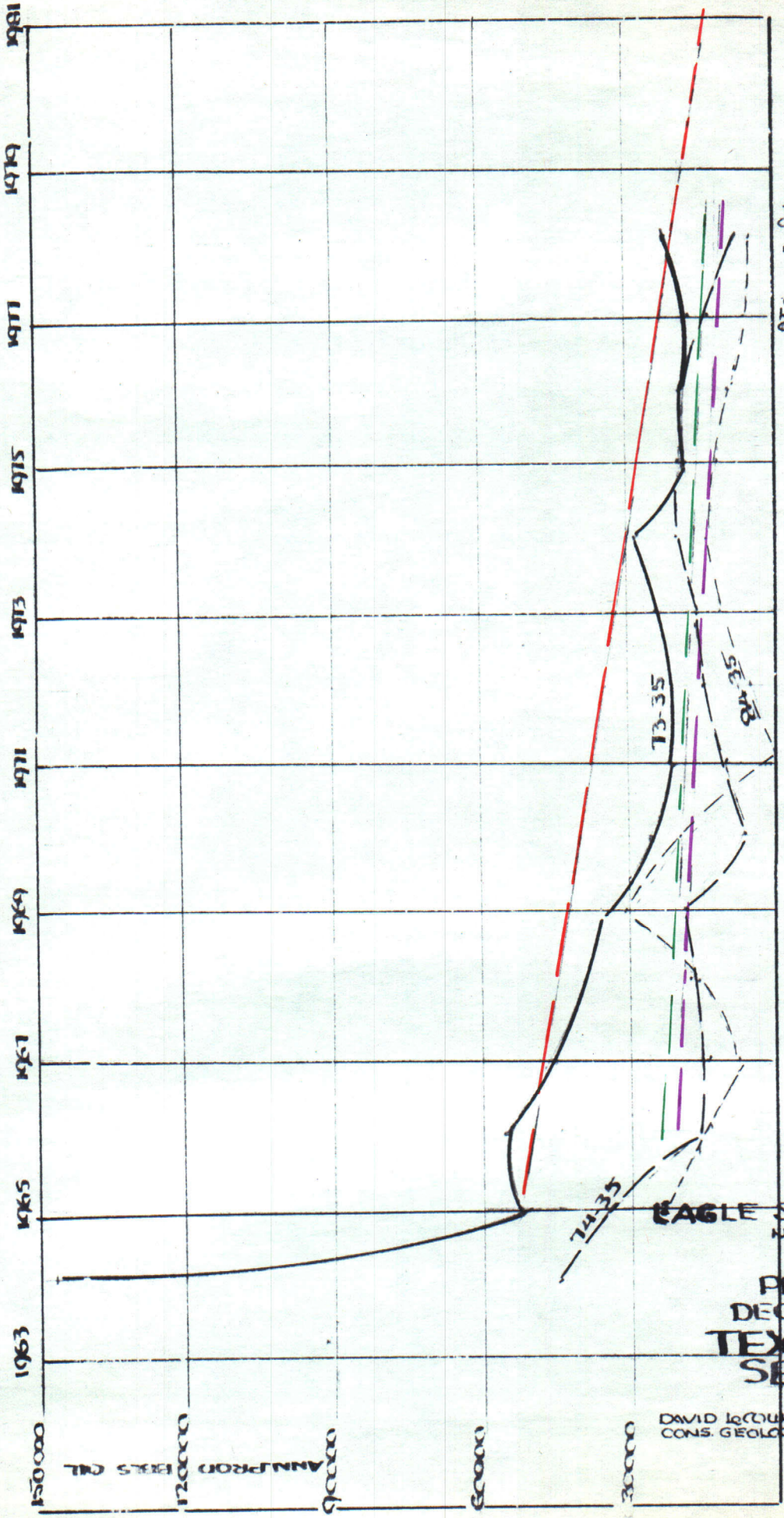
NYE CO, NEVADA

PRODUCTION DECLINE CURVES TOIYABE WELLS SECTION 35

DAVID LeCOUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA
APRIL 11, 1979

X



EAGLE SPRINGS OIL FIELD
NYE CO., NEVADA

PRODUCTION
DECLINE CURVES
TEXOTA WELLS
SECTION 35

DAVID McCOUNT EVANS
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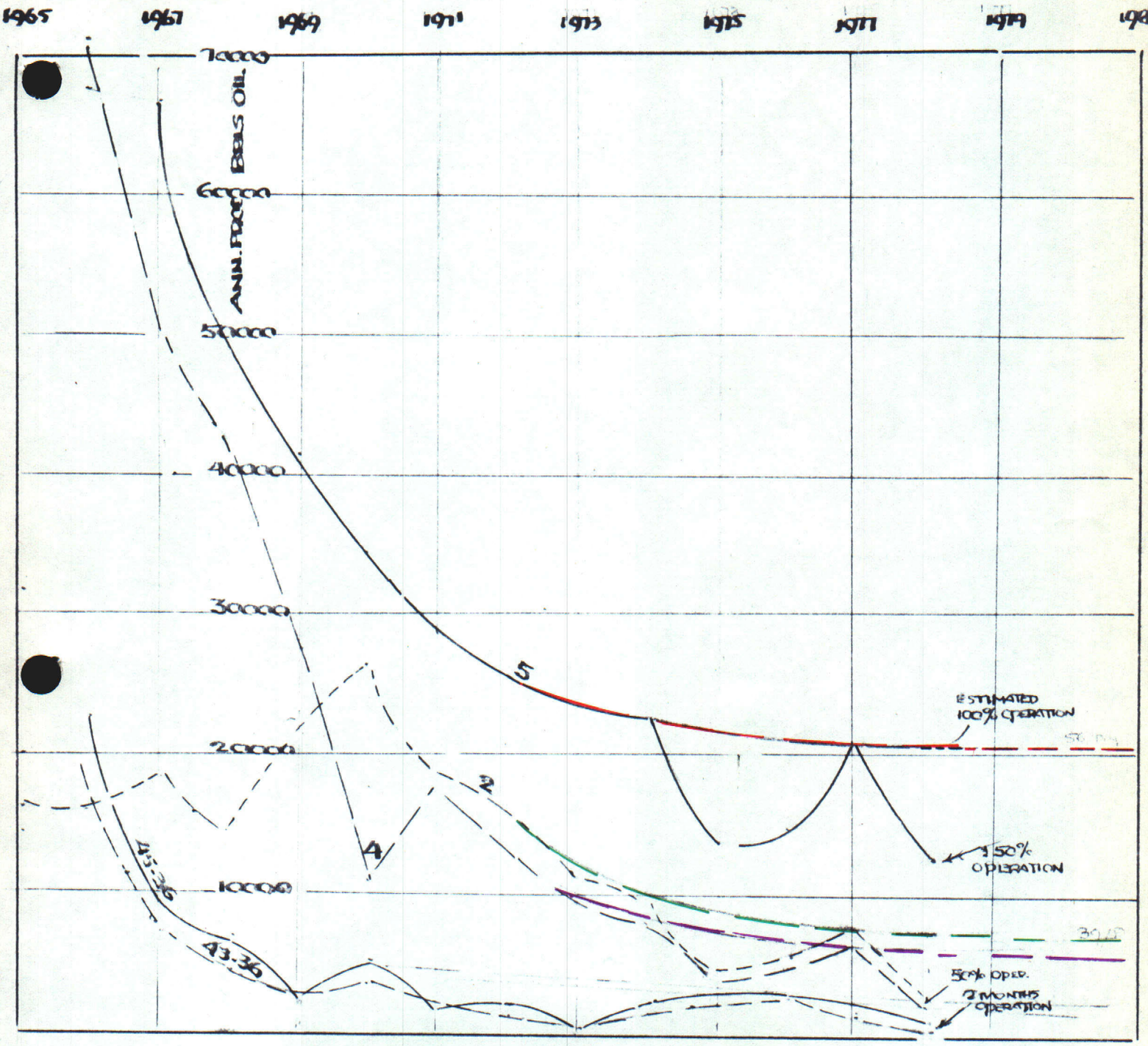
RENO, NEVADA
APRIL 11, 1979



EAGLE SPRINGS OIL FIELD

NYE CO., NEVADA

PRODUCTION DECLINE CURVES

SECTION 36

DAVID LeCOUNT EVANS
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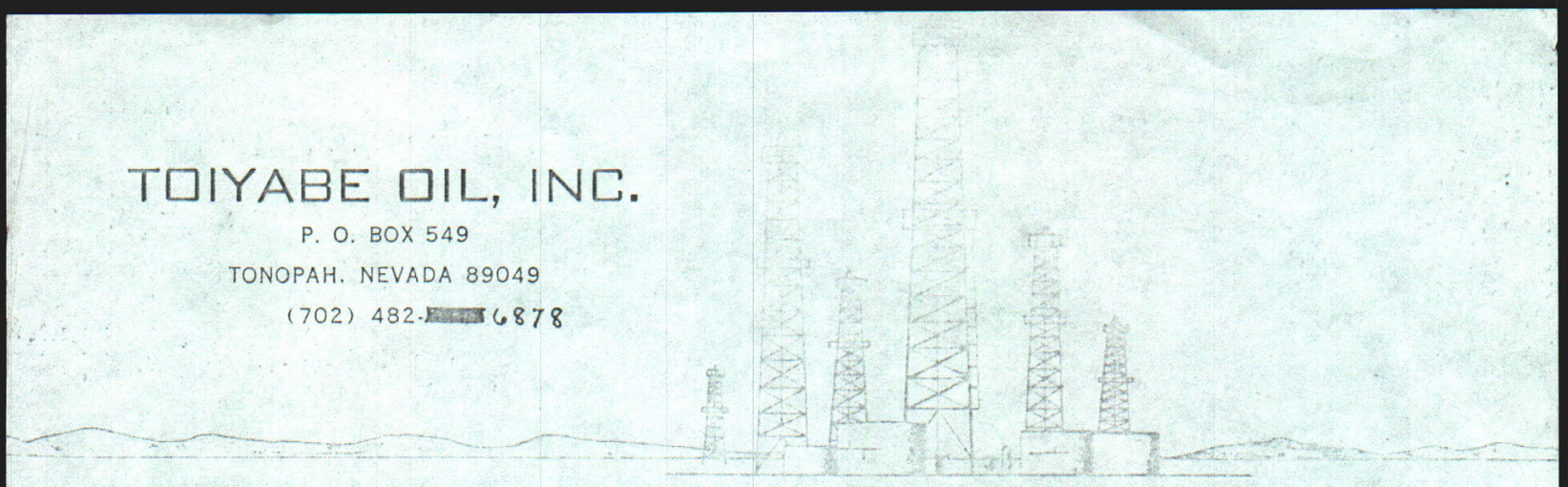
RENO, NEVADA
APRIL 11, 1979

TOIYABE OIL, INC.
P. O. BOX 549
TONOPAH. NEVADA 89049
(702) 482-[redacted]6878



CARDWELL MODEL O

DRAWWORKS:	Cardwell trailerig, Serial #TR-83 with two Murphy diesel 222 engines, 400 continuous h.p.
MAST:	Cardwell 104' model 201 telescoping, incorporated into trailer.
TRAVELING BLOCK:	National 430E 140, grooved for 1" line.
SUB-BASE:	Cardwell 10' to K.B.
ROTARY TABLE:	Oilwell 17½" C44 oil bath table.
MUD PUMP:	Emsco D-300 7¼" X 14" powered by two Murphy diesel 122 engines, 420 continuous h.p.
GENERATORS:	2 - 30 K.W., 3 phase driven by GM 4-53 diesel engine trailer mounted with fuel tank.
SWIVEL:	Ideal N35.
KELLYS:	1 - 4½" X 40' 1 - 3½" X 40' 1 - 45' Kelly slide.
MUD SYSTEM:	150 Bbls. trailer mud system which includes 4 X 5" Mission mud mixing pump, centrifugal desanders, Overstrom 4 X 5 shaker and 2 mud mixing hoppers.
WATER STORAGE:	150 Bbls. unitized doghouse and tool storage. 1 - 120 Bbls. upright skid mounted mud or water storage.
DRILL COLLARS:	12 - 6 3/4" O.D. X 2½" I.D. X 30' Hughes H-90 thread.
DRILL PIPE:	200 jts. 4½" 16.60 lb. API full hole 18 taper. 67 jts. 4½" 16.60 lb. Reed IF 18 taper.
MISC.:	Subs, elevators, etc. 1 - Shaffer C132 double gate B.O.P.

DAVID LE COUNT EVANS
CONSULTING GEOLOGIST
1700 ROYAL DRIVE
TELEPHONE (702) 747-4101
RENO, NEVADA 89503

April 11, 1979

Mr. Laurence T. Atkinson,
Minerals Management, Inc.,
326 Connecticut Avenue,
Norwalk, Connecticut 06852.

Re: A preliminary analysis
of the Toiyabe Lease,
Eagle Springs Oil Field,
Railroad Valley, Nye
County, Nevada.

Dear Mr. Atkinson:

Pursuant to your instructions, the overall Toiyabe picture and Mr. William Wright's proposals were discussed with Mr. Wright on April 4 at his current rig-site near Silver Peak, Nevada.

Studies have also included a review of the area's geology, the field's production history and remaining potential, using very complete personal files, assembled since 1971. Reference is made to the attached analysis and its plates I through XI, a product of these studies and submitted to support conclusions, recommendations and various suggestions.

Mr. Wright, President of Toiyabe Oil and 97½% owner of Monte Cristo Oil (which owns 54% of Toiyabe Oil), an honest and sincere individual, has his frustrations, to wit:

(1)disagreements of long standing with Mr. J. L. Davis, the original lessee who continues to have an override on annual net returns after depreciation;

(2) declining production from the two, of four, wells which can be pumped;

(3) a water problem because of the mandatory disposal of fluids via a water disposal well, as ruled by the BIM and the USGS;

(4) an expensive alternative, permitting disposal in ponds, at the center of the playa six miles to the west, which would require additional investment;

(5) Kobe (down hole) pumps, once efficient but today inferior and responsible for increasing shut-downs, because of repairs;

(6) a price per barrel, at well head, which seems too low to provide a profit; it is $3 lower than the price in force for the neighboring Trap Spring field;

(7) the indication that a profit can be approached only by increasing daily production.

The study indicates a favorable geological picture which would justify continued development in a northeast-southwest direction across the property, and urges that the initial step should be the drilling program , as recommended in our report.

Urged, too, is the use of the eleven plates, as one studies the test.

The opportunity to be of service in connection with this interesting property, as well as area, has been greatly appreciated.

Yours very truly,

David LeCount Evans

Consulting Geologist