



U.S. 62 West • P. O. Box 610 • Hobbs, New Mexico 88240

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EXHIBIT 54A - SIMPLIFIED ROYALTY CALCULATIONS

I. BASIS: 10,000 ORE TONS MINED

II. ASSUMPTIONS: 14.5% K₂O, 80% MILL RECOVERY, 62% K₂O
PRODUCT GRADE (= 98.1% KCl), VARIOUS SELLING PRICES

III. PRODUCTION:

A. K₂O TONS IN ORE = $10,000 \times 14.5\% = 1,450$

B. PRODUCT TONS = $10,000 \times 14.5\% \times 80\% \div 62\% = 1,871$

IV. STATE ROYALTIES

A. BEFORE JAN. 1, 1984 - BASED ON VALUE OF K₂O TONS
IN THE ORE MINED. STATE ASSIGNED UNIT VALUE OF \$17.65
PER K₂O TON IN ORE. ROYALTY RATE WAS 5% OF THIS
VALUE.

ROYALTY PAID (THIS EXAMPLE) $1,450 \times \$17.65 \times 5\% = \$1,280$

B. AFTER JAN. 1, 1984 TO PRESENT * - BASED ON GRADE
SALES VALUE OF PRODUCT AND SLIDING SCALE RATE BASED ON ORE,

1. SALES VALUE OF PRODUCT

AT \$20/TON $\times 1,871$ TONS = \$37,420 (LATE 60'S)

\$40 $\times 1,871$ " = \$74,840 (MID 70'S)

\$60 $\times 1,871$ " = \$112,260 (EARLY 80'S)

\$80 $\times 1,871$ " = \$149,680 (EARLY 90'S)

2. ROYALTY RATE

FORMULA: $2\% + ((\% K_2O - 10\%) \times 0.42377)$

EXAMPLE: $2\% + ((14.5\% - 10\%) \times 0.42377) = 3.907\%$

3. ROYALTY PAID (AT VARIOUS UNIT PRICES)

AT \$20/TON = \$37,420 $\times 3.907\% = \$1,462$

\$40/TON = \$74,840 $\times$ " = \$2,924

\$60/TON = \$112,260 $\times$ " = \$4,386

\$80/TON = \$149,680 $\times$ " = \$5,809

EX 54A - (CONTINUED)

C. * ON A CASE BY CASE BASIS, AND OWING TO DEMONSTRABLE FINANCIAL HARDSHIP, THE STATE LAND OFFICE COULD GRANT ROYALTY RELIEF. THIS RELIEF WAS GRANTED TO SEVERAL COMPANIES IN THE MID 1980'S DOWN TO A RATE OF 2%.

ROYALTY PAID

$$\begin{aligned} \text{AT } \$20/\text{TON} &= \$37,420 \times 2\% = \$748 \\ \$40/\text{TON} &= \$74,840 \times 2\% = \$1,497 \\ \$60/\text{TON} &= \$112,260 \times 2\% = \$2,245 \\ \$80/\text{TON} &= \$149,680 \times 2\% = \$2,994 \end{aligned}$$

V FEDERAL ROYALTIES

A. PRIOR TO FEB. 26, 1982 FEDERAL LEASES CALLED FOR 5% ROYALTY PAYMENTS, BUT THE INDUSTRY NEGOTIATED RATES DOWN TO 3.5%, BASED ON SALES VALUE OF PRODUCT

ROYALTY PAID (AT VARIOUS UNIT PRICES)

$$\begin{aligned} \text{AT } \$20/\text{TON} &= (\text{FROM IV B.1.}) \$37,420 \times 3.5\% = \$1,310 \\ \$40/\text{TON} &= 74,840 \times " = \$2,619 \\ \$60/\text{TON} &= 112,260 \times " = \$3,929 \\ \$80/\text{TON} &= 149,680 \times " = \$5,239 \end{aligned}$$

B. FEB. 26, 1982 TO JUNE 1, 1986 - SLIDING SCALE ROYALTY RATE BASED ON ORE GRADE AND APPLIED TO SALES VALUE.

ROYALTY PAID - SAME AS IV B.3.

C. JUNE 1, 1986 TO PRESENT. BLANKET REDUCTION TO ALL PRODUCERS TO 2% OF SALES VALUE, REDUCTION RENEWED BI-ANNUALLY WITH LATEST RENEWAL EXPIRING DEC. 31, 1993

ROYALTY PAID - SAME AS IV C.

EX 54A - (CONTINUED)

VII SUMMARY - SAMPLE ROYALTY PAYMENTS - BASED ON
ASSUMPTIONS AND SELLING PRICE TIMINGS SHOWN AT IV B 1

DATE	#/T	STATE		FEDERAL	
			% of SALES VAL		% of SALES VAL
LATE-60's	20	\$1,280	3.4%	\$1,310	3.5%
MID-70's	40	\$1,280	1.7%	\$2,619	3.5%
MID-'82	60	\$1,280	1.1%	\$4,386	3.9%
MID-'84	60	\$4,386	3.9%	\$4,386	3.9%
MID '86	60	\$4,386 (some at 2%)	3.9%	\$2,245	2.0%
CURRENT	80	\$5,848	3.9%	\$2,994	2.0%

CAPITAL APPROPRIATION REQUEST

Car No: S 93/6-1790

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

U. S. Land Office NM
Serial Number M 14957
Date effective _____

Locate hole correctly, giving distance in feet from N. or S. and E. or W. line of section; when hole is not vertical, give direction and angle.

LOG OF PROSPECT BORE HOLE

Logs of prospect bore holes are to be transmitted in duplicate to the Regional Mining Supervisor immediately upon completion of hole or shaft, or when work has been suspended indefinitely.

Lessee or permittee NMPC
Address P. O. Box 610 Hobbs, NM 88240
Driller Stewart Bros. Drilling Co.
Commenced drilling 12-11-91 Finished 12-12-91
Hole No. K-162 Sec. 2 T. 22S R. 31E M. NMP State NM
Method of drilling Rotary Logged by _____

The information given herewith is a complete and correct record of the bore hole and all work done thereon, so far as can be determined from all available records.

(Signed) [Signature]

Date 3/2/92

(Title) [Signature]

The United States Criminal Code, 18 U. S. C. 1001 makes it a criminal offense to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.

Elevation of top of hole
relative to sea level 3,535

FORMATION RECORD

DEPTH		Thickness of stratum	Geologic formations; character of rock; oil, gas and water horizons; coal and other mineral occurrences
From—	To—		
Feet	Feet	Feet	Feet
0	20	20	Blow sand & caliche
20	190	170	Reddish siltstone & sandstone
170	370	180	Red shale & siltstone
350	460	90	Red siltstone, trace gypsum
420	610	150	Brown siltstone
610	650	40	Red clay
650	760	110	Gray gypsum
760	800	40	Gray gypsum and red sandstone
800	900	100	Tan and gray gypsum and anhydrite
900	1,100	200	Halite (USGS 103 1,084' - 1,097')
1,100	1,250	150	Halite (USGS 109 1,210' - 1,222')
1,250	1,400	150	Halite (Vacatriste 1,375' - 1,379')
1,400	1,500	100	Halite (USGS 117 @ 1,468')

(Attach continuation sheets if necessary)

Depth				Thickness		Geologic Formation
From		To		of stratum		
Feet	Inches	Feet	Inches	Feet	Inches	
Start		Core				
1,500'	0"	1,502'	10"	2'	10"	Halite, heavy inclusions of brown clay.
1,502'	10"	1,510'	7"	7'	9"	Halite, occasional blebs & stringers of poly halite.
1,510'	7"	1,511'	5"	0'	10"	Red poly halite (USGS 119).
1,511'	5"	1,511'	6"	0'	1"	Green clay.
1,511'	6"	1,518'	4"	6'	10"	Halite.
1,518'	4"	1,518'	11"	0'	7"	Brown clay and halite (top of 10th).
1,518'	11'	1,523'	4"	4'	5"	Halite (middle of 10th).
1,523'	4"	1,528'	5"	5'	1"	* Sylvite, gray clay & halite (bottom of 10th).
1,528'	5"	1,533'	2"	4'	9"	Halite, few poly halite stringers.
1,533'	2"	1,534'	1"	0'	11'	Tan poly halite (USGS 120).
1,534'	1"	1,537'	0"	2'	11"	Halite.
Return with Rock Bit						
1,537'	0"	1,560'	0"	23'	0"	Halite, (union bed @ 1,575-1,581').
1,560'	0"	1,650'	0"	90'	0"	Halite.
1,650'	0"	1,676'	0"	26'	0"	Halite (USGS 123 1,656-1,662') (USGS 124 1,670-1,676').
Start Core						
1,676'	0"	1,676'	8"	0'	8"	Anhydrite (USGS 124).
1,676'	8"	1,677'	4"	0'	8"	Black Clay.
1,677'	4"	1,683'	1"	5'	9"	Halite.
1,683'	1"	1,687'	11"	4'	10"	Gray clay, langbeinite, halite, with brown clay parting at tip (4th ore zone).
1,687'	11"	1,689'	9"	1'	10"	Halite, few inclusions brown clay.
1,689'	9"	1,693'	5"	3'	8"	Halite, occasional orange polyhalite bleb.
1,693'	5"	1,695'	10"	2'	5"	Halite, sea thread clay stringers.
1,695'	10"	1,697'	9"	1'	11"	Halite, a few leonite or kainite blebs.
1,697'	9"	1,699'	1"	1'	4"	Halite, scattered brown clay blebs.
1,699'	1"	1,699'	10"	0'	9"	Langbeinite and halite
1,699'	10"	1,705'	4"	5'	6"	Halite, few langbeinite and polyhalite blebs
1,705'	4"	1,710'	1"	4'	9"	Halite, scattered brown clay stringers.
1,710'	1"	1,713'	0"	2'	11"	Halite, heavy langbeinite inclusions.

TD

* Beds Analyzed