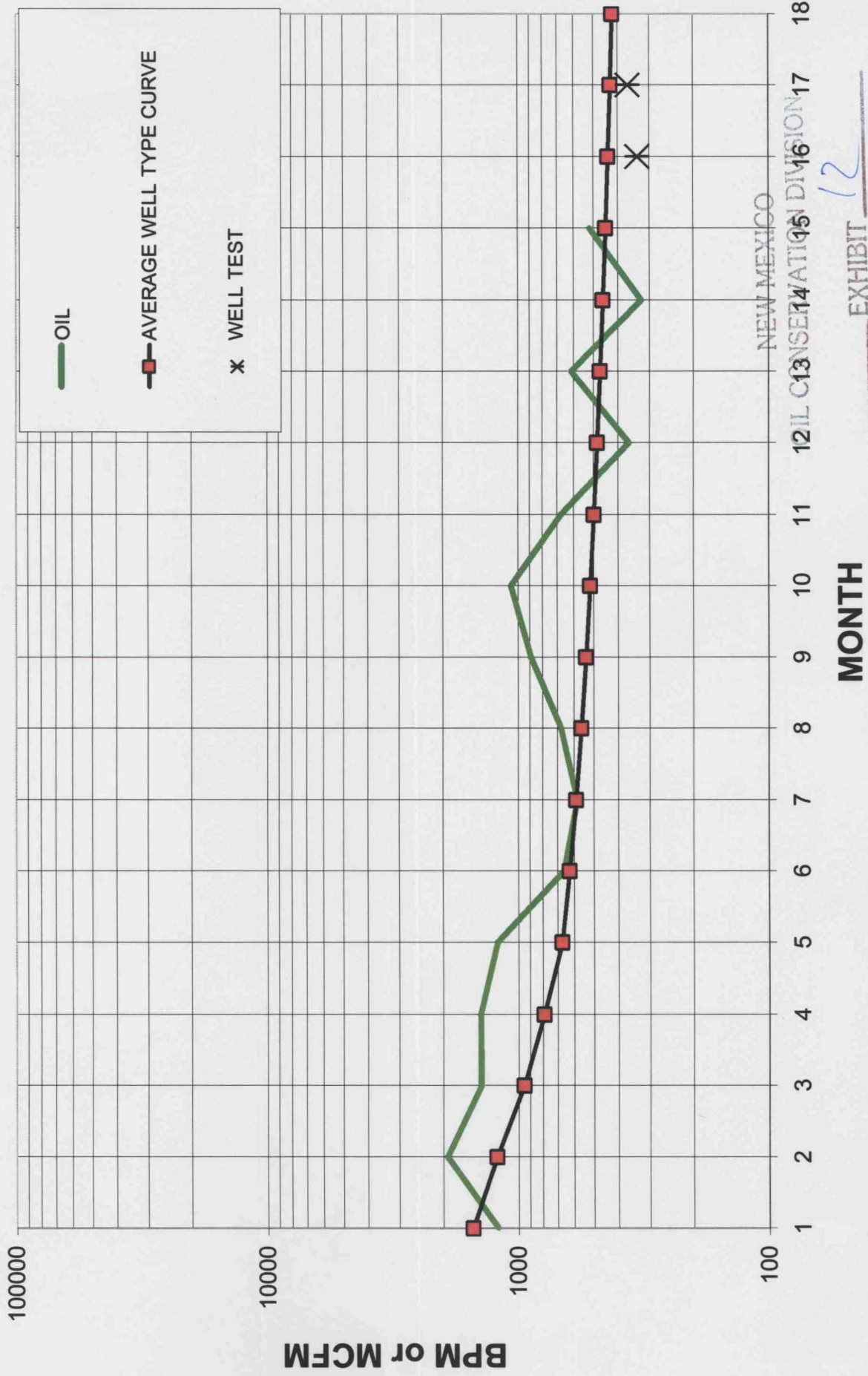


HAWK 8L FEDERAL #6



NEW MEXICO
OIL CONSERVATION DIVISION

MONTH

EXHIBIT 12

CASE NO. 11966

HAWK 8L FEDERAL #6				
LOG PAY CALCULATIONS				
DEPTH	NET PAY	POROSITY	RESISTIVITY	WATER SATURATION
	(h)	(ϕ)	(Rt)	(S _w)
	Feet	%	Ohms	%
1350 - 1353	3	10.7	35	32
1353 - 1356	3	13.0	29	29
1557 - 1560	3	6.0	590	14
1560 - 1562	2	4.5	170	34
1562 - 1566	4	6.5	120	28
1582 - 1584	2	5.4	230	24
1584 - 1586	2	4.7	220	29
1595 - 1600	5	9.0	80	25
1600 - 1602	2	7.8	110	24
1620 - 1623	3	4.7	105	42
1623 - 1628	5	6.0	250	21
1726 - 1732	6	5.5	90	38
1734 - 1736	2	4.6	115	41
1736 - 1740	4	6.0	210	23
1746 - 1751	5	4.2	400	24
1751 - 1755	4	7.8	150	21
1779 - 1784	5	5.8	100	34
1800 - 1803	3	7.5	60	34
1816 - 1818	2	4.2	275	29
1850 - 1854	4	5.0	70	48
1894 - 1898	4	4.8	110	40
1951 - 1954	3	5.9	120	31
1933 - 1935	2	9.0	30	41
1938 - 1940	2	7.6	48	38
1956 - 1960	4	7.5	50	38
1960 - 1965	5	7.6	40	42
1970 - 1973	3	5.5	90	38
1985 - 1988	3	6.0	48	48
TOTAL	95	6.5		32
$S_w = .04 / \phi^2 \times R_t \quad \text{where } R_w = 0.04 \text{ ohms}$				

HAWK 8L FEDERAL #6

DRAINAGE AREA CALCULATIONS

8L – T18S – R27E

<u>Parameter</u>	<u>Value</u>	<u>Source</u>
Projected Reserves (R):	50,000 BO	Type Curve Projection
Net Pay (h):	95 feet	Electric log calculation
Average Porosity (Φ):	0.065	Electric log calculation
Water Saturation (S_w):	0.32	Electric log calculation
Oil Saturation: (S_o)	0.68	1 - S_w
Formation Volume Factor (B_o):	1.40	Standing correlation @ 1000 GOR
Recovery Factor (RF):	0.15	Estimate for depletion drive reservoir
Drainage Area (A):	Unknown	

$$A = \frac{R \times B_o}{7758 \times h \times \Phi \times S_o \times RF}$$

$$A = \frac{50,000 \times 1.40}{7758 \times 95 \times 0.065 \times 0.68 \times 0.15}$$

$$A = 14.3 \text{ acres (radius 445 ft.)}$$