

Endurance Resources LLC - Volumetric 2nd Bone Spring Recovery Analysis
 23s-34e Lea Cty., New Mexico
 Sections - 18,19,20,29 & 30

Feb-14

		Petra Avg Ft		Core		North/South		E/W @ 26% of N/S Oriented EUR,bo	
WELL -Drainage area Polygon	AREA/ACRES	10% POR	Boi	Sw	OOIP,stb	EUR bo	% Recovery		
Sec 18 <i>Endurance-STARCASTER 18-4H</i>	160	70	1.68	0.4844	2666683	365544	13.71%		
Sec 18 <i>Chevron-BELL LAKE 18 - 1H</i>	160	54	1.68	0.4844	2057156	281991	13.71%		73587
Sec 20 <i>STRATOCASTER 1H-API#-30-025-37295</i>	160	120	1.68	0.4844	4571457	423200	9.26%		
Sec 20 <i>STRATOCASTER 4H-API#-30-025-27051</i>	160	74	1.68	0.4844	2819065	233550	8.28%		
Sec 29 <i>Caza-COPPERLINE 1H-API#-30-025-41313</i>	160	77	1.68	0.4844	2933352	453620	15.46%		
Sec 30 <i>TELECASTER 3H-API#-30-025-41455</i>	160	88	1.68	0.4844	3352402	731660	21.82%		
Avg Active Rec >							13.71%		

* Proposed

Original Oil in Place

$$OOIP = 7758 * A * h * \phi * (1 - Sw) / Boi$$

A = area (drainage acre)

h = net pay thickness (feet)

7758 = conversion factor (acre-ft* 7758 =barrels)

Phi = porosity of net reservoir (decimal)

Sw = water saturation

Boi = formation volume factor -expresses the change in oil volume between reservoir & surface conditions

GOR used for Boi correlation 1425

2nd Bone Spring -regional E/W 10 wells Avg EUR = 131 mbl

regional N/S 32 well Avg EUR = 502 mbl

EUR's from decline curve analysis of actual production volumes

B = 1.4

Di = 99.1

Minimum Decline 6 %

OCD Cases# 15074 & 15084
 Endurance Resources, LLC
 February 20, 2014
 Ex# 8-1



Core Analysis Report

Company: **Caza Petroleum**
File No.: **131378**
Well: **West Copperline 29 State Com No.1H**
Location: **330'FNL & 1980' FWL**

Field: **Bell Lake - Bone Spring**
Formation:
County: **Lea County, New Mexico**

Sample	Depth	Air	Klinkenberg	Porosity	Grain	Sw	So	Gas	Fluorescence	Sample Description
Number		Permeability	Permeability		Density			Units		
	ft	mD	mD	%	g/cc	%	%		%	Description

Confining Pressure 2,900psi

1	8,464.0	0.0161	0.0077	6.01	2.67	50.6	0.0	12	0	tr cut	Ss:lt brn vfg wl srt rnd sm dol sl pyr v sl sh styl
2	8,546.0	0.0219	0.0109	6.85	2.70	35.8	14.7	372	50	Grn Lam trace cut	Ss:lt brn vfg wl srt rnd sm dol sl pyr sl sh styl
3	8,562.0	0.0228	0.0116	6.99	2.68	32.7	17.1	243	60	Grn Lam trace cut	Ss:lt brn vfg wl srt rnd sl dol v sl pyr sm sh styl
4	8,623.0	0.0218	0.0109	7.34	2.69	32.5	18.8	351	95	Grn Lam fair cut	Ss:lt brn vfg wl srt rnd sl dol v sl pyr sl sh styl
5	8,625.0	0.0151	0.0071	6.28	2.69	33.7	17.9	297	90	Grn Lam fair cut	Ss:lt brn vfg wl srt rnd sl dol sl pyr sl sh styl
6*	9,048.0	tbfa	tbfa	3.25	2.66	48.6	0.0	496	0	Good Cut	Sh:blk nvp sm pyr
7	9,088.0	0.0019	0.0006	0.37	2.60	47.5	0.0	300	0	Good Cut	SdySh:blk v sl intrgr por sl pyr calc

Confining Pressure 3,395psi

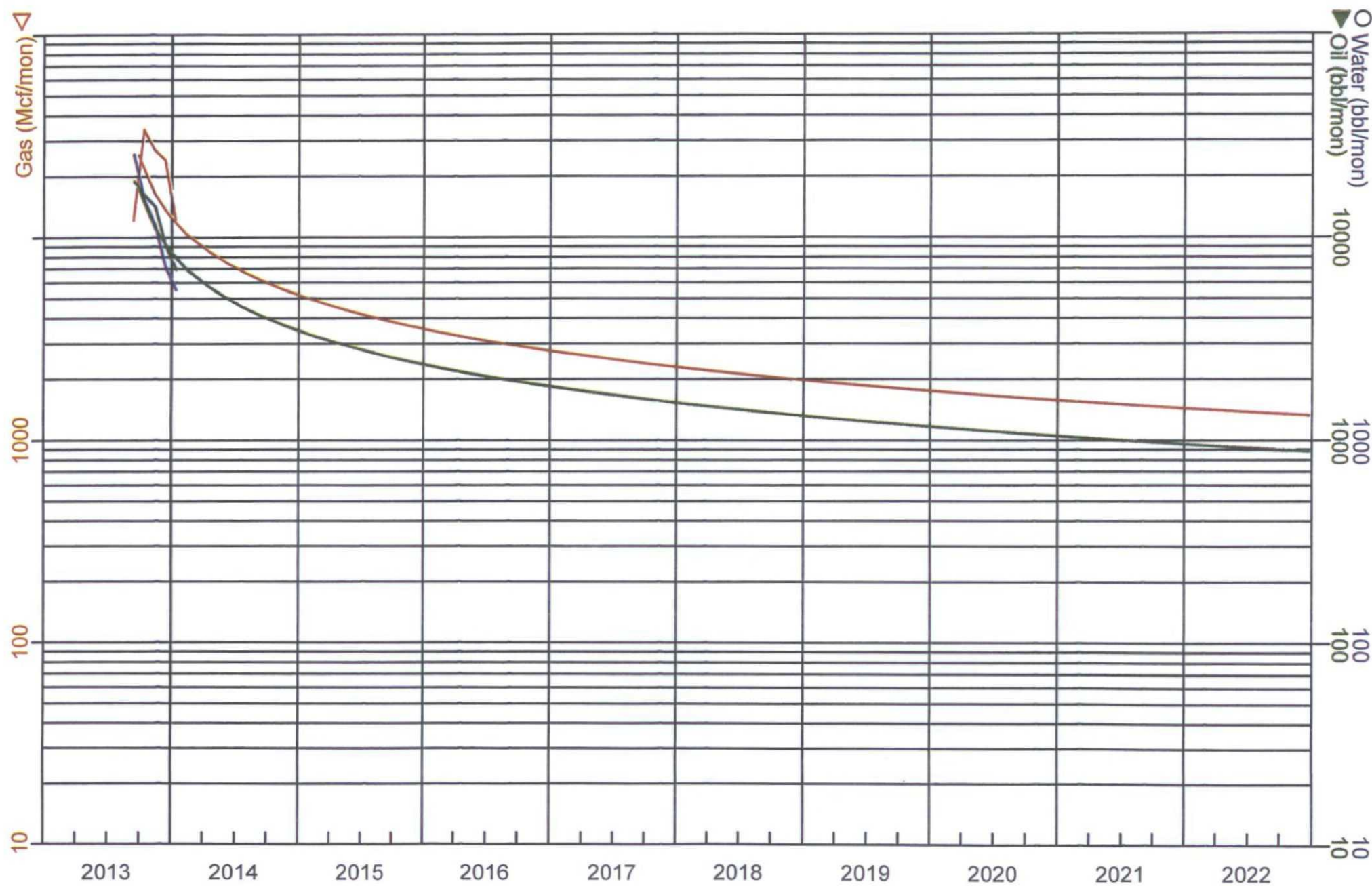
8	9,777.3	0.0267	0.0139	8.13	2.78	36.1	15.3	500+	40	Grn Lam fair cut	Ss:lt brn vfg wl srt rnd calc v sl pyr v sl sh styl
9	9,791.0	0.0143	0.0062	7.37	2.69	35.9	10.9	373	20	Grn Lam fair cut	Ss:lt brn vfg wl srt rnd sl calc v sl pyr v sl sh styl
10	9,797.0	0.0142	0.0064	7.40	2.65	33.2	16.8	337	60	Grn Lam fair cut	Ss:lt brn vfg wl srt rnd sl calc v sl pyr v sl sh styl
11	10,018.0	0.0008	0.0002	0.22	2.59	49.9	0.0	28	0	Fair cut	CalcSh:blk nvp sm pyr
12	10,334.0	0.0103	0.0046	5.11	2.73	51.5	0.0	446	0	Good Cut	Sh:blk nvp sm pyr sl dol
13	10,363.0	0.0135	0.0064	6.18	2.75	53.6	0.0	485	0	Fair cut	ShLySs:brn to blk vfg mod srt rnd sl pyr styl
14	10,451.0	0.0176	0.0087	8.30	2.73	47.2	0.0	347	0	Good Cut	Ss:brn vfg wl srt rnd shly sm dol v sl pyr
15	10,516.0	0.0183	0.0091	8.92	2.75	45.9	0.0	493	0	Fair cut	ShlySs:brn vfg wl srt md sl pyr v sl dol
16	10,536.0	0.0158	0.0077	6.66	2.67	49.6	0.0	377	0	Fair cut	SltYsSs:brn vfg wl srt md sm sh sl pyr sl dol styl
17	10,615.0	0.0159	0.0079	5.52	2.62	48.3	0.0	500+	0	Trace Cut	Ss:brn vfg wl srt rnd sl sity v sl sh v sl dol v sl pyr styl
18	10,710.0	0.0033	0.0012	0.33	2.69	51.2	0.0	445	0	Good Cut	Sh:blk nvp sm slt sm dol v sl calc sl pyr
19	10,762.0	0.0021	0.0007	0.58	2.72	44.6	0.0	500+	0	Trace Cut	Lst:brn nvp v sl sdy sm pyr foss

2nd bone spring core

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Case Name: STRATOCASTER 20-1H
Oper: ENDURANCE RESOURCES LLC
Oil EUR: 423.20 Mbb1

County, State: LEA, NM
Disc Value: 8,296.20 M\$
Gas EUR: 646.80 MMcf



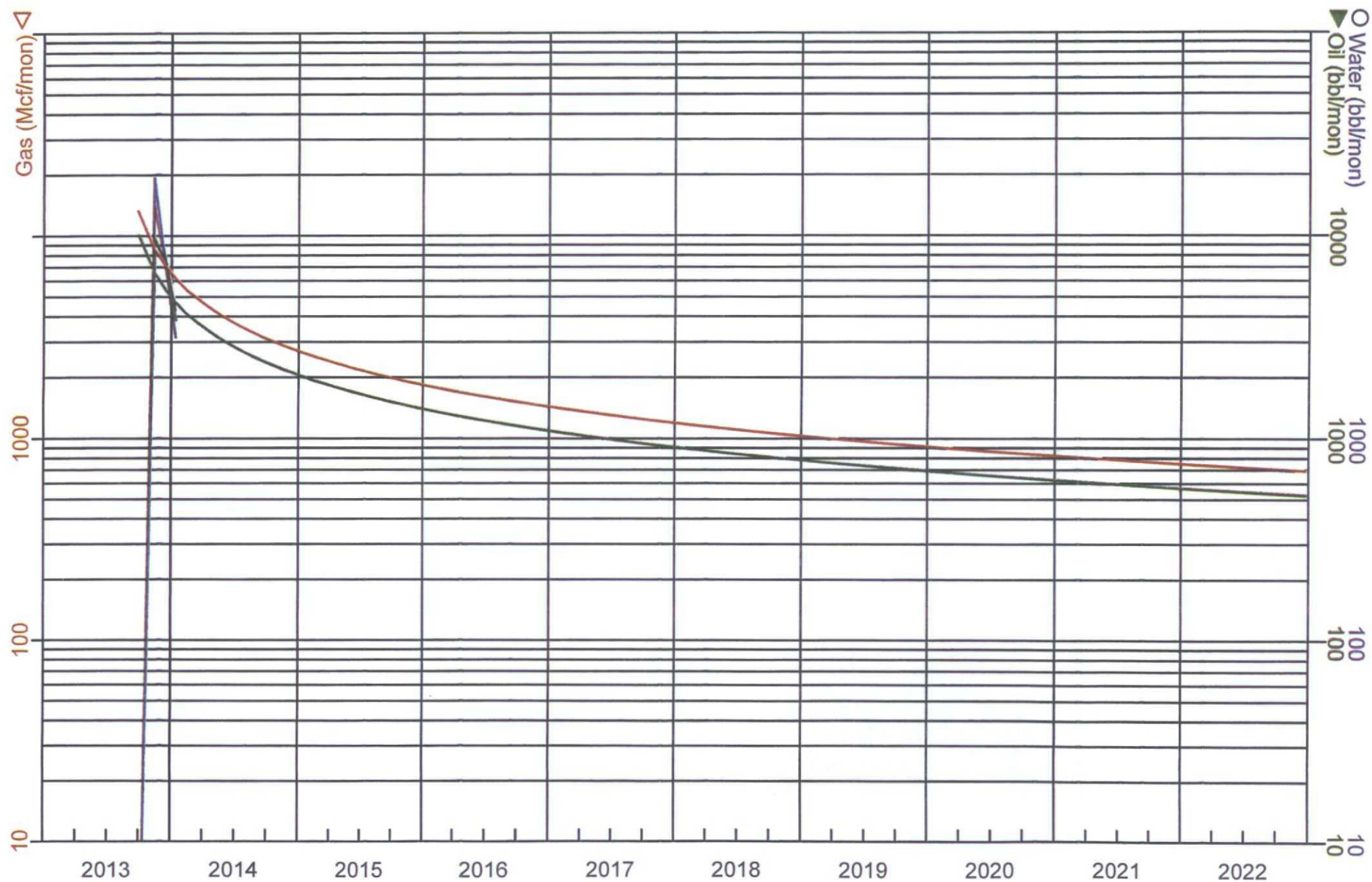
Hist Oil Cum: 49.51 Mbb1

Hist Wtr Cum: 47.81 Mbb1
Hist Gas Cum: 92.00 MMcf

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Case Name: STRATOCASTER 20-4H
Oper: ENDURANCE RESOURCES LLC
Oil EUR: 233.55 Mbbl

County, State: LEA, NM
Disc Value: 5,463.17 M\$
Gas EUR: 306.55 MMcf

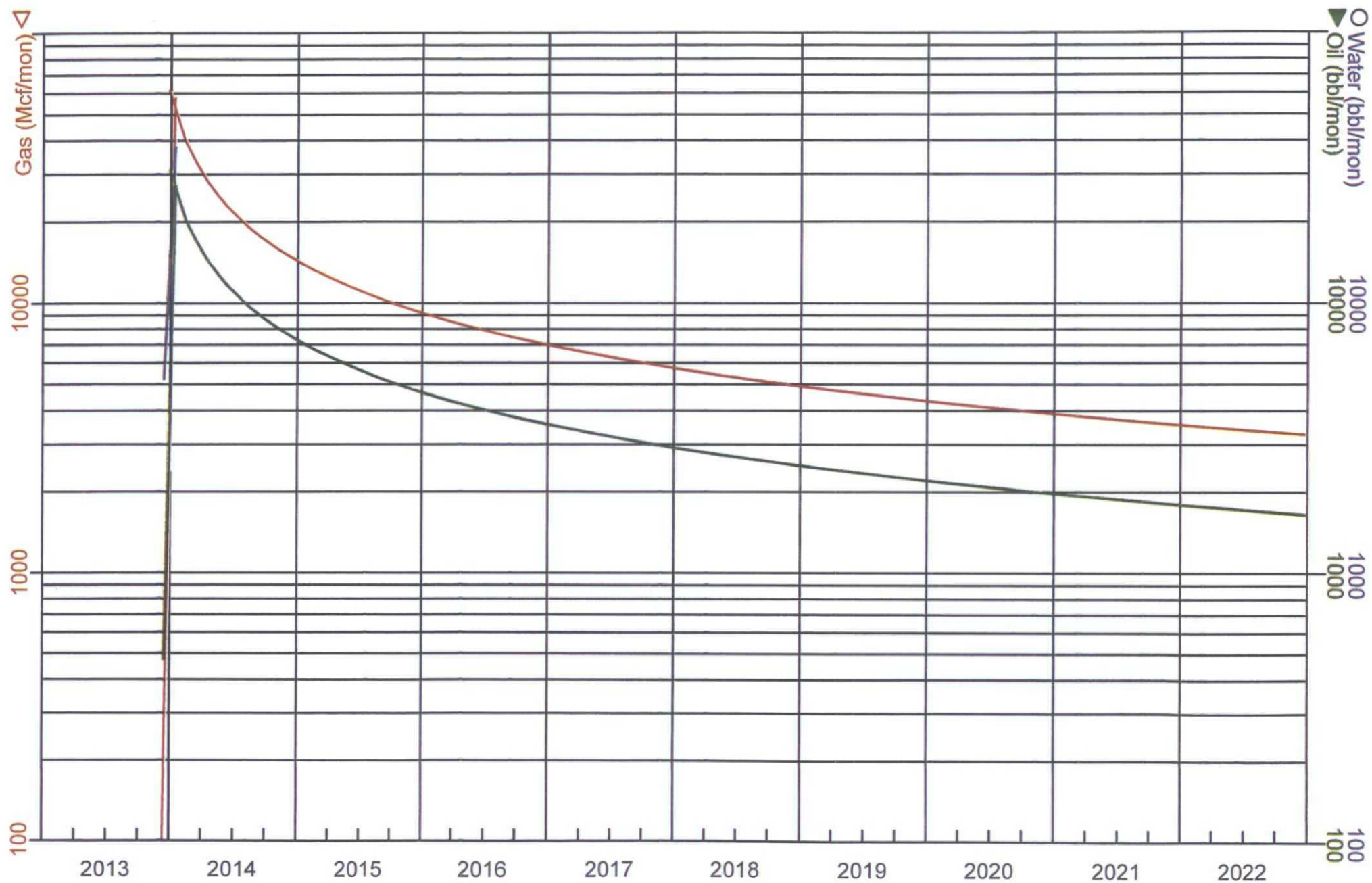


Hist Oil Cum: 17.04 Mbbl

Hist Wtr Cum: 26.53 Mbbl
Hist Gas Cum: 21.96 MMcf 8.4

Case Name: TELECASTER 3H
Oper: ENDURANCE RESOURCES LLC
Oil EUR: 731.66 Mbb1

County, State: LEA, NM
Disc Value: 20,989.53 M\$
Gas EUR: 1,448.26 MMcf



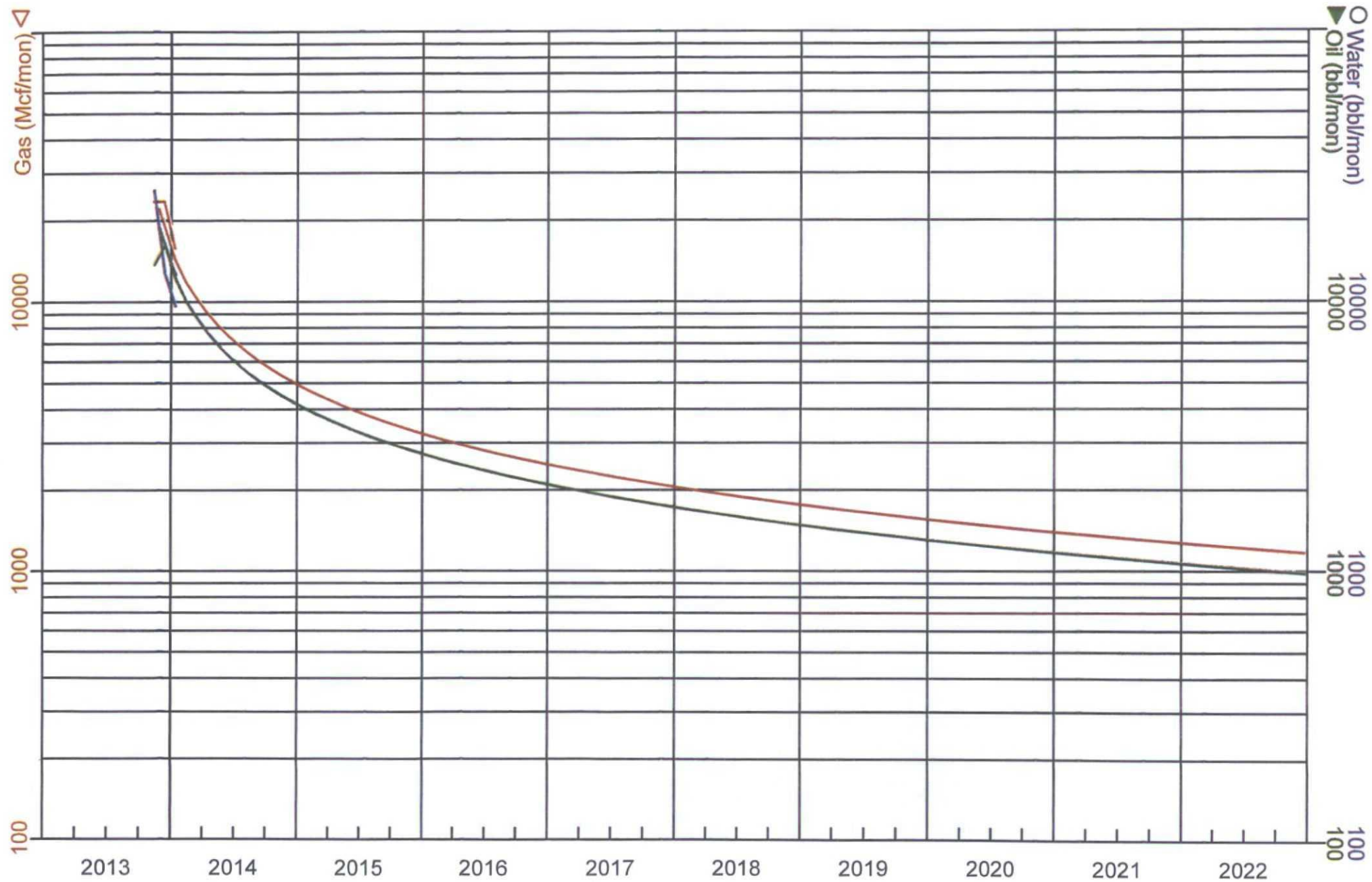
Hist Oil Cum: 0.48 Mbb1

Hist Wtr Cum: 5.23 Mbb1
Hist Gas Cum: 0.00 MMcf

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Case Name: WEST COPPERLINE 29 STATE 001H
Oper: CAZA OPERATING, LLC
Oil EUR: 453.62 Mbb1

County, State: LEA, NM
Disc Value: 2,658.06 M\$
Gas EUR: 551.93 MMcf



Hist Oil Cum: 29.83 Mbb1

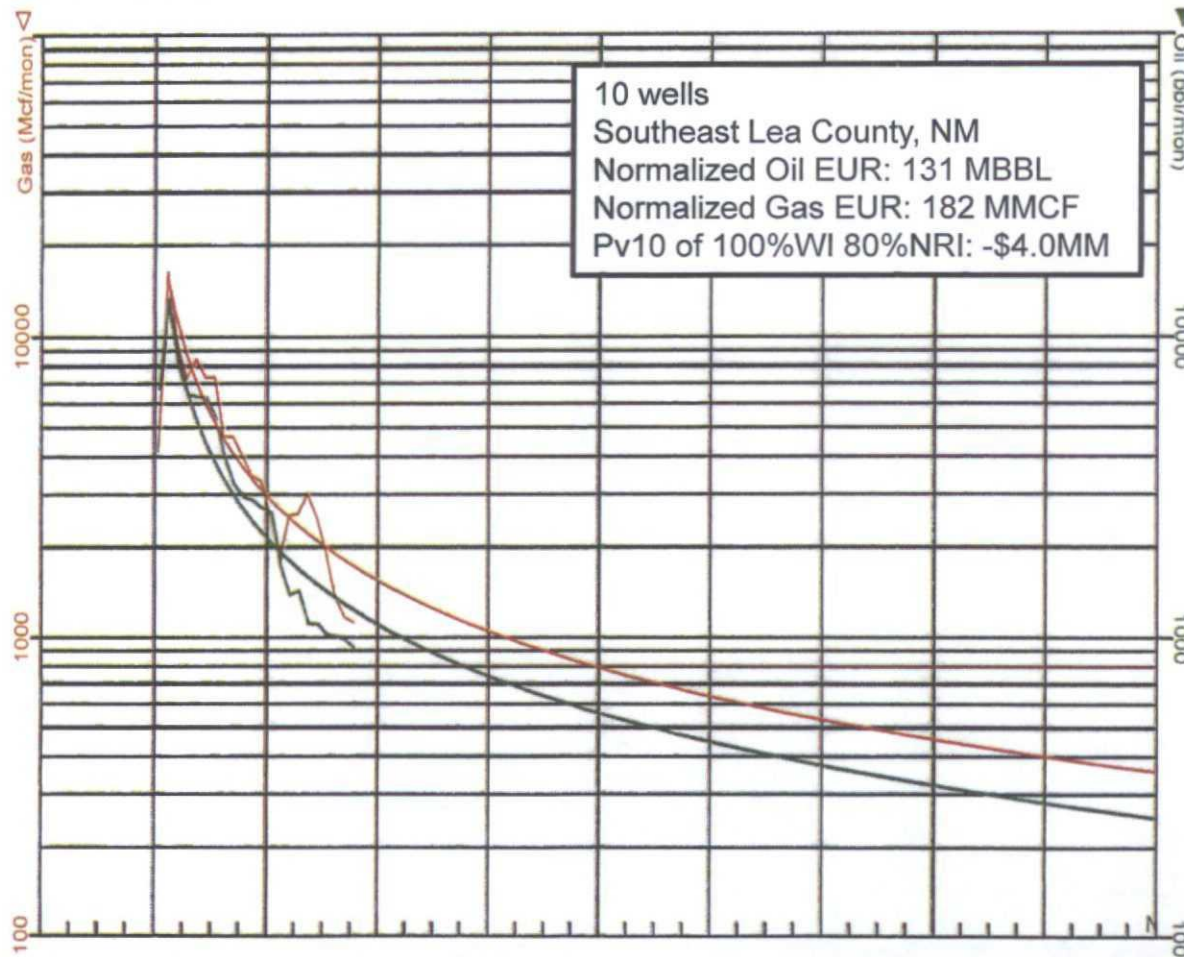
Hist Wtr Cum: 38.76 Mbb1
Hist Gas Cum: 47.18 MMcf

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2ND Bone Spring E-W Orientation





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2ND Bone Spring N-S Orientation

