

Source: Doglioni and Flores, *An Introduction to the Italian Geology*, 1997

ZENITH ENERGY LTD.

ITALY REGIONAL GEOLOGY

OCT. 2021 JOB No. 6770 FIGURE No. 2a

System	Series	Stage	Age (Ma)	
Quaternary	Pleistocene	Gelasian	younger	
Neogene	Pliocene	Piacenzian	2.588–3.600	← GAS ZONE
		Zanclean	3.600–5.332	← GAS ZONE
	Miocene	Messinian	5.332–7.246	← GAS ZONE
		Tortonian	7.246–11.608	
		Serravallian	11.608–13.65	
		Langhian	13.65–15.97	
		Burdigalian	15.97–20.43	
		Aquitania	20.43–23.03	
Paleogene	Oligocene	Chattian	older	

ZONES OF INTEREST



← GAS ZONE

← GAS ZONE

← GAS ZONE

ZENITH ENERGY LTD.

ITALY

STRATIGRAPHIC CHART

OCT. 2021

JOB No. 6770 FIGURE No. 2b

Table 2

Summary of Gross Reserves
October 1, 2021

Zenith Energy Ltd.

Lucera Concession, Onshore Italy

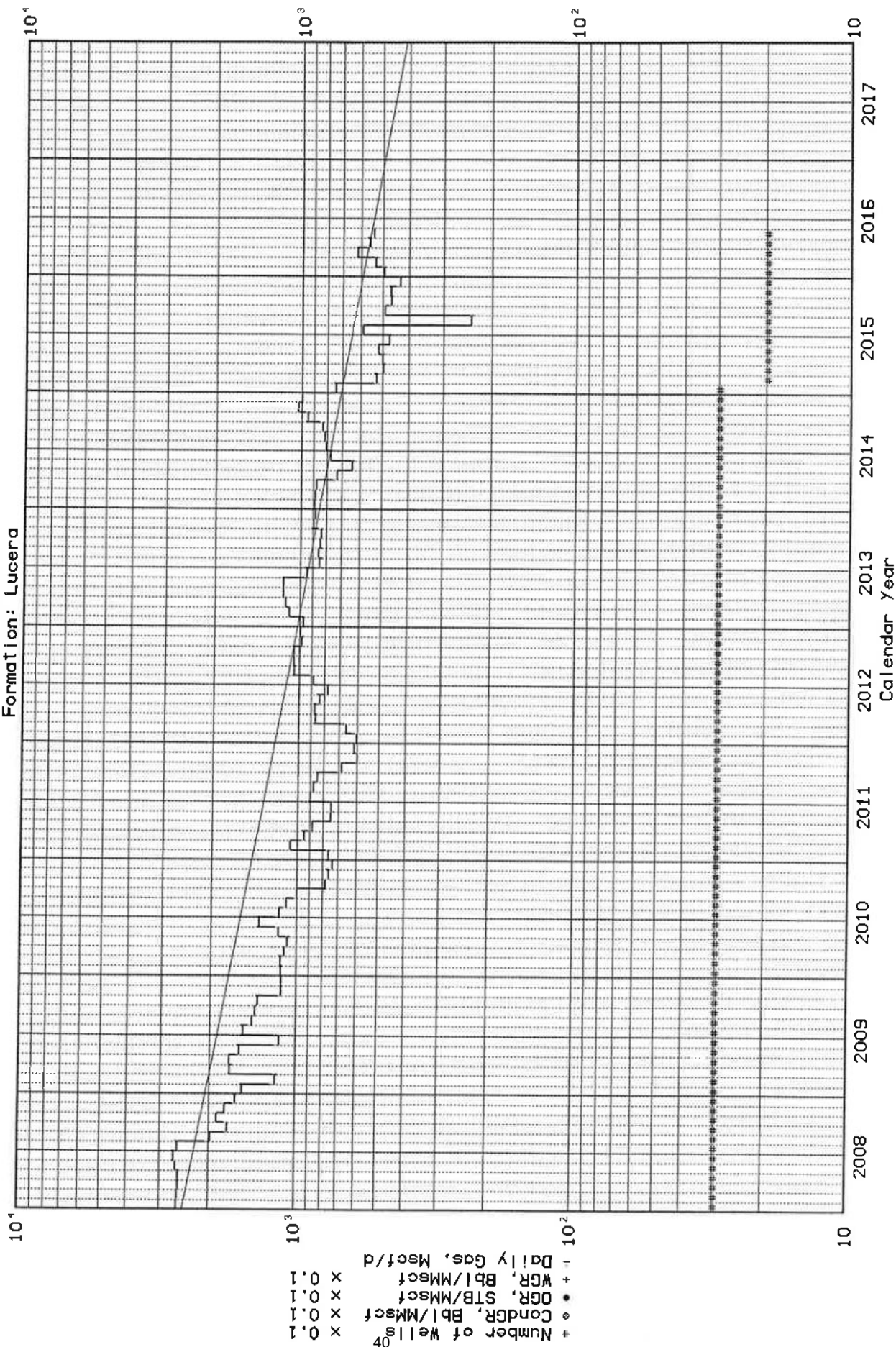
			Current or Initial Rate Mscf/d	Ultimate RGIP (MMscf)	Cumulative Production (MMscf)	Remaining RGIP (raw) (MMscf)	Remaining RGIP (sales) (MMscf)	Remaining NGLs (MMbbls)	Reference
Description									
<u>Proved Developed Non-Producing</u>									
Lucera Concession	2 Lucera wells		538	5,954	5,059	895	850	0	Fig 3a
Total Proved Developed Non-Producing			538	5,954	5,059	895	850	0	
<u>Probable Developed Non-Producing</u>									
Lucera Concession	2 Lucera wells	(Incr.)	0	210	0	210	198	0	Fig 4a
Total Probable Developed Non-Producing			0	210	0	210	198	0	
Total Proved Plus Probable Developed Non-Producing			538	6,164	5,059	1,105	1,048	0	

PRODUCTION HISTORY

Proved Developed Producing

"Lucera Field, Italy"

Field: Lucera
Formation: Lucera



PRODUCTION HISTORY

Proved Plus Probable

"Lucera Field, Italy"

Field: Lucera

Formation: Lucera

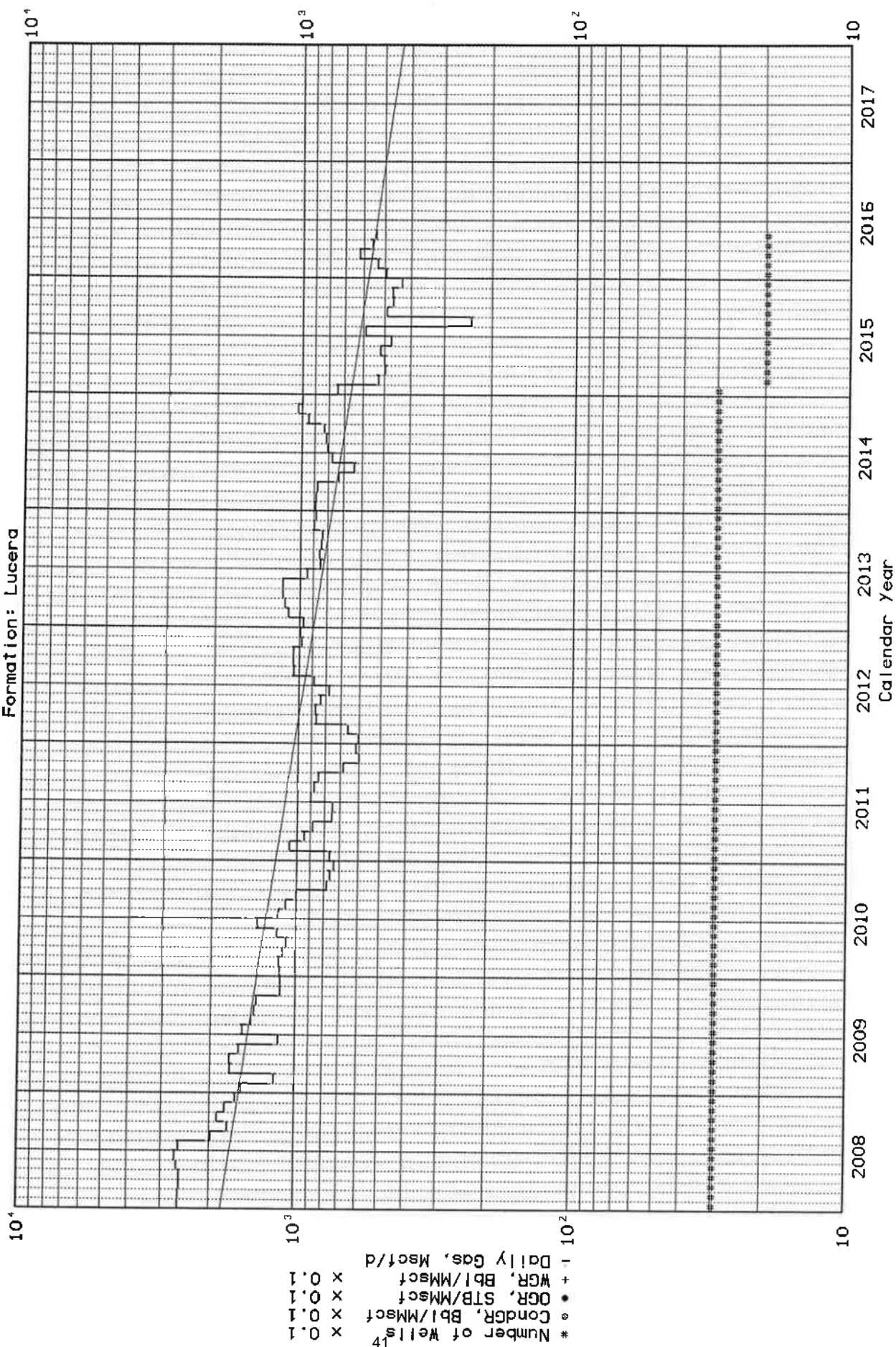


Table 3a

Summary of Anticipated Capital Expenditures
Development
October 1, 2021
Zenith Energy Ltd.

Lucera Concession, Onshore Italy

Description	Date	Operation	Capital Interest %	Gross Capital M\$	Net Capital M\$
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No anticipated capital expenditures.

Table 3b
Summary of Anticipated Capital Expenditures
Abandonment and Restoration

October 1, 2021

Zenith Energy Ltd.

Lucera Concession, Onshore Italy

Description	Well Parameters	Capital Interest %	Gross Capital M\$	Net Capital M\$
Lucera Concession	Abandon 2 gas wells, reclaim the land	13.6000	114	16

Note: M\$ means thousands of dollars.

The above capital values are expressed in terms of current dollar values without escalation.

Table 4
Summary of Company Reserves and Economics
Before Income Tax
October 1, 2021
Zenith Energy Ltd.
Lucera Concession, Italy

Forecast Prices & Costs

Description	Net To Appraised Interest										
	Reserves						Cumulative Cash Flow (BIT) - MUS\$				
	Light and Medium Oil MSTB		Conventional Natural gas MMscf		NGL Mbbbls		Discounted at:				
	Gross	Net	Gross	Net	Gross	Net	Undisc.	5%/year	10%/year	15%/year	20%/year
Proved Developed Non-Producing											
Bastia-1, Reggente 6, S. Caterina 2	0	0	115	115	0	0	243	212	188	188	151
Total Proved Developed Non-Producing	0	0	115	115	0	0	243	212	188	188	151
Probable											
Probable Developed Non-Producing											
Bastia-1, Reggente 6, S. Caterina 2	0	0	28	28	0	0	64	48	37	29	23
Total Probable Developed Non-Producing	0	0	28	28	0	0	64	48	37	29	23
Total Proved Plus Probable	0	0	143	143	0	0	307	261	225	197	174

MUS\$ means thousands of United States dollars.

Gross reserves are the total of the Company's working interest share before deduction of royalties owned by others.

Net reserves are the total of the Company's working and/or royalty interest share after deducting the amounts attributable to royalties owned by others.

Table 4a

EVALUATION OF: Lucera Concession, Onshore Italy - Proved Developed Non Producing

ERGO v7.43 P2 ENERGY SOLUTIONS PAGE 1
 GLOBAL : 07-OCT-2021 6770
 BFP: 01-OCT-2021 DISC: 01-OCT-2021 PROD: 01-MAY-2022
 RUN DATE: 7-OCT-2021 TIME: 12:33
 FILE: GLCPN1.DAZ

WELL/LOCATION - Lucera Wells
 EVALUATED BY -
 COMPANY EVALUATED - Zenith Energy Ltd.
 APPRAISAL FOR -
 PROJECT - FORECAST PRICES & COSTS

TRACT FACTOR - 100.0000 %
 ULT POOL RESERVES - 895 MMCF
 PRODUCTION TO DATE - N/A
 DECLINE INDICATOR - EXPONENTIAL

TOTAL ABANDONMENT - 138965 \$- (2032)
 NOTE: ECONOMIC LIMIT OCCURS IN 2032

INTEREST

AVG WI 13.6000%

ROYALTIES/TAXES

STATE

Year	# of Wells	Price \$/MCF	Sales Gas MMCF		Company Share	
			MCF/D	Vol	Gross	Net
2021	0	5.59	0	0	0	0
2022	2	5.70	492.4	115	15	16
2023	2	5.70	417.3	148	20	20
2024	2	5.80	350.6	124	17	17
2025	2	5.90	294.6	105	14	14
2026	2	5.96	247.5	88	12	12
2027	2	6.02	207.9	74	10	10
2028	2	6.08	174.7	62	8	8
2029	2	6.14	146.7	52	7	7
2030	2	6.20	123.3	44	6	6
2031	2	6.23	103.6	37	5	5
SUB				848	115	115
REM				0	0	0
TOT				848	115	115

P/T = COMPANY SHARE FUTURE NET REVENUE

Year	Capital & Aband Costs -M\$-	Future Revenue (FR)				Royalties			Operating Costs			FR After Roy & Oper -M\$-	Net back \$/MCF	Proc & Other Income -M\$-	Cap'l Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
		Oil -M\$-	Sale Gas -M\$-	Products -M\$-	Total -M\$-	State -M\$-	Other -M\$-	Mineral -M\$-	Fixed -M\$-	Variable -M\$-	\$/MCF						Undisc -M\$-	10.0% -M\$-
2021	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0
2022	0	0	89	0	89	0	0	0	0	11	32	47	2.98	0	0	0	47	43
2023	0	0	115	0	115	0	0	0	0	16	42	57	2.82	0	0	0	57	48
2024	0	0	98	0	98	0	0	0	0	17	36	46	2.71	0	0	0	46	35
2025	0	0	84	0	84	0	0	0	0	17	31	36	2.56	0	0	0	36	25
2026	0	0	71	0	71	0	0	0	0	17	26	28	2.33	0	0	0	28	18
2027	0	0	60	0	60	0	0	0	0	18	22	20	2.03	0	0	0	20	12
2028	0	0	51	0	51	0	0	0	0	18	19	14	1.68	0	0	0	14	7
2029	0	0	44	0	44	0	0	0	0	18	17	9	1.24	0	0	0	9	4
2030	0	0	37	0	37	0	0	0	0	19	14	4	0.70	0	0	0	4	2
2031	139	0	31	0	31	0	0	0	0	19	12	0	0.07	0	0	19	-19	-7
SUB	139	0	680	0	680	0	0	0	0	169	251	261		0	0	19	243	188
REM	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0
TOT	139	0	680	0	680	0	0	0	0	169	251	261		0	0	19	243	188

NET PRESENT VALUE (\$-)

Discount Rate	0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
FR After Roy & Oper	261422	224164	206016	195310	185562	172493	154114
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	0	0	0	0	0	0	0
Abandonment Costs	18899	11744	8923	7461	6258	4936	3193
Future Net Revenue	242523	212420	197093	187849	179304	167657	150920

COMPANY SHARE

	1st Year	Average	Royalties	Oper Costs	FR After Roy & Oper	Capital Costs	Future Net Rev
% Interest	13.6	13.6					
% of Future Revenue			0	61.6	38.4	0	35.6

PROFITABILITY

COMPANY SHARE BASIS		Before Tax
Rate of Return (%)		n/a
Profit Index (undisc.)		n/a
(disc. @ 10.0%)		n/a
(disc. @ 5.0%)		n/a
First Payout (years)		n/a
Total Payout (years)		n/a
Cost of Finding (\$/BOE)		n/a
NPV @ 10.0% (\$/MCF)		1.63
NPV @ 5.0% (\$/MCF)		1.84

Table 4b

EVALUATION OF: Lucera Concession, Onshore Italy - Proved Plus Probable Developed Non-Producing

 PRGO v7.43 P2 ENERGY SOLUTIONS PAGE 1
 GLOBAL : 07-OCT-2021 6770
 EFF:01-OCT-2021 DISC:01-OCT-2021 PROD:01-MAY-2022
 RUN DATE: 7-OCT-2021 TIME: 12:34
 FILE: GICRBL.DAX

 WELL/LOCATION - Lucera Wells
 EVALUATED BY -
 COMPANY EVALUATED - Zenith Energy Ltd.
 APPRAISAL FOR PROJECT - FORECAST PRICES & COSTS

 TRACT FACTOR - 100.0000 %
 ULT POOL RESERVES - 1105 MMCF
 PRODUCTION TO DATE - N/A
 DECLINE INDICATOR - EXPONENTIAL

 TOTAL ABANDONMENT - 144580 - \$- (2034)
 NOTE: ECONOMIC LIMIT OCCURS IN 2034

INTEREST

AVG WI 13.6000%

ROYALTIES/TAXES

STATE

Year	# of Wells	Price \$/MCF	Sales Gas MMCF		Company Share	
			Pool MCF/D	Vol	Gross	Net
2021	0	5.59	0	0	0	0
2022	2	5.70	488.0	116	16	16
2023	2	5.70	434.0	154	21	21
2024	2	5.80	378.5	134	15	15
2025	2	5.90	329.4	117	16	16
2026	2	5.95	286.7	102	14	14
2027	2	6.02	249.6	89	12	12
2028	2	6.08	217.2	77	10	10
2029	2	6.14	189.1	67	9	9
2030	2	6.20	164.6	58	8	8
2031	2	6.29	143.2	51	7	7
2032	2	6.37	124.7	44	6	6
2033	2	6.45	108.5	39	5	5
SUB				1048	143	143
REM				0	0	0
TOT				1048	143	143

- P/T -

COMPANY SHARE FUTURE NET REVENUE

Year	Capital Aband Costs -M\$-	Future Revenue (PR)				Royalties			Operating Costs			FR After Roy&Oper -M\$-	Net back \$/MCF	Proc& Other Income -M\$-	Cap'l Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
		Oil -M\$-	SaleGas -M\$-	Products -M\$-	Total -M\$-	State -M\$-	Other -M\$-	Mineral -M\$-	Fixed -M\$-	Variable -M\$-	S/MCF						Undisc -M\$-	10.0% -M\$-
2021	0	0	0	0	0	0	0	0	0	0	0.00	0	0.00	0	0	0	0	0
2022	0	0	0	0	90	0	0	0	0	11	32	47	2.99	0	0	0	47	44
2023	0	0	120	0	120	0	0	0	0	16	43	60	2.85	0	0	0	60	51
2024	0	0	106	0	106	0	0	0	0	17	39	51	2.78	0	0	0	51	39
2025	0	0	94	0	94	0	0	0	0	17	34	43	2.69	0	0	0	43	30
2026	0	0	82	0	82	0	0	0	0	17	30	35	2.52	0	0	0	35	22
2027	0	0	73	0	73	0	0	0	0	18	27	28	2.33	0	0	0	28	16
2028	0	0	64	0	64	0	0	0	0	18	24	22	2.09	0	0	0	22	12
2029	0	0	56	0	56	0	0	0	0	18	21	17	1.81	0	0	0	17	8
2030	0	0	49	0	49	0	0	0	0	19	19	12	1.49	0	0	0	12	5
2031	0	0	43	0	43	0	0	0	0	19	17	8	1.12	0	0	0	8	3
2032	0	0	38	0	38	0	0	0	0	19	15	4	.68	0	0	0	4	1
2033	145	0	34	0	34	0	0	0	0	20	13	1	.16	0	0	20	-19	-6
SUB	145	0	349	0	349	0	0	0	0	208	315	327	0	0	0	20	307	225
REM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT	145	0	349	0	349	0	0	0	0	208	315	327	0	0	0	20	307	225

NET PRESENT VALUE (-\$-)

Discount Rate	.0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
FR After Roy & Oper.	326659	271999	245311	231455	218123	200544	176402
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	0	0	0	0	0	0	0
Abandonment Costs	19663	11082	7959	6415	5191	3805	2307
Future Net Revenue	307006	260917	238352	225040	212932	196739	174095

COMPANY SHARE

	1st Year	Average	Royalties	Oper Costs	FR After Roy&Oper	Capital Costs	Future NetRev
% Interest	13.6	13.6					
% of Future Revenue			.0	61.5	38.5	.0	36.2

PROFITABILITY

COMPANY SHARE BASIS		Before Tax
Rate of Return (%)		n/a
Profit Index (undisc.)		n/a
(disc. @ 10.0%)		n/a
(disc. @ 5.0%)		n/a
First Payout (years)		n/a
Total Payout (years)		n/a
Cost of Finding (\$/BOE)		n/a
NPV @ 10.0% (\$/MCF)		1.58
NPV @ 5.0% (\$/MCF)		1.83

MISANO ADRIATICO GAS CONCESSION
ONSHORE, ITALY
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(Summary of Decline Analysis)	
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MISANO ADRIATICO GAS CONCESSION
ONSHORE ITALY
DISCUSSION

Property Description

The Company owns 100% working interest in the Misano Adriatico gas concession covering approximately 642 acres, and located onshore Italy along the Adriatic coast. This concession was scheduled to expire in 2020 but an extension has been granted based on the remaining reserves.

A map showing the Misano Adriatico concession location is presented in Figure 1a, and a description of the ownership is presented in Table 1.

Geology

The regional geology of Italy as shown in Fig 2a places the company's properties in the on-land shallow depths of the Apenninic Foredeep basin.

The Apennines are the consequences of the subduction of three types of lithosphere with different characteristics but pertaining to the same Adriatic plate.¹

1. In the north central Apennines, thin continental lithosphere at the surface in the foreland, and probably thinner at depth, occurs;
2. In the southern Apennines, thick continental lithosphere occurs in the foreland, whereas probably old oceanic lithosphere constitutes the slab at depth to the west (northern prologation of the Ionian Mesozoic basin);
3. In the southern sector, offshore Calabria, old oceanic Ionian lithosphere occurs both in the foreland and at depth.

The Misano Adriatico exploration play has gas resources in the Cenozoic Upper Tertiary Pliocene sand levels as represented in the Stratigraphic Column of Fig 2b.

¹ 'An Introduction To The Italian Geology' -- Carlo Doglioni and Giovanni Flores, 1997

Reserves

Total gross proved developed producing conventional non-associated marketable gas reserves of 88 MMscf have been estimated for the one producing gas well. This estimate is based on a conservative production decline analysis as presented in Figure 3a.

Gross probable additional developed producing conventional non-associated marketable gas reserves of 41 MMscf have been estimated for the same well based on the best fit production decline analysis, as presented in Figure 4a.

Production

The Misano Adriatico gas concession is being produced from well Misano 2 which has been historically producing 36 Mscf/d prior to being shut-in during 2020 for political reasons. The well is expected to be placed back on production in July 2021.

Product Prices

An average 2021 gas price of \$7.36/Mscf has been used for this area based on information provided by the Company, which reflects a correlation to World Bank European posted gas prices.

Capital Expenditures

There are no forecasted capital expenditures as presented in Table 3a.

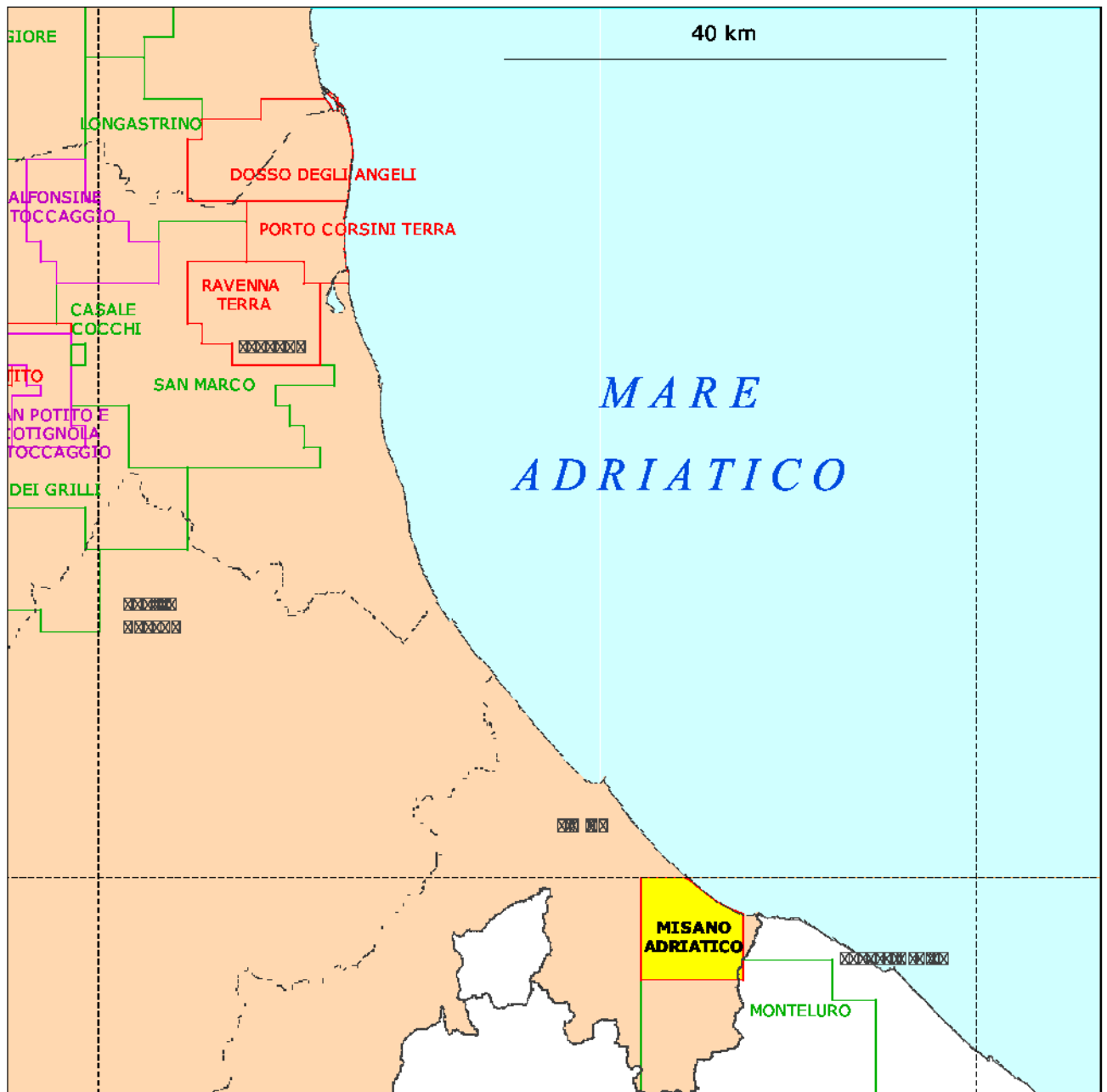
Total abandonment and reclamation liabilities of \$57,000 (\$57,000 net to the Company) have been estimated based on a reasonable expectation for these types of wells. The abandonment and site reclamation costs are presented in Table 3b.

Operating Costs

Operating costs for this area have been estimated to be \$706 per well per month plus \$1.95/Mscf, based on information provided by the Company.

Economics

An economic summary is presented on Table 4 and the results of our economic analysis are presented on Tables 4a and 4b.



ZENITH ENERGY LTD.

**MISANO ADRIATICO
CONCESSION**

**EMILIA ROMAGNA REGION, ITALY
LAND MAP**

OCT. 2021

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FIGURE No. 1

Table 1

Schedule of Lands, Interests and Royalty Burdens
October 1, 2021

Zenith Energy Ltd.

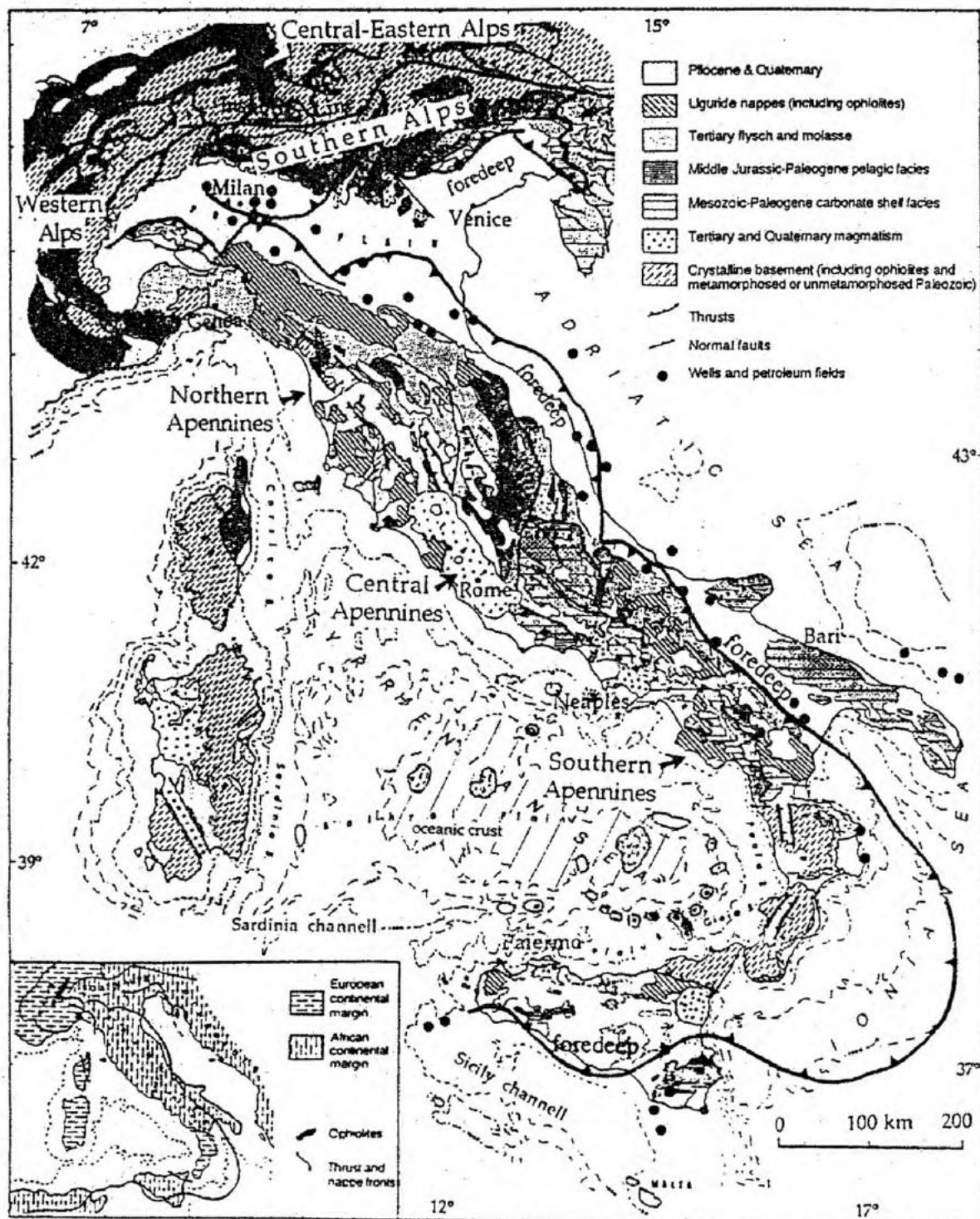
Misano Adriatico Concession, Onshore Italy

Description	Rights Owned	Gross Acres	Appraised Interest		Royalty Burdens	
			Working %	Royalty %	Basic %	Overriding %
Misano Adriatico Concession	[A]	642	100.0000	-	7.0000	[1]

General Notes : [1] Only if over 25 million cubic meters annually (882.9 MMCF), 0% at forecast rates.

Rights Owned : [A] All P&NG.

This Concession is scheduled to expire in 2020 but an extension is expected to be granted based on the remaining reserves.



Source: Doglioni and Flores, *An Introduction to the Italian Geology*, 1997

ZENITH ENERGY LTD.

ITALY REGIONAL GEOLOGY

OCT. 2021 JOB No. 6770 FIGURE No. 2a

System	Series	Stage	Age (Ma)	
Quaternary	Pleistocene	Gelasian	younger	
Neogene	Pliocene	Piacenzian	2.588–3.600	← GAS ZONE
		Zanclean	3.600–5.332	← GAS ZONE
	Miocene	Messinian	5.332–7.246	← GAS ZONE
		Tortonian	7.246–11.608	
		Serravallian	11.608–13.65	
		Langhian	13.65–15.97	
		Burdigalian	15.97–20.43	
		Aquitania	20.43–23.03	
Paleogene	Oligocene	Chattian	older	

ZONES OF INTEREST



← GAS ZONE

← GAS ZONE

← GAS ZONE

ZENITH ENERGY LTD.

ITALY

STRATIGRAPHIC CHART

OCT. 2021

JOB No. 6770 FIGURE No. 2b

Table 2

Summary of Gross Reserves
October 1, 2021

Zenith Energy Ltd.

Misano Adriatico Concession, Onshore Italy

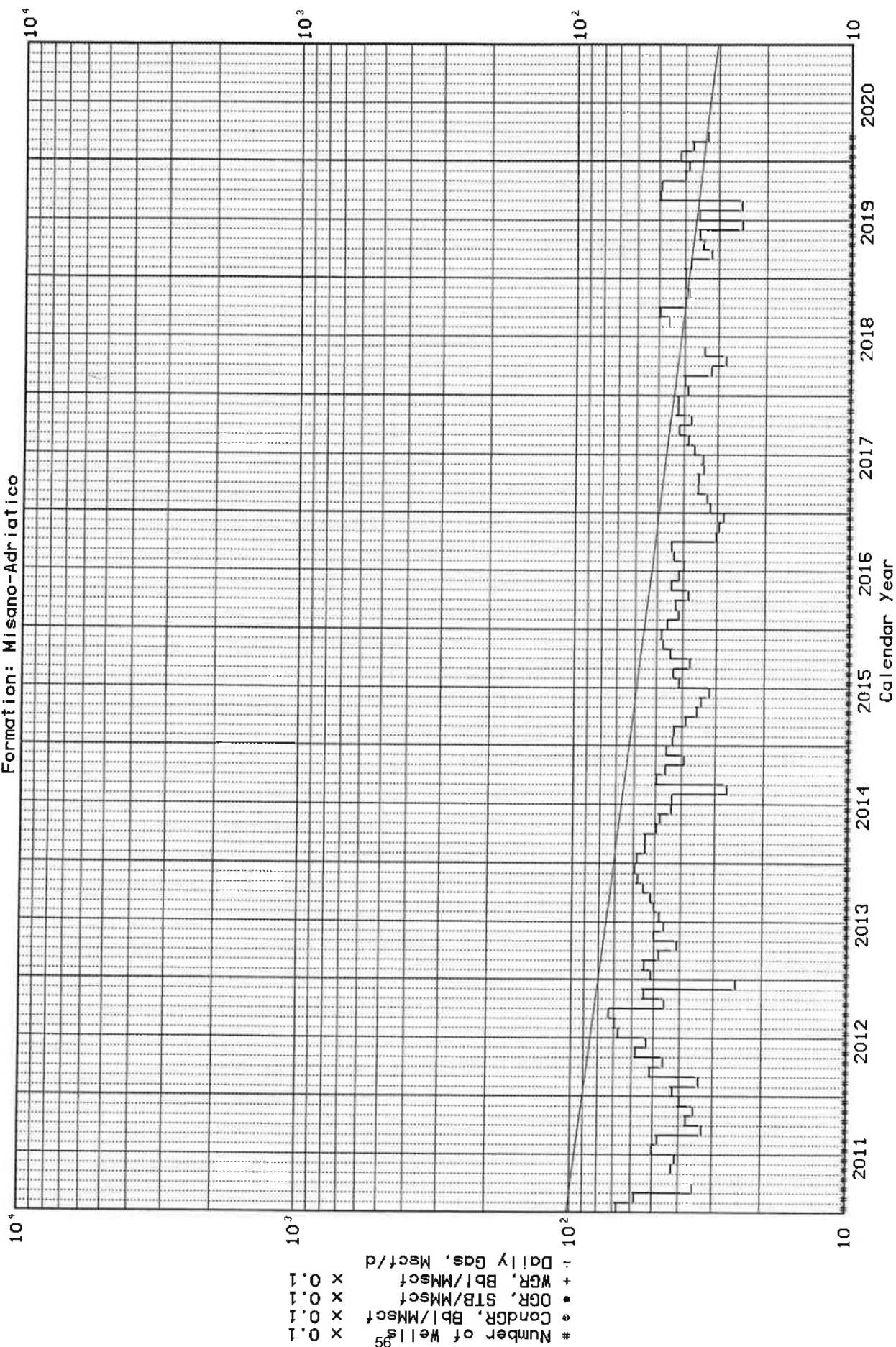
Description		Current or Initial Rate Mscf/d	Ultimate RGIP (MMscf)	Cumulative Production (MMscf)	Remaining RGIP (raw) (MMscf)	Remaining RGIP (sales) (MMscf)	Remaining NGLs (MMbbls)	Reference
Proved Developed Producing								
Misano Adriatico Concession	Misano 2	38	532	439	93	88	0	Fig 3a
	Total Proved	38	532	439	93	88	0	
Probable Incremental								
Misano Adriatico Concession	Misano 2 (Incr.)	0	43	0	43	41	0	Fig 4a
	Total Probable	0	43	0	43	41	0	
	Total Proved Plus Probable	38	575	439	136	129	0	

PRODUCTION HISTORY

Proved Developed Producing

Misano-Adriatico

Field: Misano-Adriatico
Formation: Misano-Adriatico

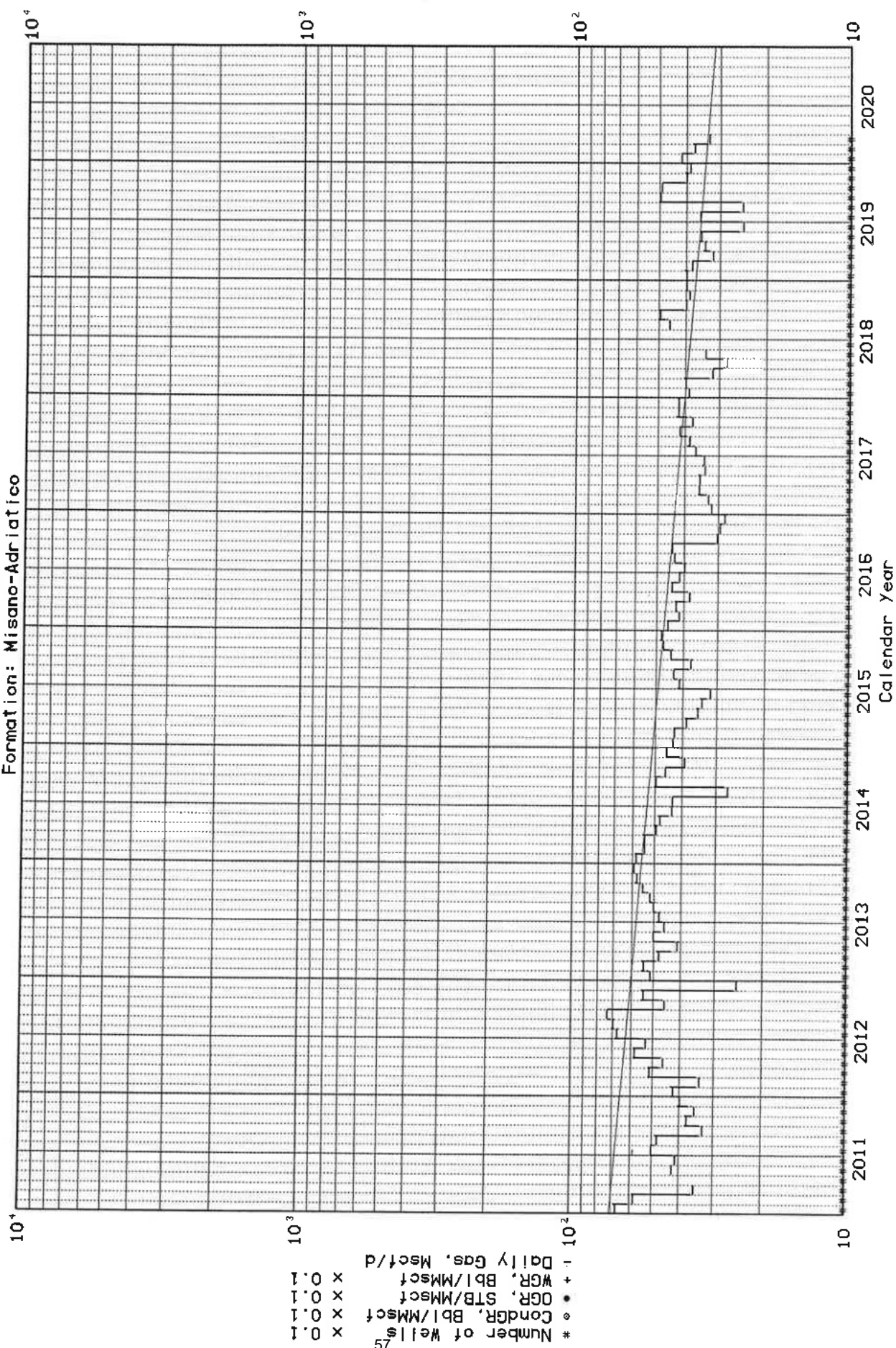


PRODUCTION HISTORY

Proved Plus Probable

Misano-Adriatico

Field: Misano-Adriatico
Formation: Misano-Adriatico



57
* Number of Wells
* CondGR, Bbl/MMscf x 0.1
* OGR, STB/MMscf x 0.1
+ WGR, Bbl/MMscf x 0.1
- Daily Gas, Mscf/d

Figure 4a

Table 3a

**Summary of Anticipated Capital Expenditures
Development**

October 1, 2021

Zenith Energy Ltd.

Misano Adriatico Concession, Onshore Italy

Description	Date	Operation	Capital Interest %	Gross Capital M\$	Net Capital M\$
--------------------	-------------	------------------	-----------------------------------	----------------------------------	--------------------------------

No anticipated capital expenditures.

Table 3b
Summary of Anticipated Capital Expenditures
Abandonment and Restoration

October 1, 2021

Zenith Energy Ltd.

Misano Adriatico Concession, Onshore Italy

Description	Well Parameters	Capital Interest %	Gross Capital M\$	Net Capital M\$
Misano Adriatico Concession	Abandon 1 gas well, reclaim the land	100.0000	57	57
	Total Abandonment and Restoration		57	57

Note: M\$ means thousands of dollars.

The above capital values are expressed in terms of current dollar values without escalation.

Table 4
Summary of Company Reserves and Economics
Before Income Tax
October 1, 2021

Forecast Prices & Costs

Zenith Energy Ltd.

Misano Adriatico Concession, Italy

Description	Net To Appraised Interest											
	Reserves						Cumulative Cash Flow (BIT) - MUS\$					
	Light and Medium Oil		Conventional Natural gas		NGL		Discounted at:					
	MSTB		MMscf		Mbbbls							
	Gross	Net	Gross	Net	Gross	Net	Undisc.	5%/year	10%/year	15%/year	20%/year	
Proved Developed Producing												
Misano-2	0	0	88	88	0	0	255	234	210	187	168	
Total Proved Developed Producing	0	0	88	88	0	0	255	234	210	187	168	
Probable												
Probable Developed Producing												
Misano-2	Incr.	0	0	41	41	0	0	154	106	71	49	35
Total Probable Developed Producing		0	0	41	41	0	0	154	106	71	49	35
Total Proved Plus Probable												
		0	0	129	129	0	0	409	340	281	236	203

MUS\$ means thousands of United States dollars.

Gross reserves are the total of the Company's working interest share before deduction of royalties owned by others.

Net reserves are the total of the Company's working and/or royalty interest share after deducting the amounts attributable to royalties owned by others.

Table 4a

EVALUATION OF: Milano Adriatico Concession, Onshore Italy - Proved Developed Producing

WELL/LOCATION - Milano-2
 EVALUATED BY -
 COMPANY EVALUATED - Zenith Energy Ltd.
 APPRAISAL FOR -
 PROJECT - FORECAST PRICES & COSTS

ERGO v7.43 P2 ENERGY SOLUTIONS PAGE 1
 GLOBAL : 07-OCT-2021 5770
 EFF:01-OCT-2021 DISC:01-OCT-2021 PROD:01-OCT-2021
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TRACT FACTOR - 100.0000 %
 ULT POOL RESERVES - 93 MMCF
 PRODUCTION TO DATE - N/A
 DECLINE INDICATOR - EXPONENTIAL

TOTAL ABANDONMENT - 78249 - \$ - (2038)
 NOTE: ECONOMIC LIMIT OCCURS IN 2038

INTEREST

ROYALTIES/TAXES

AVG WI 100.0000%

STATE

Year	# of Wells	Price \$/MCF	Sales Gas MMCF		Pool		Company Share	
			MCF/D	Vol	Gross	Net	Gross	Net
2021	1	7.36	33.2	3	3	3		
2022	1	7.50	30.9	11	11	11		
2023	1	7.50	27.5	10	10	10		
2024	1	7.63	24.4	9	9	9		
2025	1	7.77	21.7	8	8	8		
2026	1	7.85	19.3	7	7	7		
2027	1	7.93	17.2	6	6	6		
2028	1	8.01	15.3	6	6	6		
2029	1	8.09	13.6	5	5	5		
2030	1	8.17	12.1	4	4	4		
2031	1	8.28	10.8	4	4	4		
2032	1	8.38	9.6	3	3	3		
2033	1	8.49	8.5	3	3	3		
2034	1	8.60	7.6	3	3	3		
2035	1	8.70	6.7	2	2	2		
SUB				34	84	84		
RRM				4	4	4		
TOT				38	88	88		

- P/T = ----- COMPANY SHARE FUTURE NET REVENUE

Year	Capital & Aband Costs	Future Revenue (FR)				Royalties				Operating Costs			FR After Roy & Oper	Net back	Proc & Other Income	Cap'l Costs	Aband Costs	Future Net Rev	
		Oil	Sales Gas	Products	Total	State	Other	Mineral		Fixed	Variable							Undisc	10.0%
		-\$	-\$	-\$	-\$	-\$	-\$	-\$	-\$	-\$	-\$	\$/MCF	-\$	\$/MCF	-\$	-\$	-\$	-\$	-\$
2021	0	0	22270	0	22270	0	0	0	0	2112	6207	2.75	13951	4.61	0	0	0	13951	13784
2022	0	0	83401	0	83401	0	0	0	0	8523	23287	2.06	51591	4.64	0	0	0	51591	48022
2023	0	0	74180	0	74180	0	0	0	0	8694	21127	3.01	44360	4.48	0	0	0	44360	37538
2024	0	0	67158	0	67158	0	0	0	0	8867	19167	3.19	39123	4.45	0	0	0	39123	30097
2025	0	0	60781	0	60781	0	0	0	0	9045	17338	3.38	34347	4.39	0	0	0	34347	24021
2026	0	0	54621	0	54621	0	0	0	0	9226	15776	3.59	29619	4.26	0	0	0	29619	18831
2027	0	0	49080	0	49080	0	0	0	0	9410	14312	3.83	25357	4.10	0	0	0	25357	14656
2028	0	0	44096	0	44096	0	0	0	0	9598	12985	4.10	21513	3.91	0	0	0	21513	13304
2029	0	0	39615	0	39615	0	0	0	0	9790	11780	4.40	18044	3.68	0	0	0	18044	8619
2030	0	0	35585	0	35585	0	0	0	0	9986	10687	4.75	14912	3.42	0	0	0	14912	6475
2031	0	0	32066	0	32066	0	0	0	0	10196	9696	5.13	12184	3.14	0	0	0	12184	4810
2032	0	0	28390	0	28390	0	0	0	0	10390	8797	5.57	9704	2.82	0	0	0	9704	3483
2033	0	0	26025	0	26025	0	0	0	0	10597	7981	6.05	7447	2.43	0	0	0	7447	2430
2034	0	0	23440	0	23440	0	0	0	0	10809	7240	6.62	5390	1.98	0	0	0	5390	1599
2035	0	0	21108	0	21108	0	0	0	0	11025	6569	7.25	3514	1.45	0	0	0	3514	948
SUB	0	0	662316	0	662316	0	0	0	0	138259	192999		331058		0	0	0	331058	226615
RRM	78249	0	36248	0	36248	0	0	0	0	22717	11366		2166		0	0	78249	-76983	-16914
TOT	78249	0	698564	0	698564	0	0	0	0	160976	204364		333224		0	0	78249	254975	209701

NET PRESENT VALUE (-\$)

Discount Rate	0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
FR After Roy & Oper	333224	270587	242762	227138	213405	195709	172152
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	0	0	0	0	0	0	0
Abandonment Costs	78249	36283	23280	17436	13128	8657	4428
Future Net Revenue	254975	234304	219482	209701	200277	187052	167724

COMPANY SHARE

	1st Year	Average	Royalties	Oper Costs	FR After Roy & Oper	Capital Costs	Future Net Rev
% Interest	100.0	100.0					
% of Future Revenue			0	52.3	47.7	0	36.5

PROFITABILITY

COMPANY SHARE BASIS	Before Tax
Rate of Return (%)	n/a
Profit Index (undisc.)	n/a
(disc. @ 10.0%)	n/a
(disc. @ 5.0%)	n/a
First Payout (years)	n/a
Total Payout (years)	n/a
Cost of Finding (\$/BOE)	n/a
NPV @ 10.0% (\$/MCF)	2.38
NPV @ 5.0% (\$/MCF)	2.66

Table 4b

EVALUATION OF: Misano Adriatico Concession, Onshore Italy - Proved Plus Probable Developed P

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 GLOBAL : 07-OCT-2021 6770
 EFF:01-OCT-2021 DISC:01-OCT-2021 PROD:01-OCT-2021
 RUN DATE: 7-OCT-2021 TIME: 12:35
 FILE: Gm1RA1.DAX

 WELL/LOCATION - Misano-2
 EVALUATED BY -
 COMPANY EVALUATED - Zenith Energy Ltd.
 APPRAISAL FOR -
 PROJECT - FORECAST PRICES & COSTS

 TRACT FACTOR - 100.0000 %
 ULT POOL RESERVES - 136 MMCF
 PRODUCTION TO DATE - N/A
 DECLINE INDICATOR - EXPONENTIAL

 TOTAL ABANDONMENT - 90 -M\$- (2045)
 NOTE: ECONOMIC LIMIT OCCURS IN 2045

INTEREST

AVG WI 100.0000%

ROYALTIES/TAXES

STATE

		Sales Gas				
		MMCF				
		Pool		Company Share		
Year	# of Wells	Price \$/MCF	MCF/D	Vol	Gross	Net
2021	1	7.36	33.4	3	3	3
2022	1	7.50	31.8	11	11	11
2023	1	7.50	29.4	11	11	11
2024	1	7.63	27.1	10	10	10
2025	1	7.77	25.1	9	9	9
2026	1	7.95	23.2	8	8	8
2027	1	7.93	21.4	8	8	8
2028	1	8.01	19.8	7	7	7
2029	1	8.09	18.3	7	7	7
2030	1	8.17	16.9	6	6	6
2031	1	8.28	15.6	6	6	6
2032	1	8.38	14.4	5	5	5
2033	1	8.49	13.3	5	5	5
2034	1	8.60	12.3	4	4	4
2035	1	8.70	11.4	4	4	4
SUB				104	104	104
REM				25	25	25
TOT				129	129	129

P/T = COMPANY SHARE FUTURE NET REVENUE

Year	Capital & Aband Costs -M\$-	Future Revenue (PR)				Royalties			Operating Costs			FR After Roy & Oper -M\$-	Net back -M\$-	Proc & Other Income Costs -M\$-	Cap'l Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
		Oil -M\$-	Sale Gas -M\$-	Products -M\$-	Total -M\$-	State -M\$-	Other -M\$-	Mineral -M\$-	Fixed -M\$-	Variable -M\$-	\$/MCF						Undisc -M\$-	10.0% -M\$-
2021	0	0	22	0	22	0	0	0	0	2	6	14	4.62	0	0	0	14	14
2022	0	0	86	0	86	0	0	0	0	9	24	53	4.66	0	0	0	53	50
2023	0	0	79	0	79	0	0	0	0	9	23	48	4.54	0	0	0	48	41
2024	0	0	75	0	75	0	0	0	0	9	21	44	4.55	0	0	0	44	34
2025	0	0	70	0	70	0	0	0	0	9	20	41	4.54	0	0	0	41	29
2026	0	0	65	0	65	0	0	0	0	9	19	37	4.47	0	0	0	37	24
2027	0	0	61	0	61	0	0	0	0	9	18	34	4.39	0	0	0	34	20
2028	0	0	57	0	57	0	0	0	0	10	17	31	4.30	0	0	0	31	16
2029	0	0	53	0	53	0	0	0	0	10	16	28	4.19	0	0	0	28	13
2030	0	0	50	0	50	0	0	0	0	10	15	25	4.07	0	0	0	25	11
2031	0	0	46	0	46	0	0	0	0	10	14	22	3.96	0	0	0	22	9
2032	0	0	44	0	44	0	0	0	0	10	13	20	3.83	0	0	0	20	7
2033	0	0	41	0	41	0	0	0	0	11	12	18	3.68	0	0	0	18	6
2034	0	0	38	0	38	0	0	0	0	11	12	16	3.50	0	0	0	16	5
2035	0	0	36	0	36	0	0	0	0	11	11	14	3.30	0	0	0	14	4
SUB	0	0	823	0	823	0	0	0	0	138	241	444		0	0	0	444	280
REM	90	0	240	0	240	0	0	0	0	110	75	55		0	0	90	-35	0
TOT	90	0	1063	0	1063	0	0	0	0	248	316	499		0	0	90	409	281

NET PRESENT VALUE (-M\$-)

Discount Rate	.0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
FR After Roy & Oper.	499	369	318	291	268	240	205
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	0	0	0	0	0	0	0
Abandonment Costs	90	30	16	10	7	4	1
Future Net Revenue	409	340	302	281	261	236	203

PROFITABILITY

COMPANY SHARE BASIS		Before Tax
Rate of Return (%)		n/a
Profit Index (undisc.)		n/a
(disc. @ 10.0%)		n/a
(disc. @ 5.0%)		n/a
First Payout (years)		n/a
Total Payout (years)		n/a
Cost of Finding (\$/BOE)		n/a
NPV @ 10.0% (\$/MCF)		2.17
NPV @ 5.0% (\$/MCF)		2.63

COMPANY SHARE						
1st Year	Average	Royalties	Oper Costs	FR After Roy & Oper	Capital Costs	Future Net Rev
% Interest	100.0	100.0				
% of Future Revenue			0	53.1	46.9	0

TORRENTE CIGNO GAS CONCESSION
ONSHORE, ITALY
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TORRENTE CIGNO GAS CONCESSION
ONSHORE ITALY
DISCUSSION

Property Description

The Company owns 45% working interest in the Torrente Cigno gas concession covering approximately 2,545 acres and located onshore Italy along the Adriatic coast. The Company owns a 100% working interest in an electrical generation facility which utilizes gas from wells in this concession. The partner's raw gas, including condensate, is purchased at the facility intake. This concession expires in 2029, but can be extended, in order to align with the Company's additional development plans.

A map showing the Torrente Cigno concession location is presented in Figure 1a, and a description of the ownership is presented in Table 1.

Geology

The regional geology of Italy as shown in Figure 2a places the company's properties in the on-land shallow depths of the Apenninic Foredeep basin.

The Apennines are the consequences of the subduction of three types of lithosphere with different characteristics but pertaining to the same Adriatic plate.¹

1. In the north central Apennines, thin continental lithosphere at the surface in the foreland, and probably thinner at depth, occurs;
2. In the southern Apennines, thick continental lithosphere occurs in the foreland, whereas probably old oceanic lithosphere constitutes the slab at depth to the west (northern prologation of the Ionian Mesozoic basin);
3. In the southern sector, offshore Calabria, old oceanic Ionian lithosphere occurs both in the foreland and at depth.

¹ 'An Introduction To The Italian Geology' Carlo Doglioni and Giovanni Flores, 1997

The Torrente Cigno exploration play has gas resources from a subcropping sequence of carbonates beneath a significant unconformity below the base Pliocene, as represented in the Stratigraphic Column of Figure 2b and as seen in the structure of Figure 2c.

Reserves

Total gross proved developed producing conventional non-associated marketable gas reserves of 788 MMscf and 11.0 Mbbl of condensate have been estimated for the one producing gas well Masseria Vincelli 1. These estimates are based on volumetric analyses as presented in Table 2a.

Gross probable additional developed producing conventional non-associated marketable gas reserves of 1,439 MMscf and 26 Mbbl of condensate have been estimated for the same MV1 well based on a volumetric analysis assuming an improved drainage area and slightly higher condensate/gas ratio, as presented in Table 2a.

Probable undeveloped gas reserves of 13,413 MMscf and 216 Mbbl of condensate have been estimated for an offset horizontal well location (Masseria Vincelli 2) based on volumetric analysis based on reservoir parameters as shown in Table 2b. (This table reflects the reserves of the total accumulation.)

Production

The Masseria Vincelli 1 well is located in the southern part of Torrente Cigno concession. The MV1 well has been producing from the top of the Apulian platform carbonates belonging to or oligo-Miocene transgressive deposits. The well came into production during the month of October 2002.

The well Masseria Vincelli 1 was historically producing at a fairly constant rate of 458 Mscf/d into the Company's electrical generation facility until it was shut-in in 2020 for political reasons. The prospect is expected to be reactivated in July 2021 at the same production rate which is predicted to be constant for the next six years to maintain operation of a single 1.4 MWh unit before commencing a decline.

The offset probable horizontal well location Masseria Vincelli 2 is expected to be drilled in 2021 and produce at a rate of 1,000 Mscf/d which will maintain the operation of the other three 1.4

MWh units at the electrical generation facility for a number of years. Later in life, as the well declines, non utilized units will be taken off line.

Product Prices

A net effective gas price for 2021 of \$3.43/Mscf has been established for this property based on the revenues generated from the electricity generation facility and correlated to the World Bank European gas price forecast. This price accounts for a deduction of \$1.58/Mscf off the total sales volume to account for the purchase of the partner's 55% share of the gas.

Condensate is sold for \$76.05/Bbl.

Capital Expenditures

Total capital expenditures of \$3,333,000 (\$1,500,000 net to the Company) have been estimated for the drilling, testing, completion, and tie-in of one new well, as presented in Table 3a.

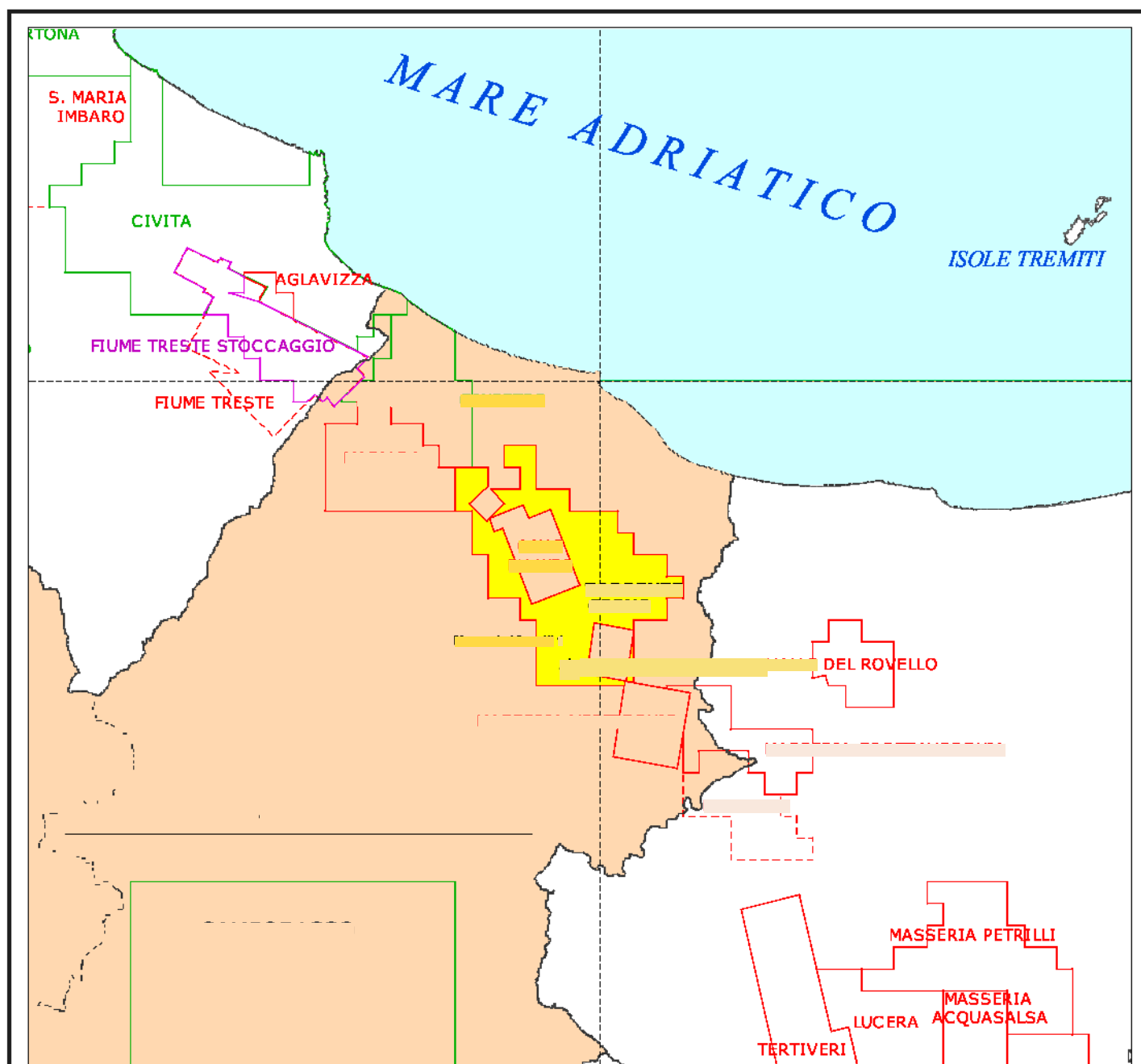
Total abandonment liabilities of \$114,000 (\$51,300 net to the Company) have been estimated based on a reasonable expectation for these types of wells. The abandonment and site reclamation costs are presented in Table 3b.

Operating Costs

Operating costs for the wells and facility combined have been estimated to be \$9,887 per month, plus \$0.79/Mscf net to the Company, based on revenue and expense statements provided. These costs account for the reimbursement of well and gas handling costs from the 55% WI partner and costs relating to condensate production and sales.

Economics

An economic summary is presented on Table 4 and the results of our economic analysis are presented on Tables 4a through 4d.



ZENITH ENERGY LTD.

**TORRENTE CIGNO
CONCESSION**

MOLISE REGION, ITALY

LAND AND WELL MAP

OCT. 2021

JOB No. 6770

FIGURE No. 1

Table 1

Schedule of Lands, Interests and Royalty Burdens
October 1, 2021

Zenith Energy Ltd.

Torrente Cigno Concession, Onshore Italy

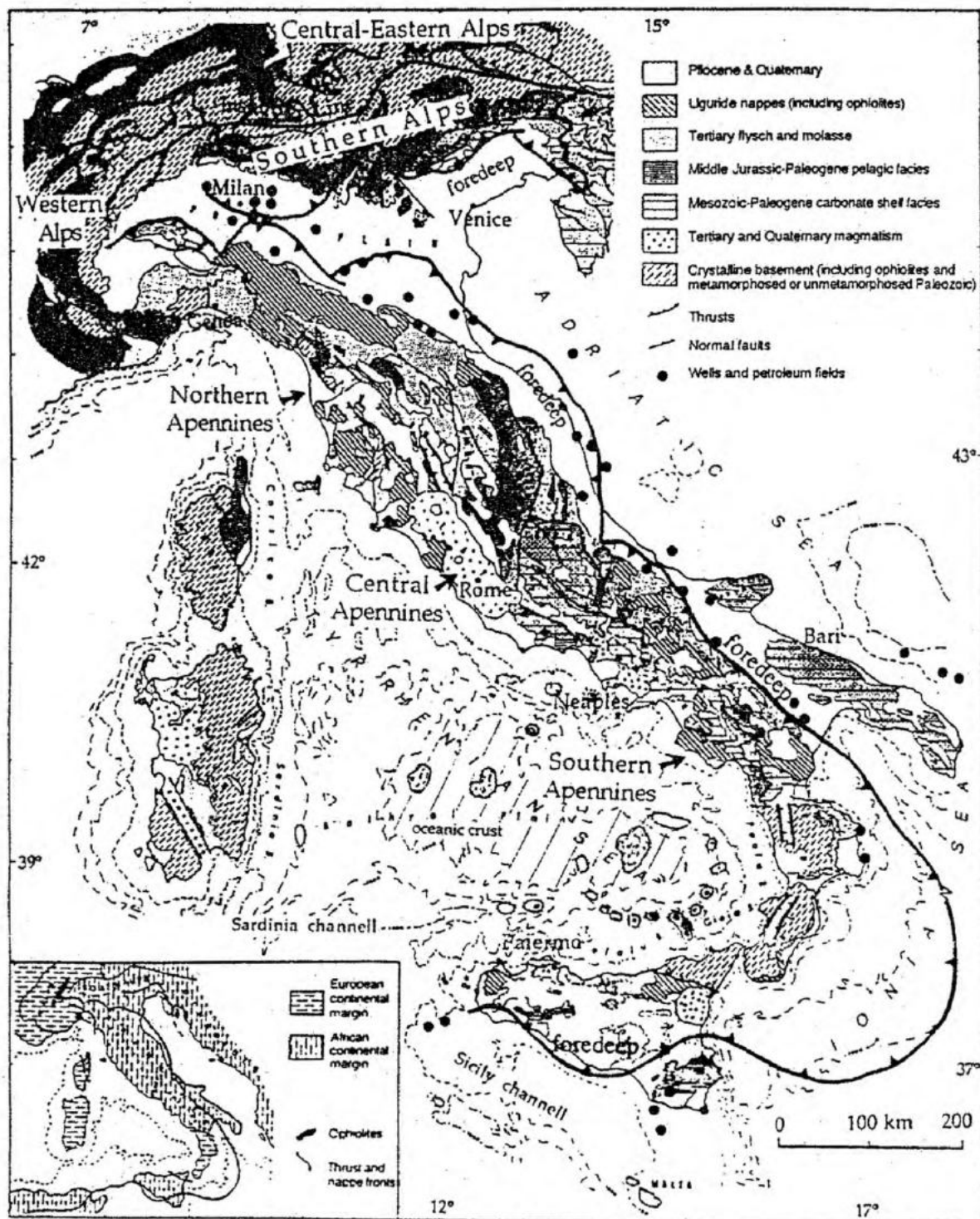
Description	Rights Owned	Gross Acres	Appraised Interest		Royalty Burdens	
			Working %	Royalty %	Basic %	Overriding %
Masseria Vincelli 1	[A]	2,545	45.0000	-	7.0000 [1]	-
Masseria Vincelli 2 (Location)						

General Notes : [1] If over 25 million cubic meters annually (882.9 MMCF)

[2] This gas is used for electrical generation from the Company's 100% owned facility and revenue from electricity sales is realized by the Company at 100%.

Rights Owned : [A] All P&NG.

This concession is scheduled to expire in 2019. An extension is expected to be granted to align with the Company's additional development plans.



Source: Doglioni and Flores, *An Introduction to the Italian Geology*, 1997

ZENITH ENERGY LTD.

ITALY REGIONAL GEOLOGY

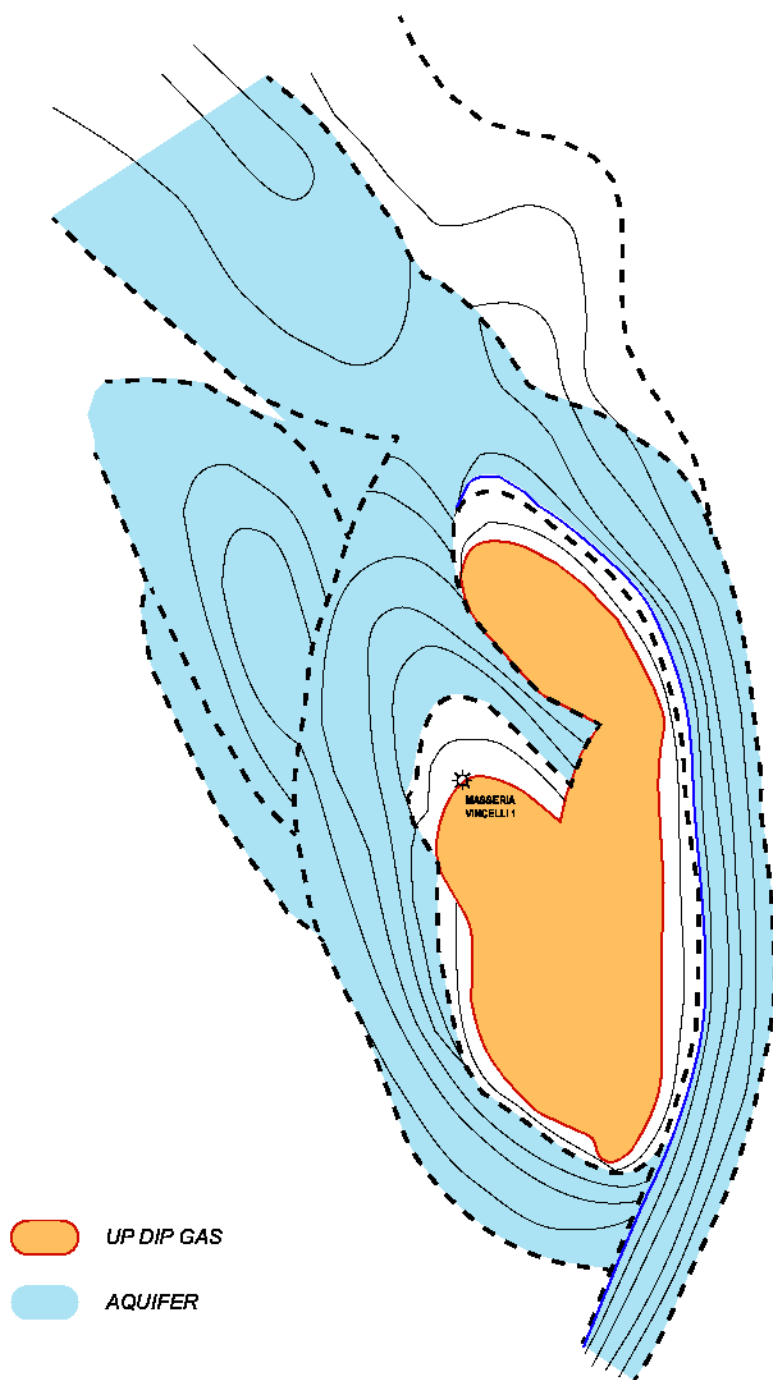
OCT. 2021 JOB No. 6770 FIGURE No. 2a

System	Series	Stage	Age (Ma)	
Quaternary	Pleistocene	Gelasian	younger	
Neogene	Pliocene	Piacenzian	2.588–3.600	← GAS ZONE
		Zanclean	3.600–5.332	← GAS ZONE
	Miocene	Messinian	5.332–7.246	← GAS ZONE
		Tortonian	7.246–11.608	↑ ZONE OF INTEREST
		Serravallian	11.608–13.65	
		Langhian	13.65–15.97	
		Burdigalian	15.97–20.43	
		Aquitania	20.43–23.03	
Paleogene	Oligocene	Chattian	older	

ZENITH ENERGY LTD.

ITALY
STRATIGRAPHIC CHART

OCT. 2021 JOB No. 6770 FIGURE No. 2b



ZENITH ENERGY LTD.

**TORRENTE CIGNO
CONCESSION**

MOLISE REGION, ITALY

MASSERIA VINCELLI STRUCTURE

OCT. 2021

JOB No. 6770

FIGURE No. 2c

Table 2

Summary of Gross Reserves
October 1, 2021

Zenith Energy Ltd.

Torrente Cigno Concession, Onshore Italy

		Current or		Ultimate	Cumulative	Remaining	Remaining	Remaining	
Description		Initial		RGIP	Production	RGIP (raw)	RGIP (sales)	NGLs	Reference
		Rate							
		Mscf/d		(MMscf)	(MMscf)	(MMscf)	(MMscf)	(MMbbls)	
<u>Proved Developed Producing</u>									
Torrente Cigno Concession	Masseria Vincelli 1	458		3,100	2,253	847	788	11	Fig 3a & Table 2a
Total Proved				3,100	2,253	847	788	11	
<u>Probable Developed Producing</u>									
Torrente Cigno Concession	Masseria Vincelli 1	(ncr.)		1,547	0	1,547	1,438	26	Fig 4a & Table 2a
<u>Probable Undeveloped</u>									
Torrente Cigno Concession	HZ Loc. Masseria Vincelli 2	1,000	Mar 22	14,423	0	14,423	13,413	216	Table 2b
Total Probable				16,970	0	16,870	14,862	242	
Total Proved Plus Probable				19,070	2,253	16,817	15,840	263	

Table 2a

SUMMARY OF GROSS RESERVES AND RESERVOIR PARAMETERS
October 1, 2021

Torrente Cigno, Italy

PRODUCT TYPE	MV-1 Apullian Carbonates (1)	
	Developed Producing	Proved Plus Probable
Non-Associated Gas		
RESERVOIR PARAMETERS		
Reservoir Pressure, psia	2,946	2,946
Reservoir Temperature, deg F	134	134
Average Porosity, %	15.0	15.0
Average Water Saturation, %	30.0	30.0
Compressibility Factor, Z	0.798	0.798
Petroleum Initially-in-Place, Mscf/ac.ft	1009.0	1008.5
Reservoir Loss, %	40.0	40.0
Surface Loss, %	7.0	7.0
RESERVES		
Net Pay, feet	32.0	32.0
Area, acres	160	240
Petroleum Initially-in-Place, MMscf	5,166	7,745
Reserves Initially-in-Place, MMscf	3,100	4,647
Cumulative Production, MMscf	2,253	2,253
Remaining Raw Reserves, MMscf	847	2,394
Remaining Marketable Reserves, MMscf	788	2,226
NGL's Recovery, bbl/MMscf	15	15
Remaining NGL's, bbls	12,705	35,910

Note: (1) Interval 2240.0 - 2255.0 m KB.

Table 2b

SUMMARY OF GROSS RESERVES AND RESERVOIR PARAMETERS
October 1, 2021

Torrente Cigno, Italy

		Total Proved plus Probable MV1 & MV2 Apullian Carbonate (1)
PRODUCT TYPE		
Non-Associated Gas		
RESERVOIR PARAMETERS		
Reservoir Pressure, psia		2,946
Reservoir Temperature, deg F		134
Average Porosity, %		15.0
Average Water Saturation, %		30.0
Compressibility Factor, Z		0.798
Petroleum Initially-in-Place, Mscf/ac.ft		1009.0
Reservoir Loss, %		40.0
Surface Loss, %		7.0
RESERVES		
Net Pay, feet		70.0
Area, acres		450
Petroleum Initially-in-Place, MMscf		31,784
Reserves Initially-in-Place, MMscf		19,070
Cumulative Production, MMscf		2,253
Remaining Raw Reserves, MMscf		16,817
Remaining Marketable Reserves, MMscf		15,640
NGL's Recovery, bbl/MMscf		15
Remaining NGL's, bbls		252,255

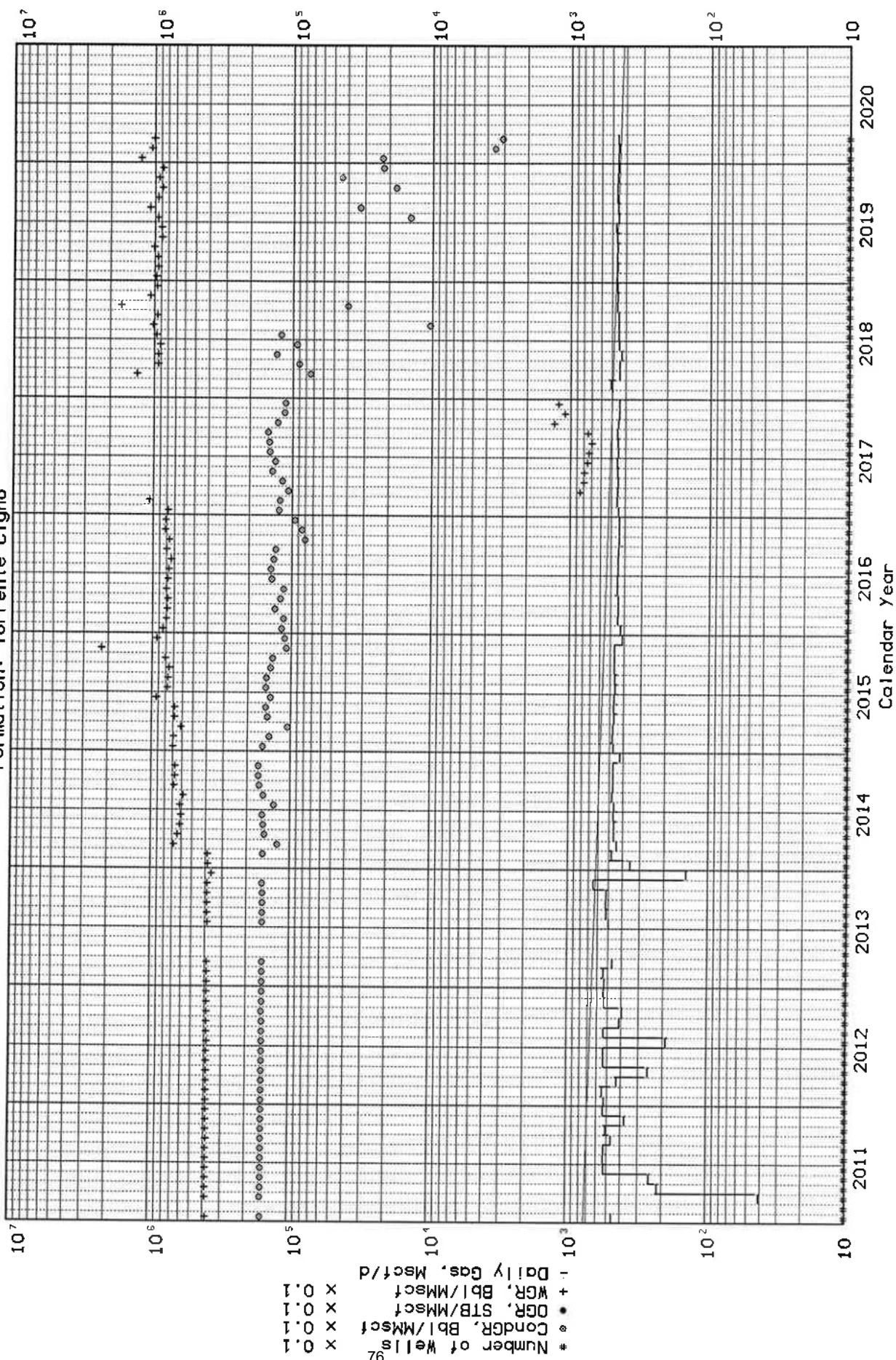
Note: (1) Interval 2240.0 - 2255.0 m KB.

PRODUCTION HISTORY

Proved Developed Producing

Torrente Cigno

Field: Torrente Cigno
Formation: Torrente Cigno

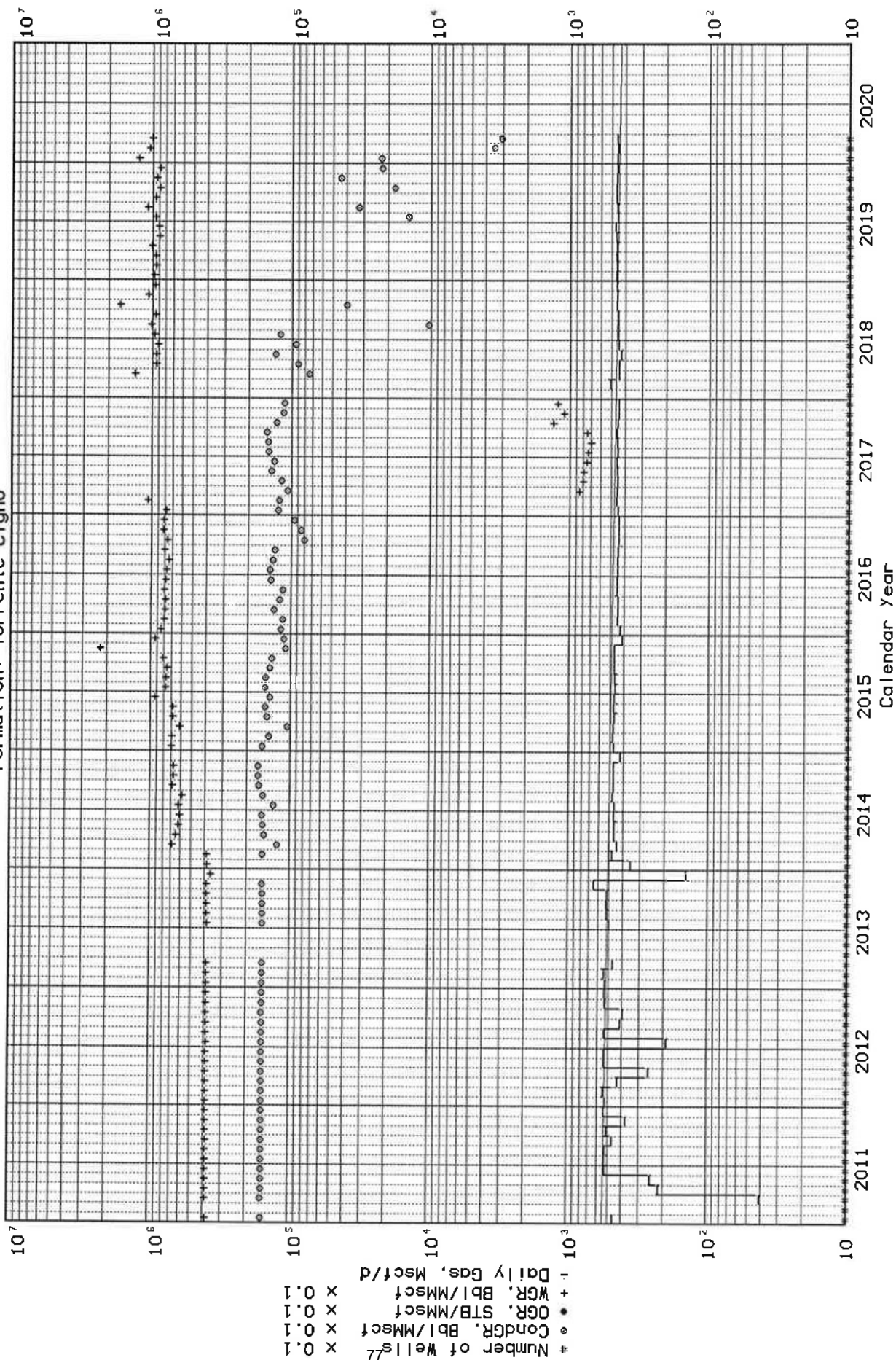


PRODUCTION HISTORY

Proved Plus Probable

Torrente Cigno

Field: Torrente Cigno
Formation: Torrente Cigno



Calendar Year

Table 3a

Summary of Anticipated Capital Expenditures
Development
October 1, 2021
Zenith Energy Ltd.

Torrente Cigno Concession, Onshore Italy

Description	Date	Operation	Capital Interest %	Gross Capital M\$	Net Capital M\$
Probable					
Loc. Masseria Vincelli 2	March -22	Horizontal drilling, testing, completion, and tie-in	45.0000	3,333	1,500
Total Probable				3,333	1,500

Note: M\$ means thousands of dollars.

The above capital values are expressed in terms of current dollar values without escalation.

Unless details are known, drilling costs have been split 70% Intangible and 30% Tangible for tax purposes

Table 3b
Summary of Anticipated Capital Expenditures
Abandonment and Restoration

October 1, 2021

Zenith Energy Ltd.

Torrente Cigno Concession, Onshore Italy

Description	Well Parameters	Capital Interest %	Gross Capital M\$	Net Capital M\$
Torrente Cigno Field	Abandon 1 gas well MV1, reclaim the land	45.0000	57	26
Torrente Cigno Field	Abandon 1 gas well MV2, reclaim the land	45.0000	57	26
Total Abandonment and Restoration			114	51

Note: **M\$ means thousands of dollars.**

The above capital values are expressed in terms of current dollar values without escalation.

Table 4
Summary of Company Reserves and Economics
Before Income Tax
October 1, 2021

Forecast Prices & Costs

Zenith Energy Ltd.
 Torrente Cigno Concession, Italy

Description		Net To Appraised Interest											
		Reserves						Cumulative Cash Flow (BIT) - MUS\$					
		Light and Medium Oil MSTB		Conventional Natural gas MMscf		NGL Mbbbls		Discounted at:					
		Gross	Net	Gross	Net	Gross	Net	Undisc.	5%/year	10%/year	15%/year	20%/year	
Proved Developed Producing													
Masseria Vincelli-1	Apulian Carbonate	0	0	788	788	11	11	2,181	1,935	1,734	1,568	1,429	
Total Proved Developed Producing		0	0	788	788	11	11	2,181	1,935	1,734	1,568	1,429	
Probable													
Probable Developed Producing													
Masseria Vincelli-1	Apulian Carbonate	Incr	0	0	1,439	1,439	25	25	3,891	2,475	1,644	1,134	809
Total Probable Developed Producing			0	0	1,439	1,439	25	25	3,891	2,475	1,644	1,134	809
Probable Undeveloped													
Masseria Vincelli-2	Apulian Carbonate		0	0	13,413	13,413	216	216	58,408	20,281	10,310	6,470	4,543
Total Probable Undeveloped			0	0	13,413	13,413	216	216	58,408	20,281	10,310	6,470	4,543
Total Probable			0	0	14,852	14,852	241	241	62,299	22,756	11,953	7,603	5,352
Total Proved Plus Probable			0	0	15,640	15,640	252	252	64,480	24,691	13,687	9,171	6,781

MUS\$ means thousands of United States dollars.

Gross reserves are the total of the Company's working interest share before deduction of royalties owned by others.

Net reserves are the total of the Company's working and/or royalty interest share after deducting the amounts attributable to royalties owned by others.

Columns may not add precisely due to accumulative rounding of values throughout the report.

Table 4a

EVALUATION OF: Tarrente Cigno Concession - Proved Developed Producing

 BRGO v7.43 P2 ENERGY SOLUTIONS PAGE 1
 GLOBAL : 07-OCT-2021 6770
 EFF:01-OCT-2021 DISC:01-OCT-2021 PROD:01-OCT-2021
 RUN DATE: 7-OCT-2021 TIME: 12:35
 FILE: GtcPP1.DAX

 WELL/LOCATION : Masseria Vincelli 1
 EVALUATED BY :
 COMPANY EVALUATED : Zenith Energy Ltd.
 APPRAISAL FOR :
 PROJECT : FORECAST PRICES & COSTS

 TRACT FACTOR : 100.0000 %
 UPL POOL RESERVES : 847 MMCF
 PRODUCTION TO DATE : N/A
 DECLINE INDICATOR : EXPONENTIAL

TOTAL ABANDONMENT : 28 -M\$- (2026)

INTEREST

ROYALTIES/TAXES

AVG W1 100.0000%

STATE

Year	# of Wells	Price \$/MCF	Sales Gas MMCF		Company Share		Condensate BBL	
			Pool		Gross	Net	Price \$/BBL	Co Share Gross
			MCF/D	Vol				
2021	1	3.43	425.9	39	39	39	76.05	548
2022	1	3.47	425.9	155	155	155	72.90	2173
2023	1	3.51	425.9	155	155	155	69.75	2173
2024	1	3.54	425.9	155	155	155	66.60	2173
2025	1	3.58	425.9	155	155	155	67.99	2173
2026	1	3.52	347.0	127	127	127	69.42	1770
SUB				788	788	788		11011
REM				0	0	0		0
TOT				788	788	788		11011

- P/T = COMPANY SHARE FUTURE NET REVENUE

Year	Capital & Aband Costs -M\$-	Future Revenue (PR)				Royalties				Operating Costs			PR After Roy & Oper -M\$-	Net back \$/MCF	Proc & Other Income Costs -M\$-	Cap'l Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
		Oil -M\$-	Sale Gas -M\$-	Products -M\$-	Total -M\$-	State -M\$-	Other -M\$-	Mineral -M\$-	-M\$-	Fixed -M\$-	Variable -M\$-	\$/MCF						Undisc -M\$-	10.0% -M\$-
2021	0	0	134	42	176	0	0	0	.0	30	33	1.61	113	2.88	0	0	0	113	112
2022	0	0	539	156	698	0	0	0	.0	121	135	1.64	442	2.84	0	0	0	442	412
2023	0	0	546	152	697	0	0	0	.0	123	137	1.68	436	2.81	0	0	0	436	369
2024	0	0	550	145	695	0	0	0	.0	126	140	1.71	429	2.76	0	0	0	429	330
2025	0	0	557	148	704	0	0	0	.0	128	143	1.75	433	2.78	0	0	0	433	303
2026	28	0	458	123	581	0	0	0	.0	107	119	1.78	356	2.81	0	0	28	328	208
SUB	28	0	2785	767	3552	0	0	0	.0	635	707		2209		0	0	28	2181	1734
REM	0	0	0	0	0	0	0	0	.0	0	0		0		0	0	0	0	0
TOT	28	0	2785	767	3552	0	0	0	.0	635	707		2209		0	0	28	2181	1734

***** NET PRESENT VALUE (-M\$-)*****

Discount Rate	.0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
PR After Roy & Oper.	2209	1957	1829	1752	1680	1582	1441
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	0	0	0	0	0	0	0
Abandonment Costs	28	22	20	18	17	15	12
Future Net Revenue	2181	1935	1802	1734	1663	1560	1429

***** COMPANY SHARE *****

	1st Year	Average	Royalties	Oper Costs	PR After Roy & Oper	Capital Costs	Future Net Rev
% Interest	100.0	100.0					
% of Future Revenue			.0	37.8	62.2	.0	61.4

***** PROFITABILITY *****

COMPANY SHARE BASIS		Before Tax
Rate of Return (%)	.....	n/a
Profit Index (undisc.)	.....	n/a
(disc. @ 10.0%)	.....	n/a
(disc. @ 5.0%)	.....	n/a
First Payout (years)	.....	n/a
Total Payout (years)	.....	n/a
Cost of Finding (\$/ROB)	.....	n/a
NPV @ 10.0% (\$/MCF)	.....	2.20
NPV @ 5.0% (\$/MCF)	.....	2.46

Table 4b

EVALUATION OF: Torrente Cigno Concession, Italy
 ===== Total Proved Plus Probable cons.

ERGO v7.43 F2 ENERGY SOLUTIONS TOTAL
 GLOBAL : 07-OCT-2021 6770
 EFF:01-OCT-2021 DISC:01-OCT-2021
 RUN DATE: 7-OCT-2021 TIME: 13:29
 FILE:

EVALUATED BY :
 COMPANY EVALUATED : Zenith Energy Ltd.
 APPRAISAL FOR :
 PROJECT : FORECAST PRICES & COSTS

TOTAL CAPITAL COSTS : 1530 -M\$-
 TOTAL ABANDONMENT : 104 -M\$-

Sales Gas MMCF						Condensate BBL		
Year	# of Wells	Price \$/MCF	Pool		Company Share		Price \$/BBL	Co. Share Gross
			MCF/D	Vol	Gross	Net		
2021	1	3.43	425.9	39	39	39	76.05	632
2022	2	3.47	1205.6	440	440	440	72.90	7098
2023	2	3.51	1355.9	495	495	495	69.75	7983
2024	2	3.54	1358.9	495	495	495	66.60	7983
2025	2	3.58	1355.9	495	495	495	67.99	7983
2026	2	3.62	1355.9	495	495	495	69.42	7983
2027	2	3.66	1355.9	495	495	495	70.87	7983
2028	2	3.70	1355.9	495	495	495	72.36	7983
2029	2	3.74	1355.9	495	495	495	73.86	7983
2030	2	3.78	1355.9	495	495	495	75.40	7983
2031	2	3.82	1320.5	485	485	485	76.98	7821
2032	2	3.86	1278.2	467	467	467	78.58	7525
2033	2	3.91	1234.3	451	451	451	80.22	7266
2034	2	3.95	1195.9	437	437	437	81.89	7040
2035	2	3.99	1162.4	424	424	424	83.59	6843
SUB				6701	6701	6701		108086
REB				8939	8939	8939		144169
TOT				15640	15640	15640		252255

P/T = ----- COMPANY SHARE FUTURE NET REVENUE -----

Year	Future Revenue (FR)				Royalties			Operating Costs			FR After Roy&Oper	Net back \$/BOE	Proc& Other Income -M\$-	Cap'l Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
	Capital & Aband Costs -M\$-	Oil -M\$-	Sales Gas -M\$-	Products Total -M\$-	Crown -M\$-	Other -M\$-	Mineral -M\$-	Fixed -M\$-	Variable -M\$-	\$/BOE						Undisc -M\$-	10.0% -M\$-
2021	0	0	134	48	182	0	0	0	0	30	33	13.89	119	26.21	0	119	119
2022	1530	0	1527	517	2044	0	0	0	222	381	11.81	1441	28.19	0	1530	0	-89
2023	0	0	1737	557	2294	0	0	0	247	437	11.91	1610	28.01	0	0	1610	1362
2024	0	0	1752	532	2284	0	0	0	252	446	12.14	1586	27.59	0	0	1586	1220
2025	0	0	1772	543	2315	0	0	0	257	455	12.39	1603	27.88	0	0	1603	1121
2026	0	0	1792	554	2346	0	0	0	262	464	12.63	1620	28.18	0	0	1620	1030
2027	0	0	1811	567	2378	0	0	0	267	473	12.89	1637	28.47	0	0	1637	939
2028	0	0	1831	578	2409	0	0	0	273	483	13.14	1653	28.76	0	0	1653	849
2029	0	0	1851	590	2441	0	0	0	278	493	13.41	1670	29.06	0	0	1670	759
2030	0	0	1871	602	2473	0	0	0	284	502	13.68	1687	29.35	0	0	1687	669
2031	0	0	1892	614	2505	0	0	0	289	512	14.05	1663	29.53	0	0	1663	579
2032	0	0	1913	626	2537	0	0	0	295	523	14.54	1604	29.61	0	0	1604	489
2033	0	0	1762	583	2344	0	0	0	301	485	15.03	1558	29.78	0	0	1558	399
2034	0	0	1724	577	2301	0	0	0	307	480	15.52	1514	29.87	0	0	1514	309
2035	0	0	1693	572	2265	0	0	0	313	476	16.01	1476	29.96	0	0	1476	219
SUB	1530	0	24910	7531	22441	0	0	0	3877	6694		21961	0	1530	0	20431	10423
REB	104	0	49786	17000	66786	0	0	0	8508	14124		44154	0	0	104	44050	3264
TOT	1634	0	74696	24532	59227	0	0	0	12385	20728		66115	0	1530	104	64180	13687

===== NPV PRESENT VALUE (-M\$-) =====

Discount Rate	0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
FR After Roy & Oper	66115	26187	18261	15119	12887	10551	8116
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	1530	1475	1444	1424	1405	1377	1334
Abandonment Costs	104	22	11	7	5	3	1
Future Net Revenue	64480	24691	16807	13687	11477	9171	6781

COMPANY SHARE						
1st Year	Average	Royalties	Oper Costs	FR After Roy&Oper	Capital Costs	Future Net Rev
% Interest	100.0	100.0				
% of Future Revenue			0	33.4	66.6	1.5

===== PROFITABILITY =====

COMPANY SHARE BASIS		Before Tax
Rate of Return (%)		999.9
Profit Index (undisc.)		39.5
(disc. @ 10.0%)		9.6
(disc. @ 5.0%)		16.5
First Payout (years)		1.2
Total Payout (years)		1.3
Cost of Finding (\$/BOE)		1.90
NPV @ 10.0% (\$/BOE)		7.54
NPV @ 5.0% (\$/BOE)		13.59

Table 4c

EVALUATION OF: Torrente Cigno Concession - Proved Plus Probable Developed Producing

```
BRGO v7.43      P2 ENERGY SOLUTIONS      PAGE    1
GLOBAL : 07-OCT-2021 6770
EFF:01-OCT-2021 DISC:01-OCT-2021 PROD:01-OCT-2021
RUN DATE: 7-OCT-2021 TIME: 12:32
FILE: GtcRA1.DAX
```

WELL/LOCATION - Masseria Vincelli-1
EVALUATED BY -
COMPANY EVALUATED - Zenith Energy Ltd.
APPRAISAL FOR
PROJECT - FORECAST PRICES & COSTS

TRACT FACTOR	-	100.0000 %
ULT POOL RESERVES	-	2394 MMCF
PRODUCTION TO DATE	-	N/A
DECLINE INDICATOR	-	4X POTENTIAL
TOTAL ABANDONMENT	-	37 -MS- (2039)

INTEREST

ROYALTIES/TAXES

AVG WT 100.0000%

STATE

		Sales Gas MMCF			Condensate BBL			
Year	# of Wells	Price \$/MCF	Pool		Company Share		Price \$/BBL	Co. Share
			MCF/D	Vol	Gross	Net		
2021	1	3.43	125.9	39	39	39	76.05	632
2022	1	3.47	125.9	155	155	155	72.90	2508
2023	1	3.51	125.9	155	155	155	69.75	2508
2024	1	3.54	125.9	155	155	155	66.60	2508
2025	1	3.58	125.9	155	155	155	67.99	2508
2026	1	3.62	125.9	155	155	155	69.42	2508
2027	1	3.66	125.9	155	155	155	10.87	2508
2028	1	3.70	125.9	155	155	155	72.35	2508
2029	1	3.74	125.9	155	155	155	73.86	2508
2030	1	3.78	125.9	155	155	155	75.40	2508
2031	1	3.82	398.5	145	145	145	76.98	2346
2032	1	3.86	348.2	127	127	127	78.58	2050
2033	1	3.91	304.3	111	111	111	80.22	1791
2034	1	3.95	265.9	97	97	97	81.89	1565
2035	1	3.99	232.4	85	85	85	83.59	1368
2036	1	4.03	197.9	73	73	73	85.28	1182
2037	1	4.07	163.4	61	61	61	86.98	1014
2038	1	4.11	128.9	49	49	49	88.68	846
2039	1	4.15	94.4	37	37	37	90.38	678
2040	1	4.19	60.0	25	25	25	92.08	510
2041	1	4.23	25.5	13	13	13	93.78	342
2042	1	4.27	0.0	1	1	1	95.48	15
2043	1	4.31	0.0	0	0	0	97.18	0
2044	1	4.35	0.0	0	0	0	98.88	0
2045	1	4.39	0.0	0	0	0	100.58	0
2046	1	4.43	0.0	0	0	0	102.28	0
2047	1	4.47	0.0	0	0	0	103.98	0
2048	1	4.51	0.0	0	0	0	105.68	0
2049	1	4.55	0.0	0	0	0	107.38	0
2050	1	4.59	0.0	0	0	0	109.08	0
2051	1	4.63	0.0	0	0	0	110.78	0
2052	1	4.67	0.0	0	0	0	112.48	0
2053	1	4.71	0.0	0	0	0	114.18	0
2054	1	4.75	0.0	0	0	0	115.88	0
2055	1	4.79	0.0	0	0	0	117.58	0
2056	1	4.83	0.0	0	0	0	119.28	0
2057	1	4.87	0.0	0	0	0	120.98	0
2058	1	4.91	0.0	0	0	0	122.68	0
2059	1	4.95	0.0	0	0	0	124.38	0
2060	1	4.99	0.0	0	0	0	126.08	0
2061	1	5.03	0.0	0	0	0	127.78	0
2062	1	5.07	0.0	0	0	0	129.48	0
2063	1	5.11	0.0	0	0	0	131.18	0
2064	1	5.15	0.0	0	0	0	132.88	0
2065	1	5.19	0.0	0	0	0	134.58	0
2066	1	5.23	0.0	0	0	0	136.28	0
2067	1	5.27	0.0	0	0	0	137.98	0
2068	1	5.31	0.0	0	0	0	139.68	0
2069	1	5.35	0.0	0	0	0	141.38	0
2070	1	5.39	0.0	0	0	0	143.08	0
2071	1	5.43	0.0	0	0	0	144.78	0
2072	1	5.47	0.0	0	0	0	146.48	0
2073	1	5.51	0.0	0	0	0	148.18	0
2074	1	5.55	0.0	0	0	0	149.88	0
2075	1	5.59	0.0	0	0	0	151.58	0
2076	1	5.63	0.0	0	0	0	153.28	0
2077	1	5.67	0.0	0	0	0	154.98	0
2078	1	5.71	0.0	0	0	0	156.68	0
2079	1	5.75	0.0	0	0	0	158.38	0
2080	1	5.79	0.0	0	0	0	160.08	0
2081	1	5.83	0.0	0	0	0	161.78	0
2082	1	5.87	0.0	0	0	0	163.48	0
2083	1	5.91	0.0	0	0	0	165.18	0
2084	1	5.95	0.0	0	0	0	166.88	0
2085	1	5.99	0.0	0	0	0	168.58	0
2086	1	6.03	0.0	0	0	0	170.28	0
2087	1	6.07	0.0	0	0	0	171.98	0
2088	1	6.11	0.0	0	0	0	173.68	0
2089	1	6.15	0.0	0	0	0	175.38	0
2090	1	6.19	0.0	0	0	0	177.08	0
2091	1	6.23	0.0	0	0	0	178.78	0
2092	1	6.27	0.0	0	0	0	180.48	0
2093	1	6.31	0.0	0	0	0	182.18	0
2094	1	6.35	0.0	0	0	0	183.88	0
2095	1	6.39	0.0	0	0	0	185.58	0
2096	1	6.43	0.0	0	0	0	187.28	0
2097	1	6.47	0.0	0	0	0	188.98	0
2098	1	6.51	0.0	0	0	0	190.68	0
2099	1	6.55	0.0	0	0	0	192.38	0
2100	1	6.59	0.0	0	0	0	194.08	0
2101	1	6.63	0.0	0	0	0	195.78	0
2102	1	6.67	0.0	0	0	0	197.48	0
2103	1	6.71	0.0	0	0	0	199.18	0
2104	1	6.75	0.0	0	0	0	200.88	0
2105	1	6.79	0.0	0	0	0	202.58	0
2106	1	6.83	0.0	0	0	0	204.28	0
2107	1	6.87	0.0	0	0	0	205.98	0
2108	1	6.91	0.0	0	0	0	207.68	0
2109	1	6.95	0.0	0	0	0	209.38	0
2110	1	6.99	0.0	0	0	0	211.08	0
2111	1	7.03	0.0	0	0	0	212.78	0
2112	1	7.07	0.0	0	0	0	214.48	0
2113	1	7.11	0.0	0	0	0	216.18	0
2114	1	7.15	0.0	0	0	0	217.88	0
2115	1	7.19	0.0	0	0	0	219.58	0
2116	1	7.23	0.0	0	0	0	221.28	0
2117	1	7.27	0.0	0	0	0	222.98	0
2118	1	7.31	0.0	0	0	0	224.68	0
2119	1	7.35	0.0	0	0	0	226.38	0
2120	1	7.39	0.0	0	0	0	228.08	0
2121	1	7.43	0.0	0	0	0	229.78	0
2122	1	7.47	0.0	0	0	0	231.48	0
2123	1	7.51	0.0	0	0	0	233.18	0
2124	1	7.55	0.0	0	0	0	234.88	0
2125	1	7.59	0.0	0	0	0	236.58	0
2126	1	7.63	0.0	0	0	0	238.28	0
2127	1	7.67	0.0	0	0	0	239.98	0
2128	1	7.71	0.0	0	0	0	241.68	0
2129	1	7.75	0.0	0	0	0	243.38	0
2130	1	7.79	0.0	0	0	0	245.08	0
2131	1	7.83	0.0	0	0	0	246.78	0
2132	1	7.87	0.0	0	0	0	248.48	0
2133	1	7.91	0.0	0	0	0	250.18	0
2134	1	7.95	0.0	0	0	0	251.88	0
2135	1	7.99	0.0	0	0	0	253.58	0
2136	1	8.03	0.0	0	0	0	255.28	0
2137	1	8.07	0.0	0	0	0	256.98	0
2138	1	8.11	0.0	0	0	0	258.68	0
2139	1	8.15	0.0	0	0	0	260.38	0
2140	1	8.19	0.0	0	0	0	262.08	0
2141	1	8.23	0.0	0	0	0	263.78	0
2142	1	8.27	0.0	0	0	0	265.48	0
2143	1	8.31	0.0	0	0	0	267.18	0
2144	1	8.35	0.0	0	0	0	268.88	0
2145	1	8.39	0.0	0	0	0	270.58	0
2146	1	8.43	0.0	0	0	0	272.28	0
2147	1	8.47	0.0	0	0	0	273.98	0
2148	1	8.51	0.0	0	0	0	275.68	0
2149	1	8.55	0.0	0	0	0	277.38	0
2150	1	8.59	0.0	0	0	0	279.08	0
2151	1	8.63	0.0	0	0	0	280.78	0
2152	1	8.67	0.0	0	0	0	282.48	0
2153	1	8.71	0.0	0	0	0	284.18	0
2154	1	8.75	0.0	0	0	0	285.88	0
2155	1	8.79	0.0	0	0	0	287.58	0
2156	1	8.83	0.0	0	0	0	289.28	0
2157	1	8.87	0.0	0	0	0	290.98	0
2158	1	8.91	0.0	0	0	0	292.68	0
2159	1	8.95	0.0	0	0	0	294.38	0
2160	1	8.99	0.0	0	0	0	296.08	0
2161	1	9.03	0.0	0	0	0	297.78	0
2162	1	9.07	0.0	0	0	0	299.48	0
2163	1	9.11	0.0	0	0	0	301.18	0
2164	1	9.15	0.0	0	0	0	302.88	0
2165	1	9.19	0.0	0	0	0	304.58	0
2166	1	9.23	0.0	0	0	0	306.28	0
2167	1	9.27	0.0	0	0	0	307.98	0
2168	1	9.31	0.0	0	0	0	309.68	0
2169	1	9.35	0.0	0	0	0	311.38	0
2170	1	9.39	0.0	0	0	0	313.08	0
2171	1	9.43	0.0	0	0	0	314.78	0
2172	1	9.47	0.0	0	0	0	316.48	0
2173	1	9.51	0.0	0	0	0	318.18	0
2174	1	9.55	0.0	0	0	0	319.88	0
2175	1	9.59	0.0	0	0	0	321.58	0
2176	1	9.63	0.0	0	0	0	323.28	0
2177	1	9.67	0.0	0	0	0	324.98	0
2178	1	9.71	0.0	0	0	0	326.68	0
2179	1	9.75	0.0	0	0	0	328.38	0
2180	1	9.79	0.0	0	0	0	330.08	0
2181	1	9.83	0.0	0	0	0	331.78	0
2182	1	9.87	0.0	0	0	0	333.48	0
2183	1	9.91	0.0	0	0	0	335.18	0
2184	1	9.95	0.0	0	0	0	336.88	0
2185	1	9.99	0.0	0	0	0	338.58	0
2186	1	10.03	0.0	0	0	0	340.28	0
2187	1	10.07	0.0	0	0	0	341.98	0
2188	1	10.11	0.0	0	0	0	343.68	0
2189	1	10.15	0.0	0	0	0	345.38	0
2190	1	10.19	0.0	0	0	0		

= P/T = ===== COMPANY SHARE FUTURE NET REVENUE

Year	Capital & Aband Costs -M\$-	Future Revenue (PR)				Royalties				Operating Costs			PR After Roy&Oper -M\$-	Net back \$/MCF	Proc& Other Income -M\$-	Cap'1 Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
		Oil -M\$-	SalesGas -M\$-	Products -M\$-	Total -M\$-	Statu -M\$-	O-her -M\$-	Mineral -M\$-	-	Fixed M\$	Variable M\$	\$/MCF						Undisc -M\$-	10.0% -M\$-
2021	0	0	134	48	182	0	0	0	0	30	33	1.61	119	3.04	0	0	0	119	118
2022	0	0	538	183	722	0	0	0	0	121	135	1.64	467	3.00	0	0	0	467	434
2023	0	0	546	175	721	0	0	0	0	123	137	1.68	460	2.96	0	0	0	460	389
2024	0	0	550	167	717	0	0	0	0	126	140	1.71	451	2.90	0	0	0	451	347
2025	0	0	557	170	727	0	0	0	0	128	143	1.75	456	2.93	0	0	0	456	319
2026	0	0	563	174	737	0	0	0	0	131	146	1.78	460	2.96	0	0	0	460	292
2027	0	0	569	177	746	0	0	0	0	134	149	1.82	314	2.32	0	0	0	314	181
2028	0	0	575	181	757	0	0	0	0	136	152	1.85	469	3.01	0	0	0	469	246
2029	0	0	581	185	767	0	0	0	0	139	155	1.89	473	3.04	0	0	0	473	226
2030	0	0	588	189	777	0	0	0	0	142	158	1.93	477	3.07	0	0	0	477	207
2031	0	0	556	181	736	0	0	0	0	145	151	2.03	441	3.03	0	0	0	441	174
2032	0	0	491	161	652	0	0	0	0	148	134	2.22	370	2.91	0	0	0	370	133
2033	0	0	434	144	578	0	0	0	0	150	120	2.43	308	2.77	0	0	0	308	100
2034	0	0	383	128	512	0	0	0	0	153	107	2.68	251	2.59	0	0	0	251	75
2035	0	0	338	114	453	0	0	0	0	157	95	2.97	201	2.37	0	0	0	201	54
SUB	0	0	7405	2328	9633	0	0	0	0	1963	1954		5717		0	0	0	5717	3296
REM	37	0	918	313	1231	0	0	0	0	579	260		392		0	0	37	356	81
TOT	37	0	8323	2542	10865	0	0	0	0	2542	2214		6109		0	0	37	6072	3377

===== NET PRESENT VALUE (MS-)=====

Discount Rate	.0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
FR After Roy & Oper.	6109	4425	3746	3384	3079	2705	2239
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	0	0	0	0	0	0	0
Abandonment Costs	37	15	9	7	4	3	1
Future Net Revenue	6072	4410	3736	3378	3074	2702	2238

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*****----- PROFITABILITY -----*****

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COMPANY SHARE BASIS	Before Tax
Rate of Return (%)	n/a
Profit Index (undisc.)	n/a
(disc. @ 10.0%)	n/a
(disc. @ 5.0%)	n/a
First Payout (years)	n/a
Total Payout (years)	n/a
Cost of Finding (\$/BOE)	n/a
NPV @ 10.0% (\$/MCF)	1.52
NPV @ 5.0% (\$/MCF)	1.96

COMPANY SHARE

	1st Year	Average	Royalties	Oper Costs	PR After Roy&Oper	Capital Costs	Future NetRev
% Interest	100.0	100.0					
% of Future Revenue			.0	43.8	56.2	.0	55.9

Table 4d

EVALUATION OF: Torrente Cigno Concession - Probable Undeveloped

 ERGO v7.43 P2 ENERGY SOLUTIONS PAGE 1
 GLOBAL : 07-OCT-2021 6770
 EFF:01-OCT-2021 DISC:01-OCT-2021 PROD:01-MAR-2022
 RUN DATE: 7-OCT-2021 TIME: 12:33
 FILE: GtCRE2.DAX

 WELL/LOCATION - H2 Loc. Masseria Vincelli-2 (Apulian Carbonate)
 EVALUATED BY -
 COMPANY EVALUATED - Zenith Energy Ltd.
 APPRAISAL FOR -
 PROJECT - FORECAST PRICES & COSTS

 TRACT FACTOR - 100.0000 %
 ULT POOL RESERVES - 14423 MMCF
 PRODUCTION TO DATE - N/A
 DECLINE INDICATOR - EXPONENTIAL
 TOTAL CAPITAL COSTS - 1530 -M\$-
 TOTAL ABANDONMENT - 68 -M\$- (2070)

INTEREST

AVG W: 100.0000%

ROYALTIES/TAXES

STATE

Year	# of Wells	Sales Gas MMCF				Condensate MBL			
		Pool		Company Share		Co.		Share	
		Price \$/MCF	MCF/D	Gross	Net	Price \$/BBL	Gross	Price \$/BBL	Net
2021	0	3.43	0	0	0	76.05	0		
2022	1	3.47	930.0	285	285	72.90	4590		
2023	1	3.51	930.0	339	339	69.75	5475		
2024	1	3.54	930.0	339	339	66.60	5475		
2025	1	3.58	930.0	339	339	67.99	5475		
2026	1	3.62	930.0	339	339	69.42	5475		
2027	1	3.66	930.0	339	339	70.87	5475		
2028	1	3.70	930.0	339	339	72.35	5475		
2029	1	3.74	930.0	339	339	73.86	5475		
2030	1	3.78	930.0	339	339	75.40	5475		
2031	1	3.82	930.0	339	339	76.98	5475		
2032	1	3.86	930.0	339	339	78.58	5475		
2033	1	3.91	930.0	339	339	80.22	5475		
2034	1	3.95	930.0	339	339	81.99	5475		
2035	1	3.99	930.0	339	339	83.59	5475		
SUB				4697	4697		75765		
REM				8716	8716		140580		
TOT				13413	13413		216345		

- P/T = ----- COMPANY SHARE FUTURE NET REVENUE -----

Year	Capital & Aband Costs -M\$-	Future Revenue (MR)				Royalties				Operating Costs				PR After Roy & Oper -M\$-	Net back \$/MCF	Proc & Other Income -M\$-	Cap'l Costs -M\$-	Aband Costs -M\$-	Future Net Rev	
		Oil -M\$-	Sale Gas -M\$-	Products -M\$-	Total -M\$-	State -M\$-	Other -M\$-	Mineral -M\$-	%	Fixed -M\$-	Variable -M\$-	\$/MCF							Undisc -M\$-	10.0% -M\$-
2021	0	0	0	0	0	0	0	0	0	0	0	1.00	0	0	0.00	0	0	0	0	0
2022	1530	0	987	335	1322	0	0	0	0	101	247	1.22	974	3.42	0	1530	0	0	-556	-517
2023	0	0	1191	382	1573	0	0	0	0	123	300	1.25	1150	3.39	0	0	0	0	1150	973
2024	0	0	1202	365	1566	0	0	0	0	126	306	1.27	1134	3.34	0	0	0	0	1134	873
2025	0	0	1215	372	1587	0	0	0	0	128	312	1.30	1147	3.38	0	0	0	0	1147	802
2026	0	0	1229	380	1609	0	0	0	0	131	318	1.32	1160	3.42	0	0	0	0	1160	737
2027	0	0	1242	60	1302	0	0	0	0	134	325	1.35	844	2.49	0	0	0	0	844	468
2028	0	0	1256	396	1652	0	0	0	0	136	331	1.38	1185	3.49	0	0	0	0	1185	622
2029	0	0	1270	404	1674	0	0	0	0	139	338	1.40	1197	3.53	0	0	0	0	1197	572
2030	0	0	1283	413	1696	0	0	0	0	142	345	1.43	1210	3.56	0	0	0	0	1210	525
2031	0	0	1297	421	1718	0	0	0	0	145	351	1.46	1222	3.60	0	0	0	0	1222	482
2032	0	0	1310	430	1741	0	0	0	0	148	359	1.49	1234	3.64	0	0	0	0	1234	443
2033	0	0	1327	439	1766	0	0	0	0	150	366	1.52	1250	3.68	0	0	0	0	1250	408
2034	0	0	1341	448	1789	0	0	0	0	153	373	1.55	1263	3.72	0	0	0	0	1263	375
2035	0	0	1354	458	1812	0	0	0	0	157	380	1.58	1275	3.76	0	0	0	0	1275	344
SUB	1530	0	17504	5303	22808	0	0	0	0	1914	4651		16244		0	1530	0	0	14714	7126
REM	68	0	48868	16687	65554	0	0	0	0	7930	13863		43762		0	0	68	68	43694	3183
TOT	1598	0	66373	21990	88363	0	0	0	0	9943	18514		60006		0	1530	68	68	58408	10310

----- NET PRESENT VALUE (M\$) -----

----- PROFITABILITY -----

Discount Rate	0%	5.0%	8.0%	10.0%	12.0%	15.0%	20.0%
PR After Roy & Oper	50006	21762	14516	11734	9807	7847	5877
Proc & Other Income	0	0	0	0	0	0	0
Capital Costs	1530	1475	1444	1424	1405	1377	1334
Abandonment Costs	68	6	2	1	0	0	0
Future Net Revenue	58408	20281	13070	10310	8402	6470	4543
----- COMPANY SHARE -----							
	1st Year	Average	Royalties	Oper Costs	PR After Roy & Oper	Capital Costs	Future Net Rev
% Interest	100.0	100.0					
% of Future Revenue			0	32.1	67.9	1.7	66.1

Before Tax	
Rate of Return (%)	205.9
Profit Index (undisc.)	36.6
(disc. @ 10.0%)	7.2
(disc. @ 5.0%)	13.7
First Payout (years)	1.7
Total Payout (years)	1.8
Cost of Finding (\$/BOE)	1.03
NPV @ 10.0% (\$/MCF)	1.77
NPV @ 5.0% (\$/MCF)	1.51

GLOSSARY OF TERMS (Abbreviations & Definitions)

General

BIT	- Before Income Tax
AIT	- After Income Tax
M\$	- Thousands of Dollars
Effective Date	- The date for which the Present Value of the future cash flows and reserve categories are established
\$US	- United States Dollars
WTI	- West Texas Intermediate – the common reference for crude oil used for oil price comparisons
ARTC	- Alberta Royalty Tax Credit
GRP	- Gas Reference Price

Interests and Royalties

BPO	- Before Payout
APO	- After Payout
APPO	- After Project Payout
Payout	- The point at which a participant's original capital investment is recovered from its net revenue
GORR	- Gross Overriding Royalty – percentage of revenue on gross revenue earned (can be an interest or a burden)
NC	- New Crown – crown royalty on petroleum and natural gas discovered after April 30, 1974
SS 1/150 (5%-15%) Oil	- Sliding Scale Royalty – a varying gross overriding royalty based on monthly production. Percentage is calculated as 1-150 th of monthly production with a minimum percentage of 5% and a maximum of 15%
FH	- Freehold Royalty
P&NG	- Petroleum and Natural Gas
Twp	- Township
Rge	- Range
Sec	- Section

Technical Data

psia	- Pounds per square inch absolute
MSTB	- Thousands of Stock Tank Barrels of oil (oil volume at 60 F and 14.65 psia)
MMscf	- Millions of standard cubic feet of gas (gas volume at 60 F and 14.65 psia)
Bbls	- Barrels
Mbbls	- Thousands of barrels
MMBTU	- Millions of British Thermal Units – heating value of natural gas
STB/d	- Stock Tank Barrels of oil per day – oil production rate
Mscf/d	- Thousands of standard cubic feet of gas per day – gas production rate
GOR (scf/STB)	- Gas-Oil Ratio (standard cubic feet of solution gas per stock tank barrel of oil)
mKB	- Metres Kelly Bushing – depth of well in relation to the Kelly Bushing which is located on the floor of the drilling rig. The Kelly Bushing is the usual reference for all depth measurements during drilling operations.
EOR	- Enhanced Oil Recovery
GJ	- Gigajoules
Marketable or Sales Natural Gas	- Natural gas that meets specifications for its sale, whether it occurs naturally or results from the processing of raw natural gas. Field and plant fuel and losses to the point of the sale must be excluded from the marketable quantity. The heating value of marketable natural gas may vary considerably, depending on its composition; therefore, quantities are usually expressed not only in volumes but also in terms of energy content. Reserves are always reported as marketable quantities.
NGLs	- Natural Gas Liquids – Those hydrocarbon components that can be recovered from natural gas as liquids, including but not limited to ethane, propane, butanes, pentanes plus, condensate, and small quantities of non-hydrocarbons.
Raw Gas	- Natural gas as it is produced from the reservoir prior to processing. It is gaseous at the conditions under which its Volume is measured or estimated and may include varying amounts of heavier hydrocarbons (that may liquefy at atmospheric conditions) and water vapour; may also contain sulphur and other non-hydrocarbon compounds. Raw natural gas is generally not suitable for end use.
EUR	- Estimated Ultimate Recovery



October 08, 2021

Chapman Petroleum Engineering Ltd.

700, 1122 – 4th Street SW

Calgary, AB

T2R 1M1

Dear Sir:

Re: Company Representation Letter

Regarding the evaluation of our Company's oil and gas reserves and independent appraisal of the economic value of these reserves for the year ended September 30, 2021, (the effective date), we herein confirm to the best of our knowledge and belief as of the effective date of the reserves evaluation, and as applicable, as of today, the following representations and information made available to you during the conduct of the evaluation:

1. We, Zenith Energy Ltd., (the Client) have made available to you, Chapman Petroleum Engineering Ltd. (the Evaluator) certain records, information, and data relating to the evaluated properties that we confirm is, with the exception of immaterial items, complete and accurate as of the effective date of the reserves evaluation, including the following:
 - Accounting, financial, tax and contractual data
 - Asset ownership and related encumbrance information;
 - Details concerning product marketing, transportation and processing arrangements;
 - All technical information including geological, engineering and production and test data;
 - Estimates of future abandonment and reclamation costs.
2. We confirm that all financial and accounting information provided to you is, to the best of our knowledge, both on an individual entity basis and in total, entirely consistent with that reported by our Company for public disclosure and audit purposes.

Zenith Energy Ltd., Suite 1500, 15th Floor, Bankers Court, 850-2nd St, SW Calgary, Alberta, T2P 0R8, Canada.

E-mail: info@zenithenergy.ca

Tel: +1 (587) 315 9031

Website: www.zenithenergy.ca

Twitter: <https://twitter.com/zenithenergyltd>

3. We confirm that our Company has satisfactory title to all of the assets, whether tangible, intangible, or otherwise, for which accurate and current ownership information has been provided.
4. With respect to all information provided to you regarding product marketing, transportation, and processing arrangements, we confirm that we have disclosed to you all anticipated changes, terminations, and additions to these arrangements that could reasonably be expected to have a material effect on the evaluation of our Company's reserves and future net revenues.
5. With the possible exception of items of an immaterial nature, we confirm the following as of the effective date of the evaluation:
 - For all operated properties that you have evaluated, no changes have occurred or are reasonably expected to occur to the operating conditions or methods that have been used by our Company over the past twelve (12) months, except as disclosed to you. In the case of non-operated properties, we have advised you of any such changes of which we have been made aware.
 - All regulatory, permits, and licenses required to allow continuity of future operations and production from the evaluated properties are in place and, except as disclosed to you, there are no directives, orders, penalties, or regulatory rulings in effect or expected to come into effect relating to the evaluated properties.
 - Except as disclosed to you, the producing trend and status of each evaluated well or entity in effect throughout the three-month period preceding the effective date of the evaluation are consistent with those that existed for the same well or entity immediately prior to this three-month period.
 - Except as disclosed to you, we have no plans or intentions related to the ownership, development or operation of the evaluated properties that could reasonably be expected to materially affect the production levels or recovery of reserves from the evaluated properties.

- If material changes of an adverse nature occur in the Company's operating performance subsequent to the effective date and prior to the report date, we will inform you of such material changes prior to requesting your approval for any public disclosure of reserves information.
6. We hereby confirm that our Company is in material compliance with all Environmental Laws and does not have any Environmental Claims pending.

Between the effective date of the report and the date of this letter, nothing has come to our attention that has materially affected or could affect our reserves and economic value of these reserves that has not been disclosed to you.

Yours very truly,



President and Chief Executive Officer



Vice-President & Chief Financial Officer

ANNEX 2

The Chapman Report 2021 – Congo

COMPETENT PERSONS REPORT

RESERVE AND ECONOMIC EVALUATION OIL PROPERTY

**TILAPIA LICENSE
REPUBLIC OF THE CONGO**

**Owned by
ZENITH ENERGY LTD.**

**September 30, 2021
(October 1, 2021)**

Chapman Petroleum Engineering Ltd.

1122 - 4th Street S.W., Suite 700, Calgary, Alberta T2R 1M1 • Phone: (403) 266-4141 • Fax: (403) 266-4259 • www.chapeng.ab.ca

October 7, 2021

Zenith Energy Ltd.

Suite 1500, 15th Floor Bankers Court
850 - 2nd Street SW
Calgary AB Canada T2P 0R8

Attention: Mr. Andrea Cattaneo

Dear Sir:

**Re: Competent Persons Report, Reserve and Economic Evaluation – Zenith Energy Ltd.
Tilapia License, Republic of the Congo – September 30, 2021**

In accordance with your authorization we have prepared a Competent Persons Report of an evaluation of an oil property located in Tilapia License, Republic of the Congo, owned by Zenith Energy Ltd. (the "Company") for an effective date of September 30, 2021 (October 1, 2021).

This evaluation has been carried out in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook ("COGEH"), the professional practice standard under our Permit to Practice with APEGA and under the guidelines of the European Securities and Markets Authority (ESMA). The report has been prepared and/or supervised by a "Qualified Reserves Evaluator" under NI 51-101 as demonstrated on the accompanying Certificate of Qualification of the author(s).

The INTRODUCTION includes the authorization, purpose and use of the report and describes the methodology and economic parameters used in the preparation of this report and the evaluation standard to which the report has been prepared.

The EXECUTIVE SUMMARY contains a concise presentation of the results of this reserve and economic evaluation.

The SUMMARY OF RESERVES AND ECONOMICS complements the Executive Summary, including values at the property level and the consolidated cash flows for each accumulating reserve category. The net present values presented in this report do not necessarily represent the fair market value of the reserves evaluated in this report. All monetary values presented in this report are expressed in terms of US dollars.

The DISCUSSION contains a description of the interests and burdens, reserves and geology, production forecasts, product prices, capital and operating costs and a map of each major property. The economic results and cash flow forecasts (before income tax) are also presented on an entity and property summary level.

A REPRESENTATION LETTER from the Company confirming that to the best of their knowledge all the information they provided for our use in the preparation of this report was complete and accurate as of the effective date, is enclosed following the Glossary.

Because the reserves data are based on judgments regarding future events, actual results will vary and the variations may be significant. We have no responsibility to update our report for events and circumstances which may have occurred since the preparation date of this report.

Prior to public disclosure of information derived from this report, or our name as author, our written consent must be obtained, as to the information being disclosed and the manner in which it is presented. This report may not be reproduced, distributed or made available for use by any other party without our written consent and may not be reproduced for distribution at any time without the complete context of the report, unless otherwise reviewed and approved by us.

We consent to the submission of this report, in its entirety, to securities regulatory agencies and stock exchanges, by the Company.

It has been a pleasure to prepare this report and the opportunity to have been of service is appreciated.

Yours very truly,
Chapman Petroleum Engineering Ltd.

[Original Signed By:]
[Signature], [Licensed Professional's Stamp]
[Membership ID Number]
October 7, 2021
C. W. Chapman, P. Eng.,
President

[Original Signed By:]
[Signature], [Licensed Professional's Stamp]
[Membership ID Number]
October 7, 2021
Khaled (Kal) A. Latif, P.Geol.
Senior Associate

cwc/lml/6771

PERMIT TO PRACTICE	
CHAPMAN PETROLEUM ENGINEERING LTD.	
[Original Signed By:]	
Signature	<u>C.W. Chapman</u>
Date	<u>October 7, 2021</u>
PERMIT NUMBER: P 4201	
The Association of Professional Engineers and Geoscientists of Alberta	

[APEGA ID Number]

CERTIFICATE OF QUALIFICATION

I, C. W. CHAPMAN, P. Eng., Professional Engineer of the City of Calgary, Alberta, Canada, officing at Suite 700, 1122 – 4th Street S.W., hereby certify:

1. THAT I am a registered Professional Engineer in the Province of Alberta and a member of the Australasian Institute of Mining and Metallurgy.
2. THAT I graduated from the University of Alberta with a Bachelor of Science degree in Mechanical Engineering in 1971.
3. THAT I have been employed in the petroleum industry since graduation by various companies and have been directly involved in reservoir engineering, petrophysics, operations, and evaluations during that time.
4. THAT I have in excess of 40 years in the conduct of evaluation and engineering studies relating to oil & gas fields in Canada and around the world.
5. THAT I participated directly in the evaluation of these assets and properties and preparation of this report for Zenith Energy Ltd., dated October 7, 2021 and the parameters and conditions employed in this evaluation were examined by me and adopted as representative and appropriate in establishing the value of these oil and gas properties according to the information available to date.
6. THAT I have not, nor do I expect to receive, any direct or indirect interest in the properties or securities of Zenith Energy Ltd., its participants or any affiliate thereof.
7. THAT I have not examined all of the documents pertaining to the ownership and agreements referred to in this report, or the chain of Title for the oil and gas properties discussed.
8. A personal field examination of these properties was considered to be unnecessary because the data available from the Company's records and public sources was satisfactory for our purposes.

[Original Signed By:]
[Signature], [Licensed Professional's Stamp]
[Membership ID Number]
October 7, 2021
C.W. Chapman, P.Eng.
President

PERMIT TO PRACTICE	
CHAPMAN PETROLEUM ENGINEERING LTD.	
	[Original Signed By:]
Signature	<u>C.W. Chapman</u>
Date	<u>October 7, 2021</u>
PERMIT NUMBER: P 4201	
The Association of Professional Engineers and Geoscientists of Alberta	

[APEGA ID Number]

CERTIFICATE OF QUALIFICATION

I, KHALED (KAL) A. LATIF, P. Geol., Professional Geologist of the City of Calgary, Alberta, Canada, officing at Suite 700, 1122 – 4th Street S.W., hereby certify:

1. THAT I am a registered Professional Geologist in the Province of Alberta.
2. THAT I graduated from the University of Alexandria with a Bachelor of Science degree in Geology in 1979.
3. THAT I have been employed in the petroleum industry since graduation by various companies and have been directly involved in geology, geophysics, petrophysics, operations, and evaluations during that time.
4. THAT I have in excess of 35 years of experience in the conduct of evaluation and geological studies relating to oil and gas fields in Canada and internationally.
5. THAT I participated directly in the evaluation of these assets and properties and preparation of this report for Zenith Energy Ltd., dated October 7, 2021 and the parameters and conditions employed in this evaluation were examined by me and adopted as representative and appropriate in establishing the value of these oil and gas properties according to the information available to date.
6. THAT I have not, nor do I expect to receive, any direct or indirect interest in the properties or securities of Zenith Energy Ltd., its participants or any affiliate thereof.
7. THAT I have not examined all of the documents pertaining to the ownership and agreements referred to in this report, or the chain of Title for the oil and gas properties discussed.
8. A personal field examination of these properties was considered to be unnecessary because the data available from the Company's records and public sources was satisfactory for our purposes.

[Original Signed By:]
[Signature], [Licensed Professional's Stamp]
[Membership ID Number]
October 7, 2021
Khaled (Kal) A. Latif, P.Geol.
Senior Associate

CERTIFICATE OF QUALIFICATION

I, REBECCA J. HOWE, of the City of Calgary, Alberta, Canada, officing at Suite 700, 1122 – 4th Street S.W., hereby certify:

1. THAT I am a Certified Petroleum Geologist as recognized by the Division of Professional Affairs of the American Association of Petroleum Geologists and a member of the Canadian Society of Petroleum Geologists.
2. THAT I graduated from Brandon University, Manitoba with a Bachelor of Science degree in Geology in 2007.
3. THAT I participated directly in the evaluation of these assets and properties and preparation of this report for Zenith Energy Ltd., dated October 7, 2021 and the parameters and conditions employed in this evaluation were examined by me and adopted as representative and appropriate in establishing the value of these oil and gas properties according to the information available to date.
4. THAT I have not, nor do I expect to receive, any direct or indirect interest in the properties or securities of Zenith Energy Ltd., its participants or any affiliate thereof.
5. THAT I have not examined all of the documents pertaining to the ownership and agreements referred to in this report, or the chain of Title for the oil and gas properties discussed.
6. A personal field examination of these properties was considered to be unnecessary because the data available from the Company's records and public sources was satisfactory for our purposes.

[Original Signed By:]
[Signature], [AAPG Membership Stamp]
[Membership ID Number]
October 7, 2021
Rebecca J. Howe, B.Sc.
Associate

COMPETENT PERSONS REPORT

**RESERVE AND ECONOMIC EVALUATION
OIL PROPERTY**

**TILAPIA LICENSE, DJENGO PROSPECT
REPUBLIC OF THE CONGO**

Owned by

ZENITH ENERGY LTD.

September 30, 2021
(October 1, 2021)

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INTRODUCTION

1. AUTHORIZATION

This evaluation has been authorized by Mr. Andrea Cattaneo, on behalf of Zenith Energy Ltd. The engineering analysis has been performed during the month of June 2021 and updated during October 2021.

2. PURPOSE OF THE REPORT

The purpose of this report was to prepare a third-party independent appraisal of the oil reserves owned by Zenith Energy Ltd. for the Company's financial planning.

The values in this report do not include the value of the Company's undeveloped land holdings nor the tangible value of their interest in associated plant and well site facilities they may own.

3. USE OF THE REPORT

The report is intended to support any securities regulatory requirements and financing purposes.

4. SCOPE OF THE REPORT

4.1 Methodology

The evaluation of the reserves and resources of these properties included in the report has been conducted under a discounted cash flow analysis of estimated future net revenue, which is the principal tool for estimating oil and gas property values and supporting capital investment decisions.

4.2 Land Survey System

This property and its boundaries are governed by a Production Sharing Contract.

4.3 Economics

The economics presentation and methodology is presented in the Discussion of the report.

4.4 Barrels of Oil Equivalent

If at any time in this report reference is made to "Barrels of Oil Equivalent" (BOE), the conversion used is 6 Mscf : 1 STB (6 Mcf : 1 bbl).

BOEs may be misleading, particularly if used in isolation. A BOE conversion ratio of 6 Mcf : 1 bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent value equivalency at the well head.

4.5 Environmental Liabilities

We have been advised by the Company that they are in material compliance with all Environmental Laws and do not have any Environmental Claims pending, as demonstrated in the Representation Letter attached.

5. BASIS OF REPORT

5.1 Sources of Information

Sources of the data used in the preparation of this report are as follows:

- i) Basic information regarding the property was derived from a Corporate presentation, previous competent persons' reports and our independent research from published information;
- ii) The ownership terms were determined from the original Production Sharing Agreement currently in place;
- iii) Capital expenditures, operating costs and product prices were based on discussions with the staff in Brazzaville and our experience and judgment.

5.2 Product Prices

Chapman Petroleum Engineering Ltd. conducts continual surveillance and monitoring on a number of Benchmark product prices both locally and internationally. Based on historical data, current conditions and our view of the relevant political and economic trends, we independently prepare oil, gas and by-product price forecasts including predictions for the near term (first few years) with 2 percent escalation thereafter.

In establishing our forecasts we also consider input from operating companies, consulting firms, oil & gas marketing companies and financial institutions. Our forecasts are updated quarterly and the latest one prior to the effective date would generally be used. The forecast used for this report is presented as Attachment 1 in the Executive Summary.

The Benchmark Oil Price used in this evaluation is Brent crude, which closely correlates to crude prices in this region of Africa.

Any prices quoted in the property discussions reflect fully adjusted prices for crude quality, transportation, gas heating value and specific contractual arrangements. In the case of delayed production the equivalent 2021 price for that production has been quoted.

5.3 **Product Sales Arrangement**

The Company does not have any "hedge" contracts in place at this time.

5.4 **Royalties**

There is a 15 percent royalty to the Republic of the Congo which is deducted prior to the application of the cost oil and profit oil allocation.

5.5 **Capital Expenditures and Operating Costs**

Operating costs and capital expenditures have been based on historical experience and analogy where necessary and are expressed in current year dollars but for economic purposes are escalated at 2% per year after the current year.

5.6 **Income Tax Parameters**

Net cash flows after consideration of corporate income tax have not been included in this report, due to the current terms of ownership of the reserves.

5.7 **Abandonment and Restoration**

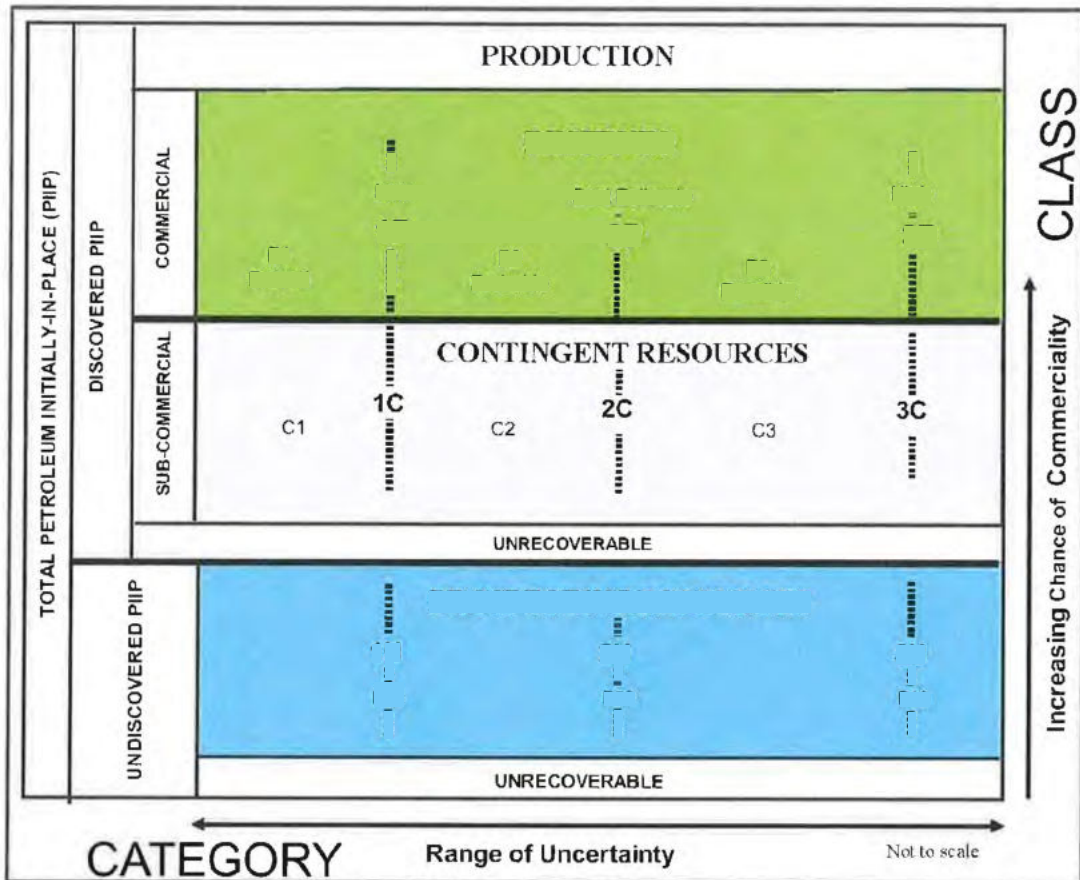
Abandonment and restoration costs are the responsibility of the government.

6. EVALUATION STANDARD USED

6.1 General

This evaluation and report preparation have been carried out in accordance with standards set out in the APEGA professional practice standard "The Canadian Oil and Gas Evaluation Handbook", 3rd Edition December 2018 ("COGEH"), prepared by the Calgary Chapter of the Society of Petroleum Evaluation Engineers (SPEE).

COGEH uses the SPE-PRMS (2018 Update) resource classification system shown in the below diagram.



By way of explanation, 'CLASS' forms the vertical axis of the PRMS diagram and represents the range of Chance of Commerciality. Likewise, 'CATEGORY' forms the horizontal axis and provides a measure of the uncertainty in estimates of the Resource Class.

Petroleum Initially-In-Place (PIIP) is that quantity of petroleum that is estimated to exist originally in naturally occurring accumulations with reference to the above diagram and is potentially producible. It includes that quantity of petroleum that is estimated, as of a given date, to be contained in known accumulations, prior to production, plus those estimated quantities in accumulations yet to be discovered (equivalent to "total resources").

Discovered PIIP (equivalent to "discovered resources") is that quantity of petroleum that is estimated, as of a given date, to be contained in known accumulations prior to production. The Discovered PIIP includes production, Reserves, and Contingent Resources; the remainder is unrecoverable.

Undiscovered PIIP (equivalent to "undiscovered resources") is that quantity of petroleum that is estimated, on a given date, to be contained in accumulations yet to be discovered. The recoverable portion of undiscovered petroleum initially in place is referred to as "Prospective Resources", the remainder as "unrecoverable".

Unrecoverable is that portion of Discovered or Undiscovered PIIP quantities which is estimated, as of a given date, not to be recoverable by future development projects. A portion of these quantities may become recoverable in the future as commercial circumstances change or technological developments occur; the remaining portion may never be recovered due to the physical/chemical constraints represented by subsurface interaction of fluids and reservoir rocks.

6.2 **Resource Definitions**

The following definitions have been extracted from COGEH and represent an overview of the resource definitions and evaluation criteria required for compliance with the Canadian Securities National Instrument 51-101. These definitions are considered to be compliant with the PRMS - 2018, in that they use the same primary nomenclature, principles and concepts.

6.2.1 **Reserves**

The following Reserves definitions and guidelines are designed to assist evaluators in making Reserves estimates on a reasonably consistent basis and assist users of evaluation reports in understanding what such reports contain and, if necessary, in judging whether evaluators have followed generally accepted standards.

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, as of a given date, based on the analysis of drilling, geological, geophysical, and engineering data; the use of established technology; and specified economic conditions, which are generally accepted as being reasonable. Reserves are further classified according to the level of certainty associated with the estimates and may be subclassified based on development and production status.

The guidelines outline

- general criteria for classifying reserves,
- procedures and methods for estimating reserves,
- confidence levels of individual entity and aggregate reserves estimates,
- verification and testing of Reserves estimates.

The following definitions apply to both estimates of individual Reserves Entities and the aggregate of reserves for multiple entities.

RESERVES CATEGORIES

Reserves are categorized according to the probability that at least a specific volume will be produced. In a broad sense, Reserves categories reflect the following expectations regarding the associated estimates:

<u>Reserves Category</u>	<u>Confidence Characterization</u>
Proved (1P)	Low Estimate, Conservative
Proved + Probable (2P)	Best Estimate
Proved +Probable +Possible (3P)	High Estimate, Optimistic

- Proved Reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated Proved Reserves.
- Probable Reserves are those additional reserves that are less certain to be recovered than Proved Reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated Proved + Probable Reserves.

- c. Possible Reserves are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated Proved + Probable + Possible Reserves.

DEVELOPMENT AND PRODUCTION STATUS

Each of the reserves categories (proved, probable and possible) may be divided into developed and undeveloped categories.

- a. Developed Reserves are those Reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (e.g., when compared to the cost of drilling a well) to put the Reserves on production. The developed category may be subdivided into producing and non-producing.
 - i. Developed Producing Reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.
 - ii. Developed Non-Producing Reserves are those reserves that either have not been on production, or have previously been on production, but are shut-in and the date of resumption of production is unknown.
- b. Undeveloped Reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the Reserves classification (Proved, Probable, Possible) to which they are assigned.

In multi-well pools, it may be appropriate to allocate total pool Reserves between the Developed and Undeveloped categories or to sub-divide the Developed Reserves for the pool between Developed Producing and Developed Non-Producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities and completion intervals in the pool and their respective development and production status.

LEVELS OF CERTAINTY FOR REPORTED RESERVES

The qualitative certainty levels contained in the definitions are applicable to "individual Reserves entities," which refers to the lowest level at which Reserves calculations are performed, and to "Reported Reserves," which refers to the highest level sum of individual entity estimates for which Reserves estimates are presented. Reported Reserves should target the following levels of certainty under a specific set of economic conditions:

- At least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated Proved Reserves,
- At least a 50 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated Proved + Probable reserves,
- At least a 10 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated Proved + Probable + Possible reserves.

A quantitative measure of the certainty levels pertaining to estimates prepared for the various Reserves categories is desirable to provide a clearer understanding of the associated risks and uncertainties. However, the majority of Reserves estimates are prepared using deterministic methods that do not provide a mathematically derived quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

Additional clarification of certainty levels associated with Reserves estimates and the effect of aggregation is provided in Section 5.7.1.6, The Portfolio Effect, of COGEH.

6.2.2 Contingent Resources

Contingent Resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development (TUD), but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their economic status.

Contingencies may include economic, environmental, social and political factors, regulatory matters, a lack of markets or prolonged timetable for development. Contingent Resources have a Chance of Development that is less than certain.

Contingent resources are further categorized according to their level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by their economic status.

Project Maturity Sub-Classes are: Development Pending, Development on Hold, Development Unclassified and Development Not Viable, as demonstrated in the chart below (Section 6.3).

Reports on Contingent Resources must specify the level of maturity and usually include 1C, 2C and 3C estimates.

There is no certainty that it will be commercially viable to produce any portion of the Contingent Resources.

6.2.3 Prospective Resources

Prospective Resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated Chance of Discovery and a Chance of Development. Prospective resources are further subdivided in accordance with the level of certainty associated with recoverable estimates assuming their discovery and development and may be sub-classified based on project maturity.

The project maturity subclasses describe the stage of exploration and broadly correspond to chance of commerciality from in increasing order from "play" to "lead" to "prospect" as demonstrated in the chart below (Section 6.3).

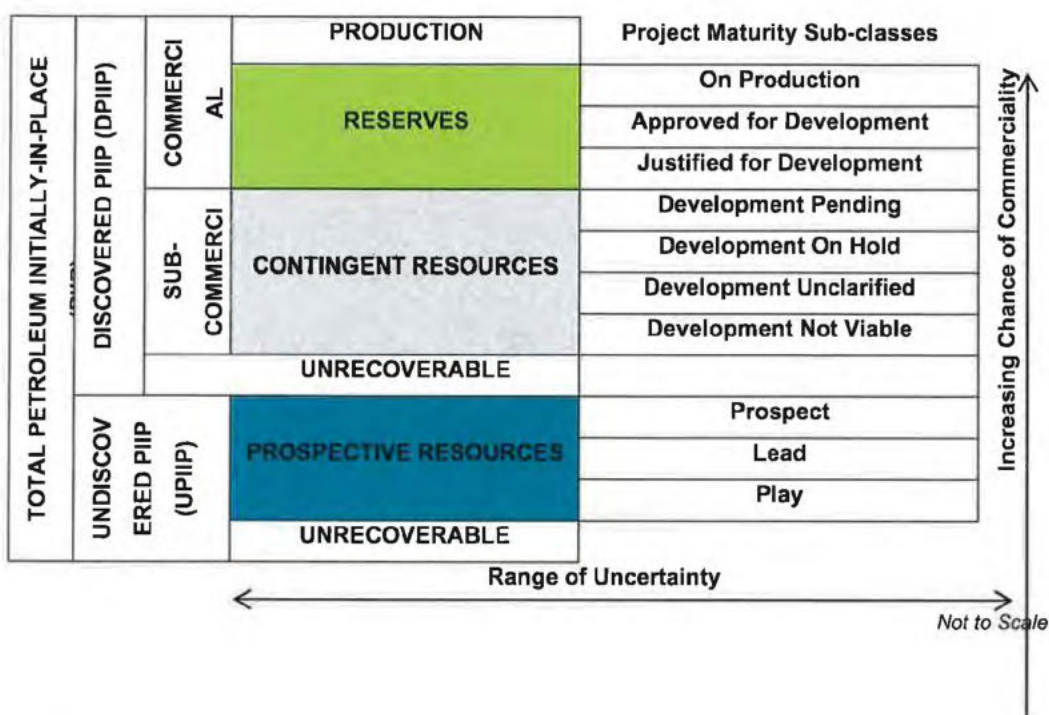
A "play" is a family of geologically similar fields, discoveries, prospects and leads. It would have the lowest chance of commerciality in these project maturity subclasses.

A "lead" is a potential accumulation within a play that requires more data acquisition and/or evaluation in order to be classified as a prospect.

A "prospect" is a potential accumulation within a play that is sufficiently well defined to represent a viable drilling target. A "prospect" would have the highest chance of commerciality.

There is no certainty that any portion of the resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources.

6.3 Project Maturity Sub-Classes



7. SITE VISIT

A personal field examination of these properties was not considered to be necessary because the data available from the Company's records and public sources were satisfactory for our purposes. However, a video conference was conducted with the Company's representatives in Brazzaville.



Source: Google Maps



ZENITH ENERGY LTD.

TILAPIA LICENCE
REPUBLIC OF THE CONGO
ORIENTATION MAP

OCT. 2021

JOB No. 6771

EXECUTIVE SUMMARY

This Executive Summary presents an overview of the Company's properties and results of the evaluation and, in particular, addresses the information required by the European Securities and Markets Authority (ESMA), Section 132.

- (a) Details of the Company's reserves established under COGEH (NI 51-101) standards are presented with their associated net present values on the attached Table 1 (before taxes) and the production and cash flow analyses are presented as Table 4a in the Discussion, for the Probable Undeveloped Reserves.
- (b) The anticipated project life of this property based on the established Probable Reserves and production forecasts is 24 years.
- (c) The Company, through a share purchase agreement, effectively holds a 56.0 percent working interest in the Tilapia License in the Republic of the Congo, which is located on the coast, covering an area of 50 square kilometers (12,355 acres), mostly offshore in water depths of less than 10 meters. The Tilapia field contains seven wells all with the surface onshore, five of which have been directionally drilled offshore.

The field is governed by a Production Sharing Agreement (PSA), the terms of which are discussed later.

- (d) The Tilapia field is located in an environment of active producing shallow offshore fields with conventional infrastructure and procedures for producing to market.
- (e) The results of this evaluation are based on facts and assumptions typical of this type of engagement. It should be noted that under COGEH Section 7.8.2 evaluations are conducted without consideration of the availability of capital for funding the scheduled development. The product price forecasts used for this evaluation, shown in Attachments 1a, are based on history and analysis and reflect the industry consensus as of the effective date of the report, however variations may occur and the variations could be material.

Table 1
Summary of Company Reserves and Economics
Before Income Tax

October 1, 2021
(as of September 30, 2021)

Zenith Energy Ltd.
Tilapia License, Republic of the Congo

Description	Net Reserves	Cumulative Cash Flow (BIT) - M\$				
	Oil	Discounted at:				
	MSTB					
	Company Net	Undisc.	5%/year	10%/year	15%/year	20%/year
Probable Undeveloped Reserves						
Djeno/Tilapia Ten Well Development	5,959	360,778	231,792	161,249	119,129	91,799

M\$ means thousands of dollars

Net resources are the total of the Company's working interest share after deducting the amounts attributable to royalties and profit oil owned by the government

Attachment 1

**CHAPMAN PETROLEUM ENGINEERING LTD.
CRUDE OIL
HISTORICAL, CONSTANT, CURRENT AND FUTURE PRICES**

October 1, 2021

Date	WTI [1] \$/US/STB	Brent Spot (ICE)[2] \$/US/STB	AB Synthetic Crude Price [3] \$/CDN/STB	Western Canada Select [4] \$/CDN/STB	Exchange Rate \$/US/CDN
HISTORICAL PRICES					
2012	94.05	111.63	92.56	71.70	1.00
2013	97.98	108.56	100.17	75.76	0.97
2014	93.12	99.43	101.07	82.07	0.91
2015	48.69	53.32	62.17	46.23	0.78
2016	43.17	45.06	57.98	38.90	0.76
2017	50.86	54.75	67.75	49.63	0.77
2018	64.92	71.64	75.06	50.17	0.77
2019	57.00	64.11	75.28	57.86	0.75
2020	39.54	43.40	48.78	37.05	0.75
2021 9 mos.	64.80	67.56	79.76	65.47	0.80

CONSTANT PRICES (The average of the first-day-of-the-month price for the preceding 12 months-SEC)

56.36 58.83 68.97 55.83 0.79

FORECAST PRICES

2021 3mos.	75.50	79.28	87.01	70.47	0.80
2022	72.50	76.13	83.26	67.44	0.80
2023	69.50	72.98	79.51	64.40	0.80
2024	66.50	69.83	75.76	61.36	0.80
2025	67.83	71.22	77.42	62.71	0.80
2026	69.19	72.65	79.11	64.08	0.80
2027	70.57	74.10	80.84	65.48	0.80
2028	71.98	75.58	82.61	66.91	0.80
2029	73.42	77.09	84.41	68.37	0.80
2030	74.89	78.63	86.24	69.86	0.80
2031	76.39	80.21	88.11	71.37	0.80
2032	77.92	81.81	90.02	72.92	0.80
2033	79.47	83.45	91.97	74.50	0.80
2034	81.06	85.12	93.96	76.11	0.80
2035	82.68	86.82	95.99	77.75	0.80
2036	84.34	88.55	98.05	79.42	0.80

Escalated 2% thereafter

- Notes:
- [1] West Texas Intermediate quality (D2/S2) crude (40API) landed in Cushing, Oklahoma.
(Comparative WTI future oil prices are: \$US73.74/STB in 2021; \$US71.10/STB in 2022 and \$US64.66/STB in 2023)
 - [2] The Brent Spot price is estimated based on historic data.
 - [3] Equivalent price for Light Sweet Crude (D2/S2) & Synthetic Crude landed in Edmonton.
 - [4] Western Canada Select (20.5API), spot price for B.C., Alberta, Saskatchewan, and Manitoba.

**TILAPIA LICENSE
REPUBLIC OF THE CONGO
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**TILAPIA LICENSE
REPUBLIC OF THE CONGO
DISCUSSION**

Property Description

The Company has completed a share purchase agreement with Anglo African Oil & Gas plc ("AAOG") for the acquisition of 100 percent interest in AAOG's wholly owned subsidiary in the Republic of the Congo, Anglo African Oil & Gas Congo S.A.U ("AAOG Congo")

AAOG Congo, holds a 56 percent working interest and is the operator of the Tilapia License in the Republic of the Congo. This License is located on the coast, covering an area of 50 square kilometers (12,355 acres), mostly offshore in water depths of less than 10 meters.

The License has been renegotiated for a new 25-year license term. The Tilapia field contains seven wells all with the surface onshore, five of which have been directionally drilled offshore. This report is focused on the Djeno formation, which is the main target in the License area and producing from surrounding fields. The Tilapia zone, which has produced from this license, is also of interest of a secondary nature.

The property is governed by a Production Sharing Agreement (PSA), the terms of which are shown on Table 1. A map of the Tilapia field is presented on Figure 1

Geology

Basin Geology and Petroleum System

The Lower Congo Basin lies offshore of the west coast of Africa, covering 115,000 square kilometers from the Republic of the Congo to central Angola, in water depths extending to over 3500 meters. As shown in Figure 2a, it lies between the Gabon Basin to the north, and the Kwanza Basin to the south. The transition from the Congo Basin to the Kwanza Basin lies along the Ambriz spur, a NE-SW trend, located to the north of Luanda, the capital of Angola. The Congo Basin is one of the largest intra-cratonic basins in the world where more than 295 oil and gas fields exist in the basin, as seen in Figure 2b.

The major tectonic development of the basin along the coast of West Africa commenced in the Late Mesozoic due to rifting and the separation of South American and African continental masses during the opening of the South Atlantic Ocean. Transverse fracture zones of the Mid-Atlantic rift segmented the rifted continental crust into a series of sub-basins. The Congo Basin is one of these sub-basins.

The tectonic history of the Congo Basin can be divided into three main stages:

1. Rift stage, with lacustrine and alluvial deposition within graben and half-graben structures (Neocomian to mid-Aptian).
2. Evaporite deposition stage, developed during the transition from active rifting to thermally-induced crustal subsidence (Aptian).
3. Subsidence stage, with regional marine deposition and active extension with salt tectonics (Albian to Recent).

The main stratigraphic sequences in the basin, as illustrated in Figures 2c and 2d, were lacustrine silt and shale deposits of the Bucomazi Formation (Neocomian to mid-Aptian). By the end of the Barremian, the rift activity on the Mid-Atlantic ridge had progressed to the west, reducing the tectonic activities along the African passive margin. Final uplift and erosion produced a regional unconformity where the Chela formation sandstone and shales were deposited on this unconformity during early-Aptian. The onset of marine deposition in the Congo Basin is denoted by deposition of the Aptian Loeme Salt Formation. The Loeme Salt involved in diapir features and complex compressional structures in the deep water portion in the western half of the basin and extensional faulting all along the eastern half. Open marine conditions continued with deposition of the Pinda Formation during Albian, which consists of a sequence of continental shelf clastics, limestone and dolomite. Then the shelf collapsed westward into a series of faulted blocks leading to the development of regional west-dip of the shelf. During the Cenomanian time the deposited sequences changed from mostly carbonate-clastics of the Pinda Formation to mainly siliciclastics of the Iabe Formation. Depositional patterns varied laterally from non-marine to the east, nearshore and shoreface environments; and shale with silts in the western portion of the basin. Subsidence of West Africa passive margin in the Congo Basin continued through the Late Cretaceous-Eocene, with marine deposition of the Landana Formation, which may have turbidite sediments in the deepwater area. A major unconformity at the base of the Oligocene marks the beginning of a period of marine deposition which continues to present day, providing a large volume of Tertiary sediments. Throughout the Miocene time; the Congo River spread turbidite deposits in a channel-dominated submarine fan system where the Malembo Formation shale forms the vertical and lateral seals of sand-filled channels.

The Lower Congo petroleum system, as shown in Figure 2e, contains numerous source rocks such as the Cretaceous: Pointe Noire Marl (Bucomazi-equivalent) and Iabe Formation, and the Tertiary Landana and Malembo Formations. Such vertically stacked source rocks provide the world-class petroleum system that created a large volume of hydrocarbons in the basin. Anoxic conditions during the Neocomian-Barremian time resulted in the deposition of a widespread organic-rich lacustrine shale and marl of the Pointe Noire Marl Formation that is the primary source rock in the basin. This interval contains Type I and Type II Saprolitic Kerogen with Total Organic Carbon (TOC) contents ranges from 1 to 5 with a maximum of 20%. The Cenomanian-Maastrichtian Iabe Formation provides an additional source rock and it has mostly Type II, and sometime Type I Kerogen that contain TOC of 3 to 5%. The shales of the Paleocene-Eocene Landana Formation and the Olig-Micene Malembo Formation also considered as source rocks that contains Type II and III Kerogen with TOC of 3-5% and 1-5 respectively.

The pervasive extensional and compressional tectonics that took place in the Lower Congo Basin created a large number of structural traps with a component of stratigraphic trapping that in general, dominate in the basin. These traps are associated with rollover into extensional faults, channel truncation against updip faults, compaction closures over deeper Cretaceous structures, and salt-related traps such as thrust folds, and turtle structures.

The hydrocarbon generation began between Late Cretaceous to Miocene time and continued to present. The network of faults that occur throughout the basin facilitates the hydrocarbon migration into the relevant reservoirs, in addition to the direct migration from the source rock shales into the overlying and underlying reservoir beds. The seal is provided by the Cretaceous: Loeme Salt, Pointe Noire Marl, Pointe Indienne Shale, and the Tertiary Malembo shales, in addition to intra-formational clays.

The Lower Congo Basin contains multiple existing reservoirs ranging from Pre-Salt to Post-Salt and Tertiary reservoirs. The Early Cretaceous, Neocomian-Barremian Djeno reservoir, which is the main focus of this evaluation, consists of lacustrine turbidite sandstone with shale interbeds.

Prospect and Reservoir Geology

Seven wells were drilled in Tilapia licence, as seen in Figure 1, where numerous reservoirs were penetrated, such as the Aptian Chela Formation reservoir and the Barremian Tilapia Formation, which is the main producing reservoir in this property. There is also the Barremian Mengo Formation which was penetrated in 2 wells and it demonstrated hydrocarbon indication but it is tight lacustrine sandstone that would require fracturing and possibly a horizontal application.

Additionally, there is the Neocomian-Barremian Djeno Formation, which is the main reservoir of focus in this evaluation and it is producing from several fields in the region. Djeno was penetrated in only one well in this property and it is divided into three main zones, where only the top part was penetrated, as shown in Figure 2f. There are indications from the logs that Djeno is hydrocarbon-bearing reservoir, however there is no test to confirm it. As illustrated in Figure 2g, the mapped Djeno reservoir shows that it has a 4-way dip structural closure, however the seismic quality is relatively poor. This reservoir thickens towards the offshore area where it reached 1000 meter thick, while in this area it can be up to 500 meters gross thickness.

The Djeno reservoir is lacustrine, turbiditic sandstone with shale interbeds, and it has high clay content, as shown in the log interpretation. The reservoir occurred between 2400 and 2600 meters in the well, with a porosity range from 10 to 16%, water saturation of 30-45%, net thickness of about 40-80 meters (for full hydrocarbon column), net pay of 10-35 meter net oil where the rest is gas cap.

Reserves

Total probable Undeveloped Reserves of 19,633 MSTB have been estimated for the Tilapia license. Of these, 15,783 MSTB have been estimated for the Djeno Formation based on a Monte Carlo simulation, P50 results, with input data derived from Company presentations and a previous Competent Person's Report, both of which incorporated information from surrounding producing Djeno pools.

Additional Probable Reserves of 3850 MSTB have been estimated for the Tilapia zone based on analogy to the producing Tilapia well TLP 101 ST, R2 formation.

The Probable Reserves case involves a development with 10 wells, initially producing from the deeper Djeno formation until depletion and then recompleted in the shallower Tilapia zone.

A summary of the Reserves is presented on Table 2 and the statistical input parameters for the Monte Carlo are presented on Table 2a.

Productivity Estimates

A production forecast has been developed for the Djeno completions on a conservative basis for a with initial rates per well of 1500 STB/d. The forecasts include steep declines initially with a stable exponential decline after the first two years, resulting in a rational schedule for depletion of the

reserves assigned. It has been reported that initial production rates have reached as high as 5000 STB/d in other Djeno pools in the area.

The production forecast for the typical Tilapia completions has been developed from the profile of production from the R2 zone in the analog well.

The forecast for the anticipated field development is presented on Page 1 of the economic analysis, Table 4a.

Product Prices

The Djeno production is expected to attract an oil price, which is equivalent to Brent crude, based on a comparison of Brent posted prices to an average of prices posted for production from Nigeria and Angola. The price forecast is shown on the economic analysis.

Operating Environment

The Tilapia license is located in a region of active oil and gas development. Although the Djeno prospective reservoir is mostly located offshore, the surface locations and facilities will be located onshore at the coastline. The Tilapia license contains wells that have produced oil previously from the shallower Tilapia reservoir and therefore, the gathering infrastructure is in place. With the anticipated production rates, there will be a need to expand the oil handling facilities, which has been included in the economic analysis.

Capital Expenditures

The cost to drill, complete and tie-in for production has been estimated to be \$5,000,000 per directional well and \$250,000 per well for surface facilities and local tie-ins. An additional cost for the expansion of the oil handling facility has been estimated to be another \$5,000,000 spread over two years.

It has been estimated that the recompletions to the Tilapia would cost \$750,000 each.

Under the PSA the abandonment of the wells is the responsibility of the government.

The capital expenditures scheduled for each case are presented in Table 3a and on Page 1 of each of the economic analysis cases.

Operating Costs

Operating costs have been estimated to be \$10,000/well/month (fixed), \$2.00/STB (variable) plus \$2.00/STB for transportation, based on our experience and reasonable judgement.

Economics

The results of the economic analysis, before income tax are summarized in Table 4, and the detailed, analysis are presented in Table 4a.

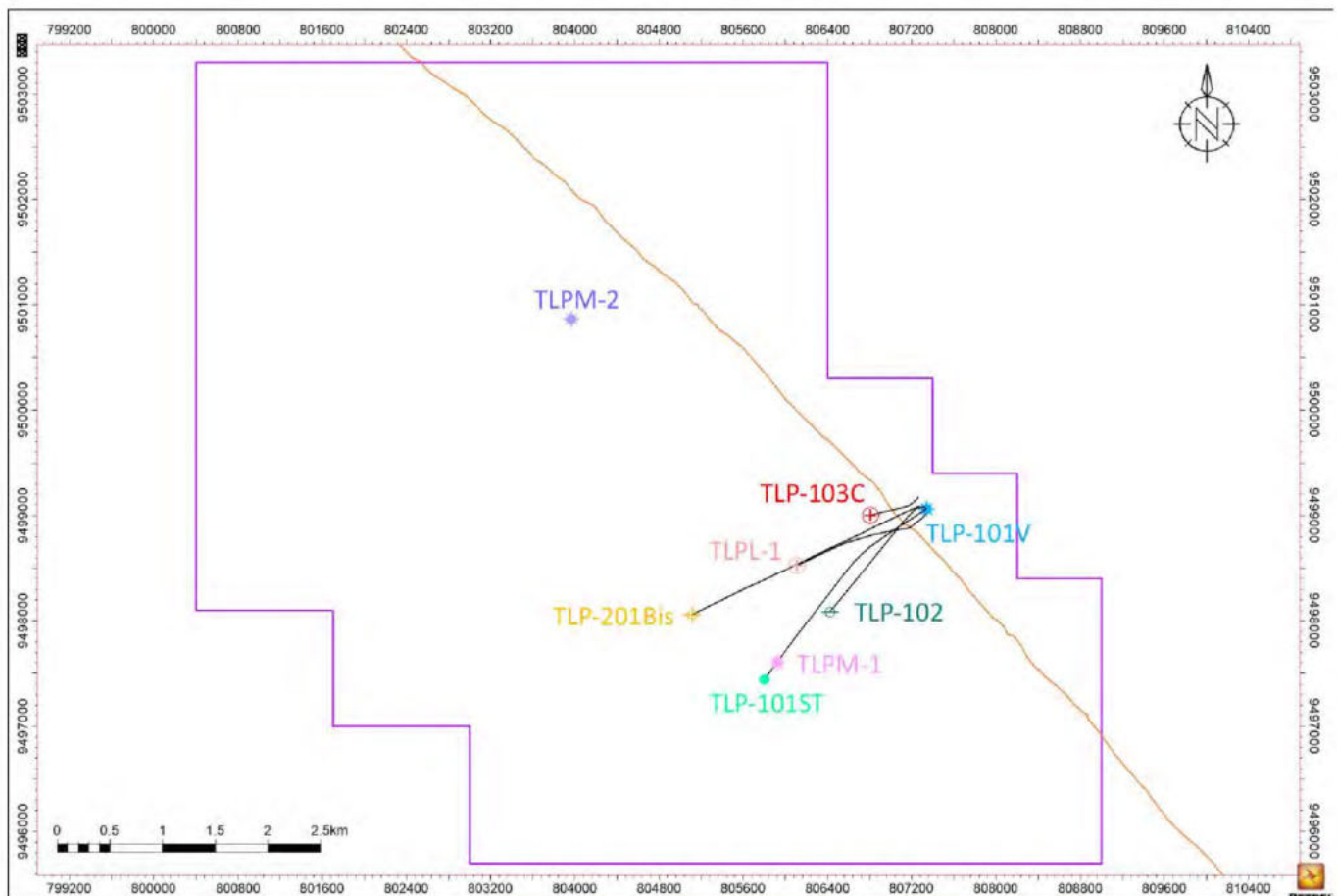
In order to properly account for the cost recovery and profit splits under the PSA terms, the economic analysis is conducted for all production from the license and for accumulating reserve categories.

The evaluation for each reserve category consists of four pages. Page 1 presents the production rates for each well or group of wells for each year of the forecast. The daily rates are then multiplied by the active days per year to obtain an annual production volume. The well count, total daily rate and capital expenditures are shown on the right hand side of the page.

Page 2 presents the gross annual production in barrels and shows the conversion to gross revenue by applying the oil price. The 15% royalty is deducted. Fixed and variable operating costs are shown and escalated at 2 percent per year in all years.

Pages 3 applies the conditions of the Production Sharing Agreement governing Cost Recovery and the sharing of Profit Oil. See the Property Description and Table 1 for an explanation of the terms of the PSA.

Page 4 is the cash flow analysis, initially for the full Contractor group position and finally the undiscounted and discounted values represent the Company's net position, which in this case is 56.0% of the contractor group. Values are shown before income tax (tax not applicable), at discount rates of 0, 5, 10, 15 and 20 percent. The Company Net Oil Reserves are also shown on this page.



Source: Anglo African Oil & Gas PLC, 2020, Slide 17

ZENITH ENERGY LTD.

TILAPIA LICENCE
REPUBLIC OF THE CONGO
LAND AND WELL MAP

OCT. 2021 JOB No. 6771 FIGURE No. 1

Table 1

**Schedule of Lands, Interests and Royalty Burdens
September 30, 2021**

Zenith Energy Ltd.

Tilapia License, Republic of the Congo

<u>Description</u>	<u>Rights Owned</u>	<u>Gross Acres</u>	<u>Appraised Interest</u>		<u>Royalty Burdens</u>	
			<u>Working %</u>	<u>Royalty %</u>	<u>Basic %</u>	<u>Overriding %</u>
Tilapia License	All P& NG	12,355	56.0000	-	15.0000	-
Total		12,355				

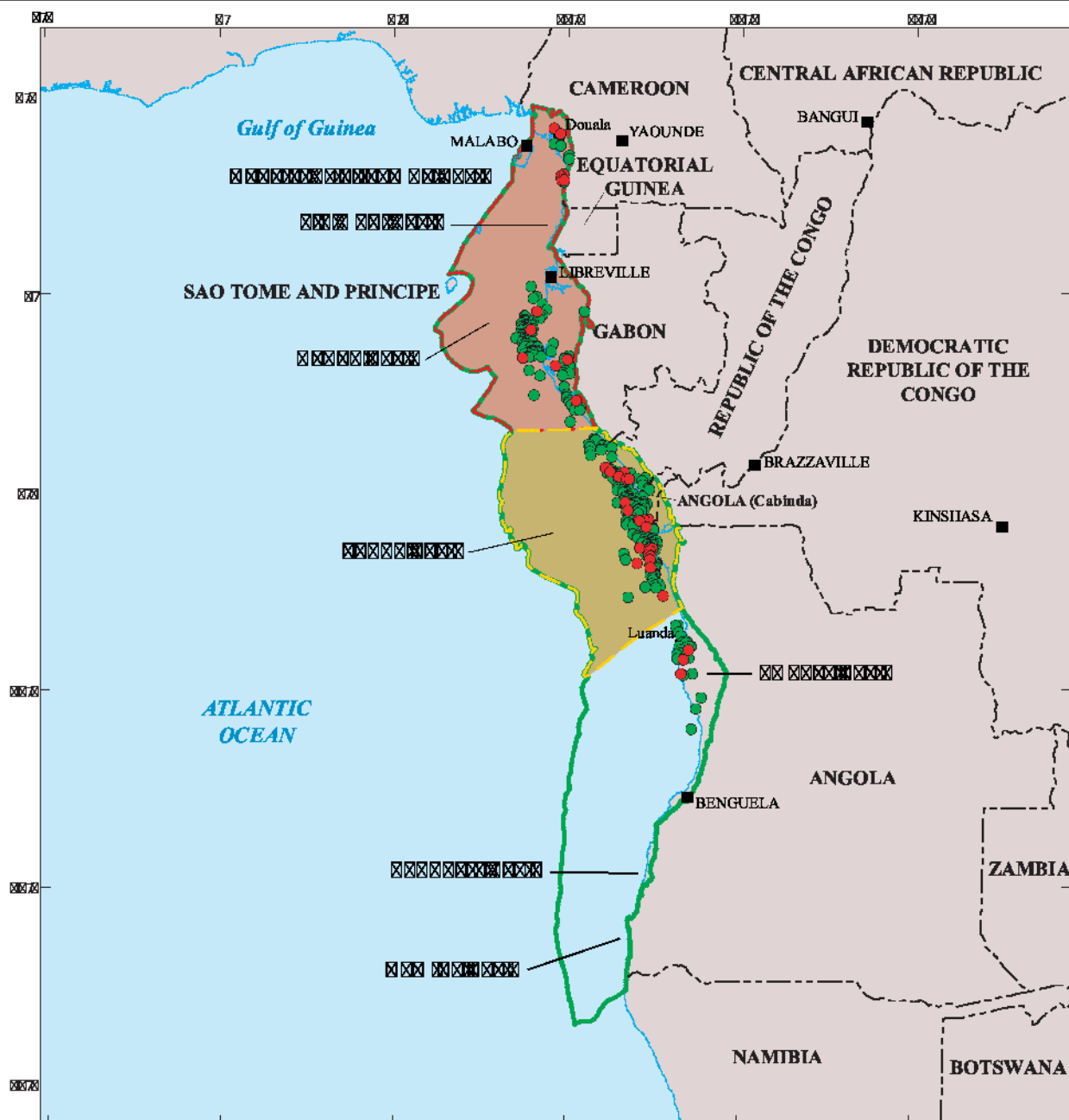
General Notes : [1] Production Sharing Agreement - Cost Oil and Profit Oil are a function of Cumulative Production

[2] Cost Oil Schedule

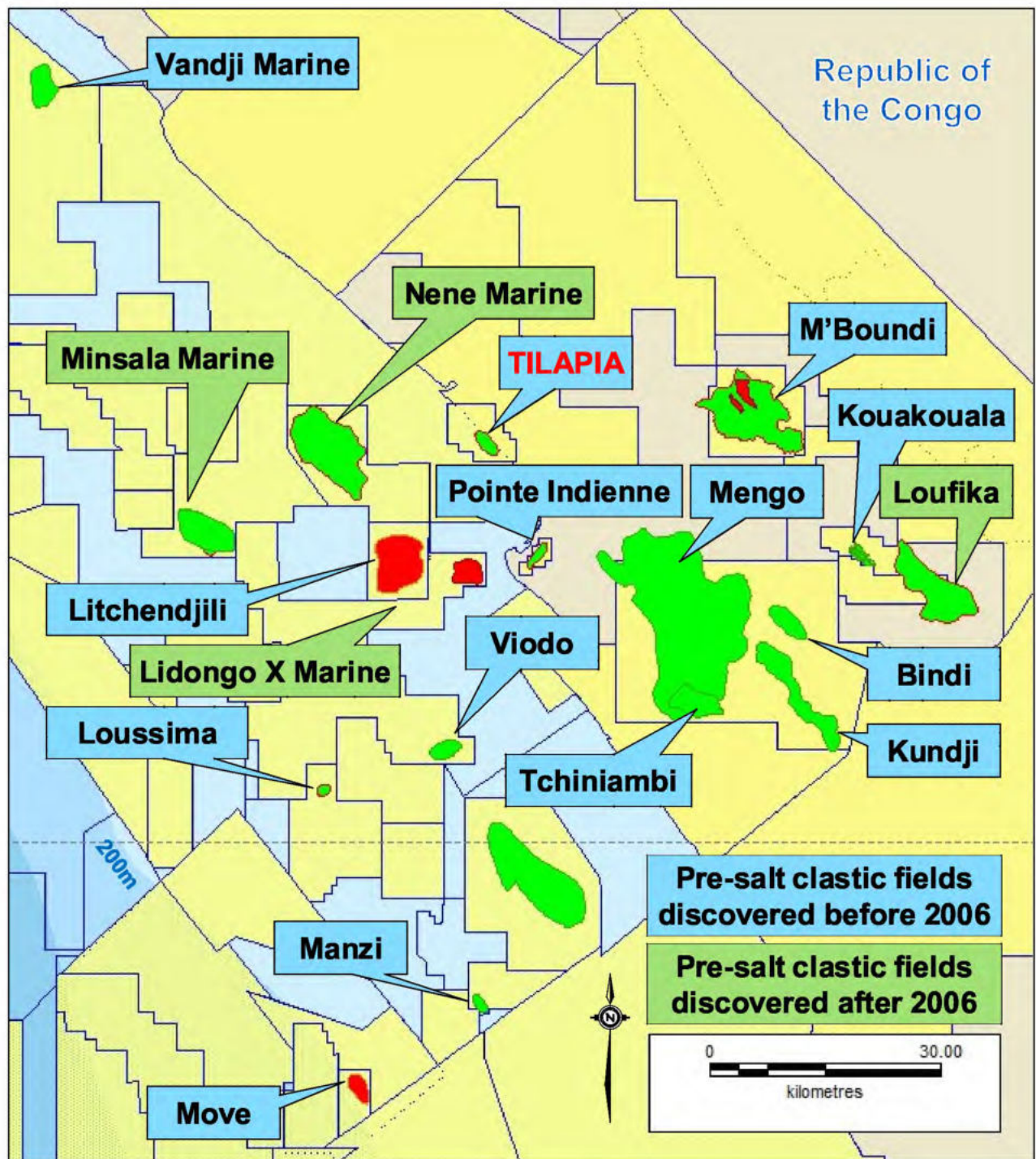
<u>Cumulative Production MMSTB</u>	<u>Cost Oil Allocation</u>
0<25	60%
25 to 100	55%
>100	50%

[3] Profit Oil Schedule

<u>Cumulative Production MMSTB</u>	<u>Contractor</u>	<u>Government</u>
0<25	60%	40%
25 to 100	55%	45%
>100	50%	50%



Scale: 1:1,000,000
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Source: Gaffney, Cline & Associates, 2015, Slide 11

ZENITH ENERGY LTD.

CONGO BASIN

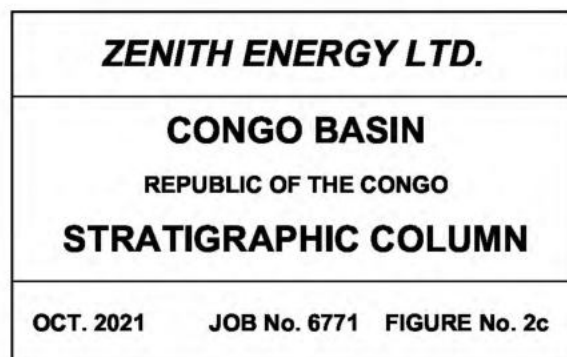
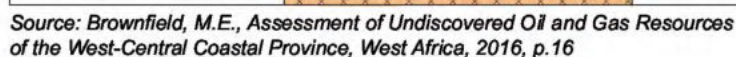
REPUBLIC OF THE CONGO

PRE-SALT CLASTIC PLAYS

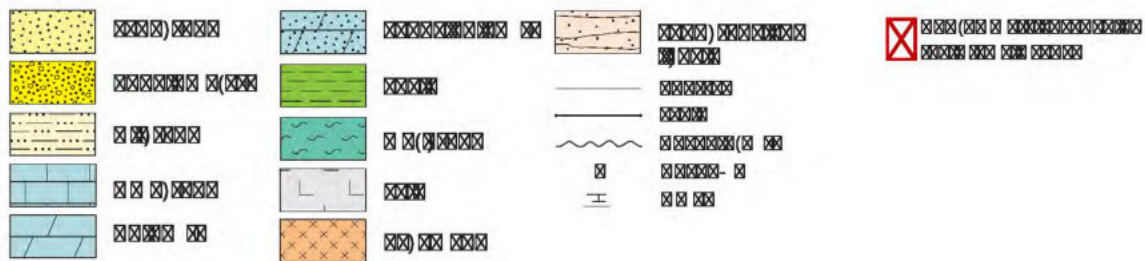
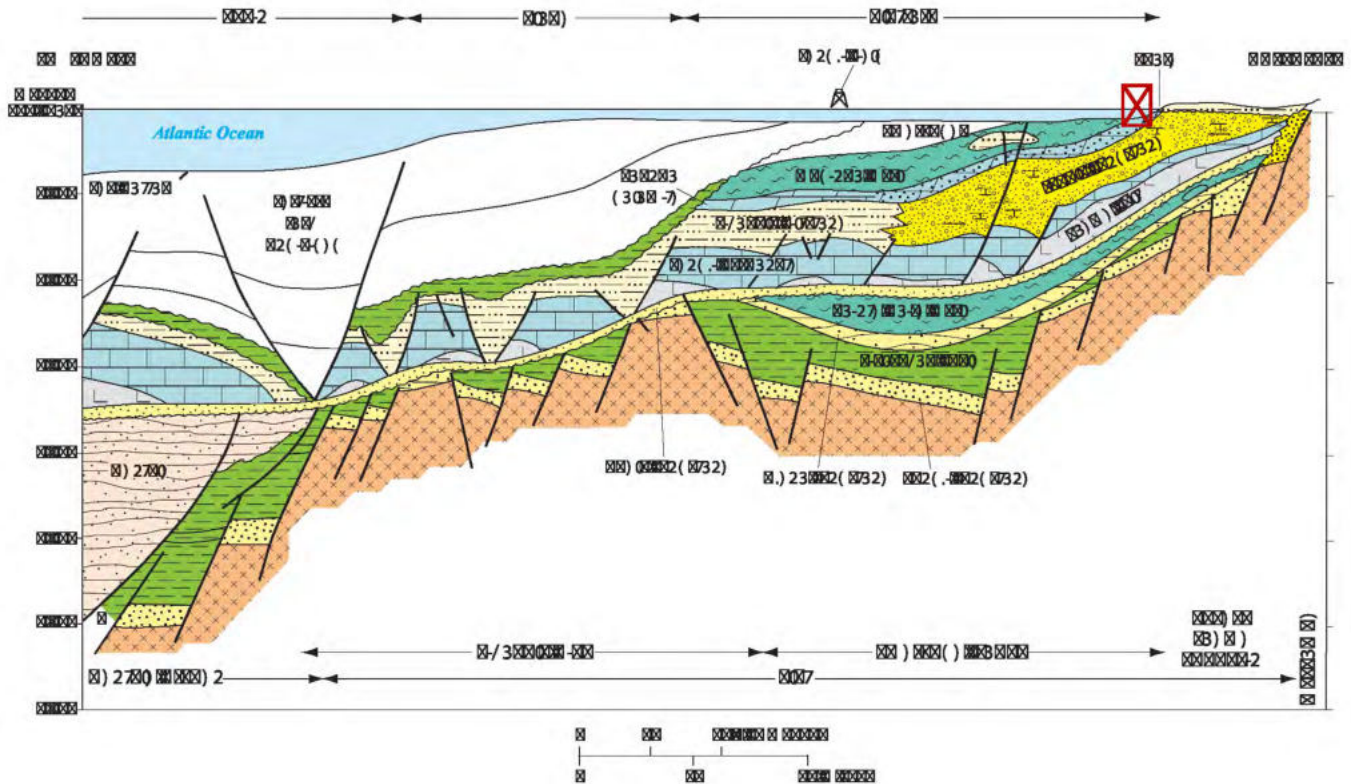
OCT. 2021

JOB No. 6771

FIGURE No. 2b



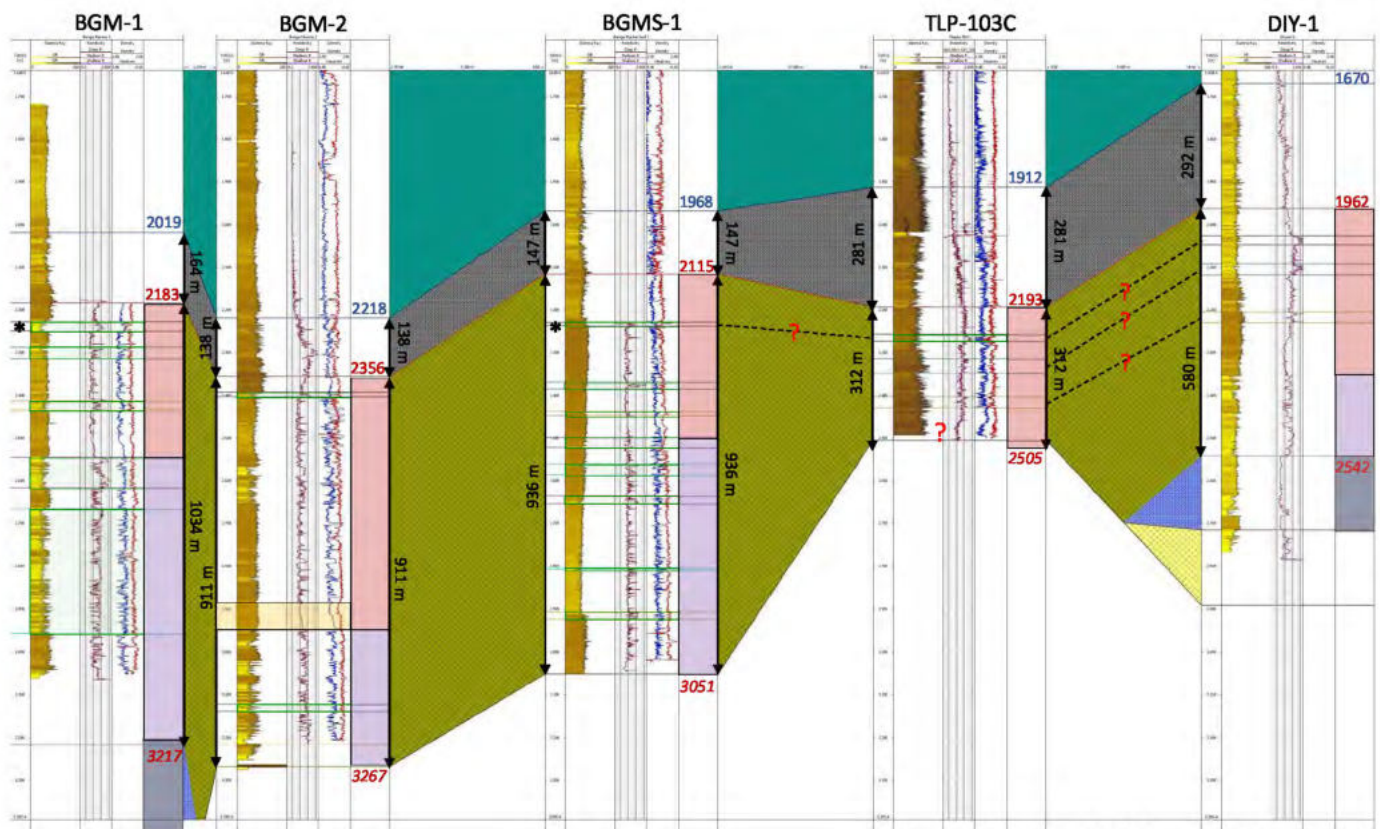
Source: Brownfield, M.E., Assessment of Undiscovered Oil and Gas Resources of the West-Central Coastal Province, West Africa, 2016, p.17



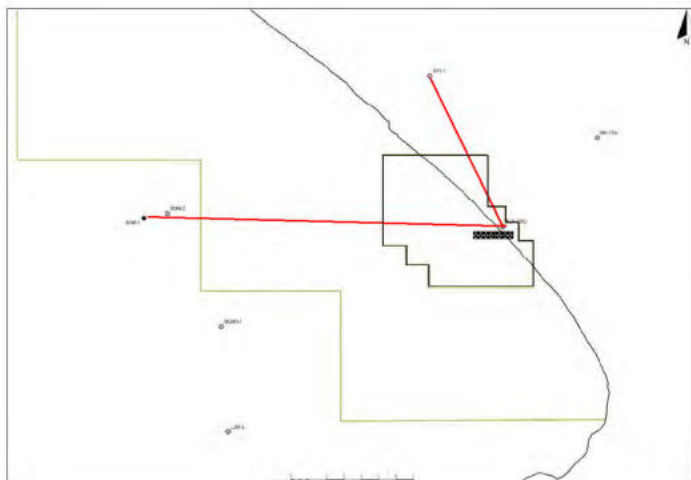
ZENITH ENERGY LTD.

CONGO BASIN
WEST AFRICA
**SW-NE REGIONAL
CROSS SECTION**

OCT. 2021 JOB No. 6771 FIGURE No. 2d



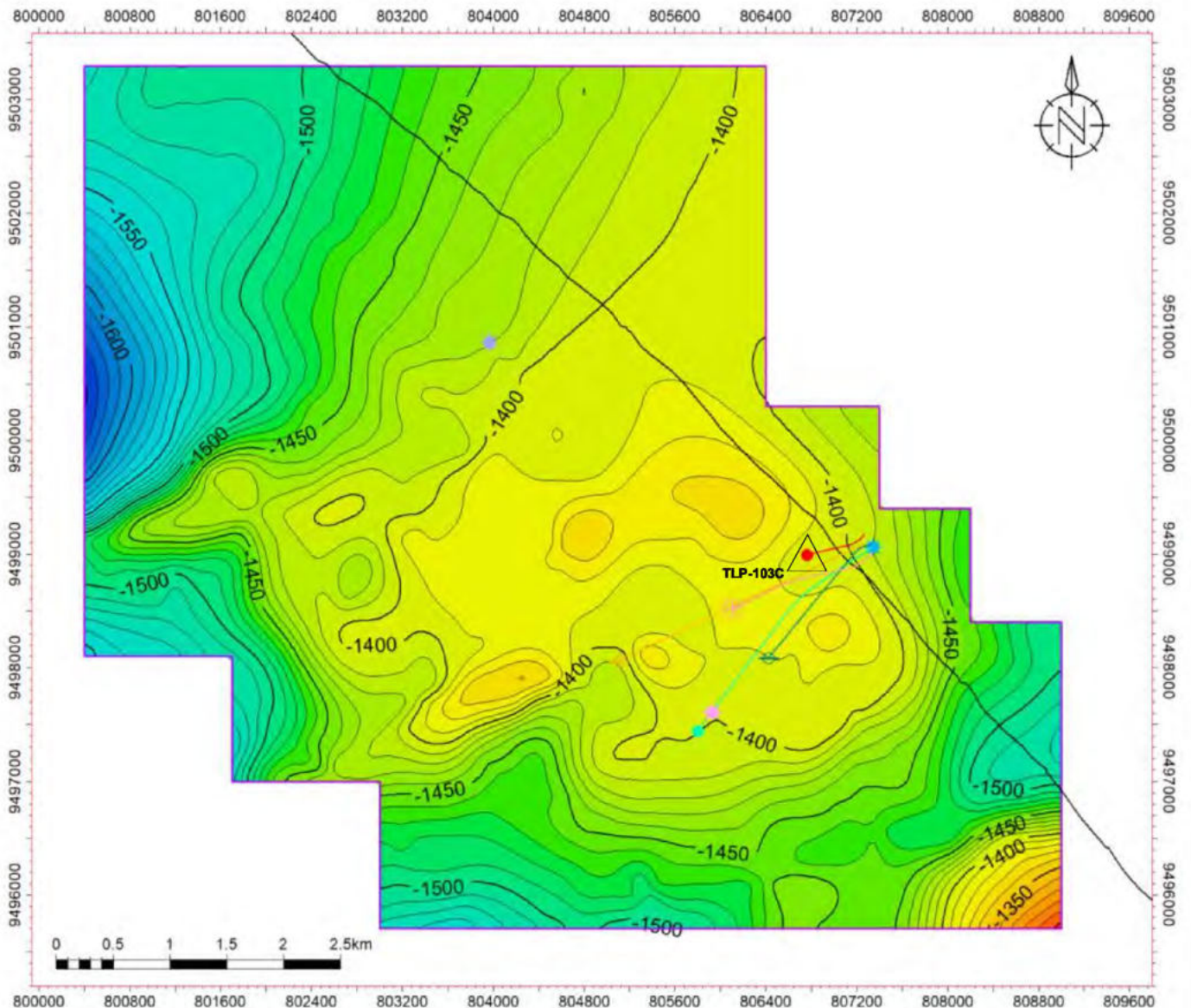
Source: Anglo African Oil & Gas PLC, 2020, Slide 26



ZENITH ENERGY LTD.

**TILAPIA LICENCE
REPUBLIC OF THE CONGO
STRATIGRAPHIC
CROSS SECTION OF THE
DJENO SANDSTONE**

OCT. 2021 JOB No. 6771 FIGURE No. 2f



Source: Anglo African Oil & Gas PLC, 2020, Slide 12

△ Company's Djeno Sandstone Well

ZENITH ENERGY LTD.

TILAPIA LICENCE
 REPUBLIC OF THE CONGO
DJENO SANDSTONE
TIME STRUCTURE MAP
 C.I. = 10 ms

OCT. 2021 JOB No. 6771 FIGURE No. 2g

Table 2

**Summary of Gross Reserves
September 30, 2021**

Tilapia License, Republic of the Congo

<u>Description</u>		<u>Current or Initial Rate STB/d/well</u>	<u>API Gravity (Deg)</u>	<u>Ultimate Reserves (MSTB)</u>	<u>Cumulative Production (MSTB)</u>	<u>Reserves (MSTB)</u>	<u>Reference</u>
<u>LIGHT & MEDIUM OIL</u>							
<u>Probable Undeveloped</u>							
Ten Well Development	Djeno	1,500	40	15,783	0	15,783	Monte Carlo - P50
Recompletions (same wells)	Tilapia	450	40	3,850	0	3,850	Analog
Total Probable				19,633	0	19,633	

Table 2a

MONTE CARLO RESERVE ANALYSIS
Zenith Energy Ltd.
Lower Congo Basin - Tilapia Licence
Djeno Fm.

PAY PARAMETERS :

	Values	Units	Description
P90 gross	33	ft	Low Estimate Gross Pay
P10 gross	115	ft	High Estimate Gross Pay
N/G ratio	0.50	Dimensionless	Net to Gross Ratio
GCF	0.90	Dimensionless	Geometric Correction Factor

NET PAY :

	Values	Units	Description
P90	15	ft	Low Estimate
P10	52	ft	High Estimate
P50	28	ft	Best Estimate
P99	9	ft	Minimum Estimate
P1	86	ft	Maximum Estimate
Mean	31	ft	Most Likely Estimate

AREA :

	Values	Units	Description
P90	3,300	ac	Low Estimate
P10	8,400	ac	High Estimate
P50	5,265	ac	Best Estimate
P99	2,255	ac	Minimum Estimate
P1	12,294	ac	Maximum Estimate
Mean	5,596	ac	Most Likely Estimate

YIELD :

	Values	Units	Description
P90	53	bbls/ac-ft	Low Estimate
P10	217	bbls/ac-ft	High Estimate
P50	108	bbls/ac-ft	Best Estimate
P99	30	bbls/ac-ft	Minimum Estimate
P1	385	bbls/ac-ft	Maximum Estimate
Mean	123	bbls/ac-ft	Most Likely Estimate

RESERVOIR PARAMETERS :

	Low Estimate	High Estimate	
Porosity	10%	16%	P75 & P25 values
SW	45%	30%	P75 & P25 values
FVF	0.80	0.80	P75 & P25 values
RF	10%	20%	P75 & P25 values

MINIMUM ECONOMIC FIELD SIZE :

	Values	Units
MEFS	1,500	Mstb

Table 2a (cont'd)

MONTE CARLO RESERVE ANALYSIS
Zenith Energy Ltd.
Lower Congo Basin - Tilapia Licence
Djeno Fm.

PROSPECTIVE RESOURCES :

	Geological (Mstb)	Commercial (Mstb)	
P90	5,691	5,733	Low Estimate
P10	43,545	43,449	High Estimate
P50	15,742	15,783	Best Estimate
Mean	20,946	20,945	Most Likely Estimate

Table 3a

**Summary of Anticipated Capital Expenditures
Exploration & Development**

September 30, 2021

Zenith Energy Ltd.

Tilapia License, Republic of the Congo

Description	Date	Operation	Capital Interest %	Gross Capital M\$	Net Capital M\$
Probable Undeveloped Reserves					
Tilapia Field, Djeno well	2020	Drill, Complete, and Equip one well	56.0000	5,250	2,940
Tilapia Field, Djeno wells	2021	Drill, Complete, and Equip three wells	56.0000	15,750	8,820
Tilapia Field	2021	Central Oil Handling Facility	56.0000	2,500	1,400
Tilapia Field, Djeno wells	2022	Drill, Complete, and Equip three wells	56.0000	15,750	8,820
Tilapia Field	2022	Central Oil Handling Facility	56.0000	2,500	1,400
Tilapia Field, Djeno wells	2023	Drill, Complete, and Equip three wells	56.0000	15,750	8,820
Tilapia Field, Tilapia wells	2035	Recompletion in Tilapia zone, one well	56.0000	750	420
Tilapia Field, Tilapia wells	2036	Recompletion in Tilapia zone, three wells	56.0000	2,250	1,260
Tilapia Field, Tilapia wells	2037	Recompletion in Tilapia zone, three wells	56.0000	2,250	1,260
Tilapia Field, Tilapia wells	2038	Recompletion in Tilapia zone, three wells	56.0000	2,250	1,260
Total Probable				65,000	36,400

Note: **M\$ means thousands of dollars.**

The above capital values are expressed in terms of current dollar values without escalation.

Table 3b
Summary of Anticipated Capital Expenditures
Abandonment and Restoration

September 30, 2021

Zenith Energy Ltd.

Tilapia License, Republic of the Congo

Description	Well Parameters	Capital Interest %	Gross Capital M\$	Net Capital M\$
Tilapia Field	Abandonment Costs are the responsibility of the Government	0.0000	0	0

Table 4
Summary of Company Reserves and Economics
Before Income Tax

October 1, 2021
(as of September 30, 2021)

Zenith Energy Ltd.
Tilapia License, Republic of the Congo

Description	Net Reserves		Cumulative Cash Flow (BIT) - M\$			
	Oil MSTB	Undisc.	Discounted at:			
			5%/year	10%/year	15%/year	20%/year
Probable Undeveloped Reserves						
Djeno/Tilapia Ten Well Development	5,959	360,778	231,792	161,249	119,129	91,799

M\$ means thousands of dollars

Net resources are the total of the Company's working interest share after deducting the amounts attributable to royalties and profit oil owned by the government.