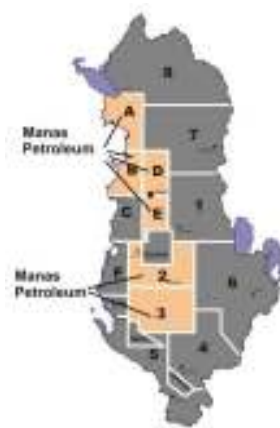


Resource Evaluation Report On Manas Petroleum Corporation's Concessions in Albania (Revision 2.0)



Blocks A, B, D and E

Effective Date: 15 December 2009

**Prepared According To
National Instrument 51-101**

Submitted to:

Manas Petroleum Corporation

Submitted By:



GUSTAVSON ASSOCIATES
5757 CENTRAL AVE. SUITE D BOULDER, COLORADO 80301 USA

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A handwritten signature in black ink, appearing to read "Letha C. Lencioni", written over a light blue rectangular background.

**Letha C. Lencioni
Registered Petroleum Engineer
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1. EXECUTIVE SUMMARY

Gustavson Associates LLC (the Consultant) has been retained by Manas Petroleum Corporation (the Client, Manas) to prepare an updated Resource Evaluation Report regarding the Blocks A, B, D & E in Albania licensed by Manas Petroleum Corporation. This Report considers the primary and recognized plays identified as reasonably expected targets on the concession position. The license position is described as Blocks A, B, D & E that are subject to Production Sharing Contracts (PSC) with the Albanian government that were signed on July 31, 2007 and ratified by the Albanian government as of December 13, 2007, with a total of approximately 780,853 acres (3,160 square kilometers)¹ located along the NW-SE trending fold belt of northwestern Albania. The plays include potential conventional exploration targets involving sub-thrust hydrocarbon accumulations in fractured carbonates. This Report is limited to a report on the potential undiscovered oil and gas resources underlying the license position. This Report does not attempt to place a value thereon.

The Republic of Albania (*Republika e Shqipërisë*) is located on the eastern side of the Adriatic Sea in Southeast Europe and has significant natural resources that include oil and gas.

Manas Petroleum Corporation is a Baar, Switzerland headquartered international oil exploration and development company with offices in Kyrgyzstan and Albania. It was founded as a private company in 2004 and has spent approximately US\$7 million acquiring and advancing its Kyrgyz and Albanian projects. In Kyrgyz, Manas has acquired and farmed out to Santos International Holdings Pty Ltd., 70% of its interest in 6 licenses covering 778,876 acres (3,152 square kilometers). In addition to the Albania concessions in Blocks A, B, D & E, Manas is in the process of obtaining the Block 2 & 3 concession in Albania, concessions in southern Chile and in Mongolia.

¹ All values are presented in both US standard and metric units. Standard conversions were used for distance, area and volume values. For Oil, a 33° API was assumed for a 7.33 Bbl/tonne conversion; for Condensate a 50° API was assumed for an 8.41 Bbl/tonne conversion and for Gas a 35.315 ft³/m³ conversion was used.

In general, based on field geological surveys there are many indications showing an intensive structural compression resulting in thrusting generally from the East to the West which sets up a NW-SE trending fold belt with subthrust play potential.

During the early 1960s the interpretation of seismic data began to reveal subsurface structures that resulted in the discovery of deeper subthrust carbonate reservoirs. A number of discoveries were made in Cretaceous to Eocene limestones related to thrust anticlines formed during the Neogene in the Ionian Zone. The most notable of these fields are Visoka (1963), Gorisht (1966), Ballshi (1967), Cakran (1977), Amonica (1980), and Delvina (1987).

The existing 2D seismic data over the concession area totals approximately 2,485 miles (4,000 kilometers) and was shot by AlbPetro, Shell, and Coparex. Manas has reprocessed approximately 411 miles (662 kilometers) of the existing data and has acquired 118 miles (190 kilometers) of new data in Blocks A and B at a cost of US\$3.0MM. Manas intends to acquire 65 miles (105 kilometers) of new seismic data along with reprocessing 186 miles (300 kilometers) of existing seismic in Blocks D and E. At this time of this report, Manas has defined two new prospects, Jubani and West Gjurice with the benefit of the new and reprocessed old seismic. Manas is continuing the reinterpretation of the seismic data over their other nine prospects; however, preliminary results confirm the presence of these prospects.

Gustavson has audited the Manas seismic interpretation and has made modifications to the Manas interpretation relative to the size of the potential accumulations of hydrocarbons where necessary. Since the interpretation of the nine prospects that were reviewed previously had not changed, Gustavson did not revise our interpretation.

The Manas Blocks are located north of high-sulfur, heavy oil production, and recent deep oil discoveries show the deeper carbonate sections to contain 30° - 35° API low sulfur oil at depths below 9,842 feet (3,000 meters).

The primary exploration targets are sub-thrust fractured carbonate reservoirs similar to those discovered in the 1990s in the Apennines of Italy. During the same time Shell and Coparex

acquired approximately 1,118 miles (1,800 kilometers) of seismic on these concessions and discovered a deep under-thrust structure within the blocks that, by their calculations, has the potential to contain a combined 820 million barrels (MMBO) or 112 million tonnes of recoverable oil. Manas has this opportunity because Shell and Coparex suspended all exploration activity and abandoned the blocks in reaction to the extreme unrest in Albania and the conflict in neighboring Kosovo allowing Manas to later acquire these superbly defined, giant, virtually drill ready prospects.

Manas' primary exploration targets range from 4,265 feet to 18,045 (1,300 meters to 5,500 meters), sub-thrust fractured carbonate reservoirs. Seismic imaging from the 1990s revealed a large carbonate sub-thrust, extending over blocks A, B, D and E on the Manas blocks known as the Ionian carbonate, which is the targeted reservoir and holds all known Albanian onshore reserves.

The Ionian thrust sheet's source rocks are more ancient Jurassic age carbonates and shales formed from 199 to 145 million years previous. The Jurassic carbonates are covered by Cretaceous through Eocene age limestone reservoir rocks that are then sealed by thick Miocene age (Neogene) flysch.

A 2005 light oil discovery by Occidental Petroleum approximately 31 miles (50 kilometers) south of the Manas blocks, has established that the same thrust sheet as the Tirana sub thrust anticline is Ionian and does in fact contain oil. This fact substantially reduces the A, B, D, E blocks' exploration risk as it greatly increases the probability that the giant anticline outlined by Shell and Coparex seismic is in fact the oil-saturated Ionian formation. In addition, the Dajc #2 well located 7.5 miles (12 kilometers) west-southwest of the new Jubani Prospect in Block A, found bitumen and oil staining in the target interval. The well also tested saltwater from the formation. These facts indicate that hydrocarbons and fractures are present in the target interval near the Manas prospects.

The plays include acreage that would be considered exploratory and carry with them the associated risks of success. A probabilistic resource estimate has been prepared for eleven

primary prospects within the exploratory blocks, for three cases: 1) Oil with associated gas, 2) Oil with gas cap, and 3) Gas with condensate. Resources have been estimated herein in accordance with resource definitions from the Canadian Oil and Gas Evaluation Handbook, the standard called for in the Canadian National Instrument 51-101 Oil and Gas Resource Reporting Guidelines. All of the resources in this report are 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 subclassified based on project maturity.²

These resources are classified as Prospective Resources based on the commercial risk as defined by the Society of Petroleum Evaluation Engineers, (Calgary Chapter): *Canadian Oil and Gas Evaluation Handbook, Second Edition*, Volume 1, September 1, 2007, pg 5-9 to 5-10. In order to assign recoverable resources, a development plan consisting of one or more projects needs to be defined. Estimates of recoverable quantities are stated in terms of the sales products derived from a development program, assuming commercial development. It must be recognized that reserves, contingent resources and prospective resources involve different risks associated with achieving commerciality. The likelihood that a project will achieve commerciality is referred to as the “chance of commerciality.” The risk of commerciality for Prospective Resources is that not all exploration projects will result in discoveries. The chance that an exploration project will result in the discovery of petroleum is referred to as the “chance of discovery.” Thus, for an undiscovered accumulation the chance of commerciality is the product of two risk components – the chance of discovery and the chance of development.

Table 1.1 through Table 1.3 below summarize³ the resource estimates for Cases 1 through 3, respectively. These estimates represent the likely size of the resource, if present, and have not been adjusted for risk of failure. There is no certainty that any portion of the resources will be

² Society of Petroleum Evaluation Engineers, (Calgary Chapter): *Canadian Oil and Gas Evaluation Handbook, Second Edition*, Volume 1, September 1, 2007, pg 5-7

³ The metric equivalent Tables of Volumes can be found in section 7

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

Table 1.1 Summary of Prospective Resource Estimates⁴, Case 1 – Oil-Filled

Prospect Name	Prospective Oil in Place, Million Barrels			Prospective Recoverable Oil Resources, Million Barrels			Prospective Recoverable Associated Gas Resources, Billions of Cubic Feet		
	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	1,460	2,628	4,229	345	644	1,090	350	652	1,112
Rinas Prospect	1,349	2,509	4,273	324	611	1,106	324	617	1,131
Nikel Prospect	815	1,516	2,402	196	373	620	196	375	620
Kamez Prospect	876	1,496	2,302	208	367	595	209	369	597
Sauk Prospect	989	1,633	2,477	229	404	642	226	407	649
Rova Prospect	143	222	328	33	54	85	33	55	87
Papri Prospect	797	1,426	2,209	188	351	570	188	352	588
Kashari Prospect	443	742	1,247	104	184	318	105	185	321
Rova W Prospect	81	170	283	20	42	73	19	42	73
Jubani Prospect	308	617	1,151	72	151	293	70	154	303
W Gjurice Prospect	260	466	711	61	114	187	63	115	188
Sum of Prospects	7,521	13,425	21,612	1,780	3,295	5,579	1,783	3,323	5,669

Table 1.2 Summary of Prospective Resource Estimates, Case 2 – Oil with Gas Cap

Prospect Name	Prospective Oil in Place, Million Barrels			Prospective Recoverable Oil Resources, Million Barrels			Prospective Recoverable Total Gas Resources, Billions of Cubic Feet		
	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	677	1,231	2,068	160	304	538	1,887	3,377	5,670
Rinas Prospect	624	1,171	2,109	148	290	540	1,669	3,142	5,558
Nikel Prospect	372	709	1,196	88	175	310	1,023	1,972	3,224
Kamez Prospect	398	704	1,153	93	173	297	1,103	1,943	3,109
Sauk Prospect	438	773	1,236	102	190	320	1,235	2,119	3,364
Rova Prospect	64	105	166	15	26	43	180	295	456
Papri Prospect	360	667	1,115	85	164	283	989	1,816	2,970
Kashari Prospect	200	347	623	47	86	158	553	961	1,683
Rova W Prospect	37	80	140	9	20	36	99	212	364
Jubani Prospect	136	293	567	33	72	144	252	551	1,080
W Gjurice Prospect	120	218	356	28	53	93	343	611	964
Sum of Prospects	3,426	6,298	10,729	808	1,553	2,762	9,333	16,999	28,442

⁴ These resource estimates are based on P₉₀, P₅₀ and P₁₀ values from probabilistic analysis, and as such the arithmetic sum of the estimates for individual reservoirs and plays do not equal the estimates based on probabilistic simulation of the total system. This is because the parameters of each prospect vary independently of each other in the probabilistic simulation. The client requested that the Sum of Prospects be presented as the arithmetic total.

Table 1.3 Summary of Prospective Resource Estimates, Case 3 – Gas-Filled

	Prospective Gas in Place, Billions of Cubic Feet			Prospective Recoverable Gas Resources, Billions of Cubic Feet			Prospective Recoverable Condensate Resources, Million Barrels		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	4,615	8,178	13,342	3,401	6,105	10,047	22	58	118
Rinas Prospect	4,219	7,579	13,003	3,103	5,669	9,856	21	54	112
Nikel Prospect	2,590	4,793	7,575	1,948	3,576	5,667	12	34	66
Kamez Prospect	2,755	4,718	7,350	2,041	3,521	5,529	13	33	65
Sauk Prospect	3,057	5,207	7,798	2,278	3,913	5,907	14	37	70
Rova Prospect	461	723	1,077	342	541	809	2	5	10
Papri Prospect	2,455	4,415	6,853	1,834	3,285	5,184	12	31	61
Kashari Prospect	1,399	2,307	3,921	1,041	1,724	2,975	7	17	34
Rova W Prospect	242	515	848	180	385	641	1	4	7
Jubani Prospect	410	845	1,593	301	632	1,206	2	6	14
W Gjurice Prospect	754	1,327	2,000	552	993	1,523	4	9	18
Sum of Prospects	22,957	40,607	65,360	17,021	30,344	49,344	110	288	575

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3. INTRODUCTION

3.1 AUTHORIZATION

Gustavson Associates LLC (the Consultant) has been retained by Manas Petroleum Corporation (the Client, Manas) to prepare a Resource Evaluation Report regarding the Blocks A, B, D, & E position in Albania licensed by Manas Petroleum Corporation.

3.2 INTENDED PURPOSE AND USERS OF REPORT

The purpose of this Report is to provide independent information and opinions on the Manas Petroleum Corporation concessions and their favorability to investors, who might choose to support the Client's exploration effort in Albania. The intended users of the Report are the officers and employees of Manas Petroleum Corporation and any potential investors or financiers with whom they may choose to share it.

3.3 OWNER CONTACT AND PROPERTY INSPECTION

This Consultant has had occasional contact with the Client including contact up to the date of this Report. This Consultant has personally inspected some of the subject properties.

3.4 SCOPE OF WORK

This Report is intended to describe and quantify the potential oil and gas resources contained within the license area that is located in the concession Blocks A, B, D and E granted by the Albanian government.

3.5 APPLICABLE STANDARDS

Resources have been estimated herein in accordance with resource definitions from the Canadian Oil and Gas Evaluation Handbook, the standard called for in the Canadian National Instrument

51-101 Oil and Gas Resource Reporting Guidelines. The estimates are also in accordance with the resource definitions in the recent “Petroleum Resources Management System,” issued by the Society of Petroleum Engineers and the World Petroleum Congress in March 2007. The National Instrument requires disclosure of specific information concerning prospects, as will be provided in Sections 4, 5 and 6 of this Report.

3.6 ASSUMPTIONS AND LIMITING CONDITIONS

This Report is limited to a report on the estimated resources of the license area. This Report does not attempt to place a value thereon.

Gustavson Associates reserves the right to revise its opinions of reserves and resources, if new information is deemed sufficiently credible to do so.

The accuracy of any resource estimate is a function of available time, data, and of geological, engineering, and commercial interpretation and judgment. While the resource estimates presented herein are believed to be reasonable, they should be viewed with the understanding that additional analysis or new data may justify their revision and we reserve the right to make such revision.

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.

3.7 INDEPENDENCE/DISCLAIMER OF INTEREST

Gustavson Associates LLC has acted independently in the preparation of this Report. The company and its employees have no direct or indirect ownership in the property evaluated or the area of study described.

Our fee for this Report and the other services that may be provided is not dependent on the amount of resources estimated.

4. ALBANIA

4.1 GEOGRAPHY

Albania is located on the eastern side of the Adriatic Sea in Southeast Europe with Montenegro to the North, Kosovo to the Northeast, Macedonia to the East and Greece to the Southeast (Figures 4.1 and 4.2). The capital of the Republic of Albania (*Republika e Shqipërisë*) is Tirana, which has 800,000 inhabitants, and is located near the center of the country. Albania has a total area of 11,100 square miles (28,750 square kilometers). Its coastline is 225 miles (362 kilometers) long and stretches along the Adriatic Sea and the Ionian Sea. The lowlands of the west face the Adriatic Sea with the mountain area known as the Albanides to the east.



Figure 4.1 Albania Locator Map

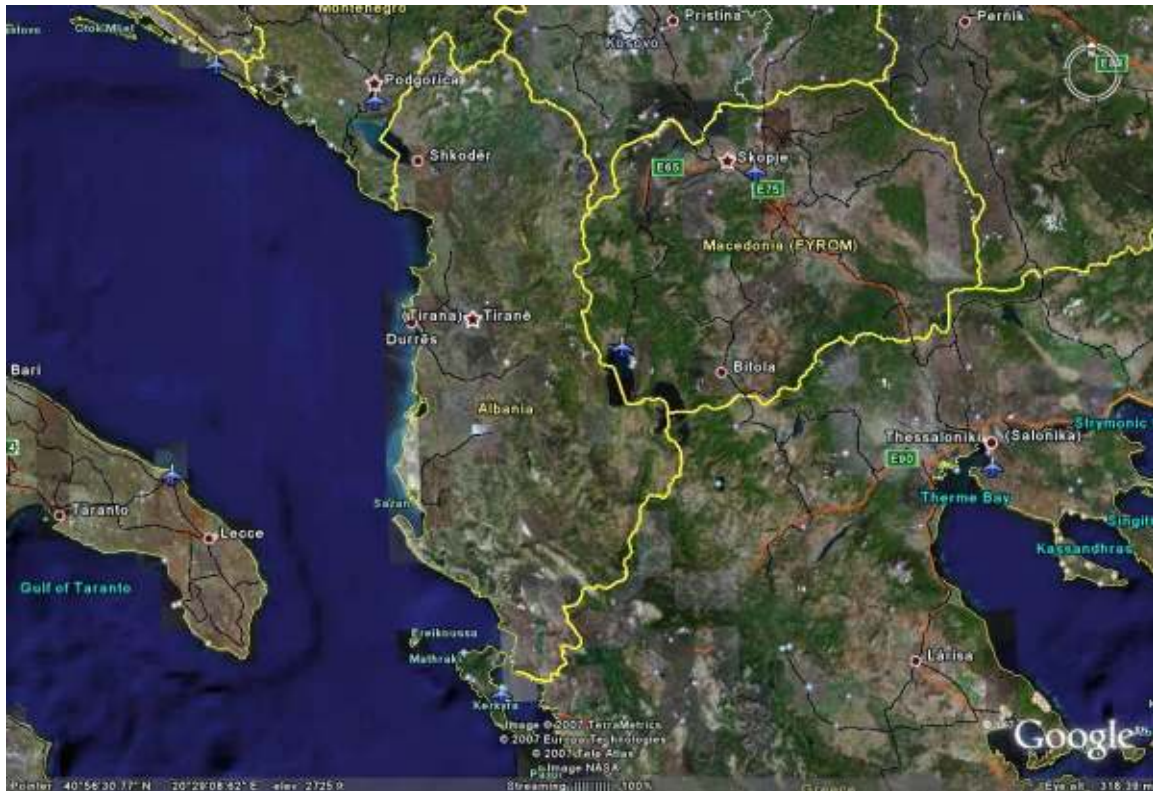


Figure 4.2 Google-Earth image of Albania and surrounding countries

The 70% of the country that is mountainous is rugged and often inaccessible. The highest mountain is Korab situated in the district of Dibra (Northeastern Albania), reaching up to 9,032 ft (2,753 meters). The country has a continental climate at its high altitude regions with cold winters and hot summers and a mild climate towards the west along the Adriatic Sea.

As of July 2007, Albania's population is estimated at 3,600,523. The dominant language is Albanian, with two main dialects, Gheg and Tosk. Many Albanians are also fluent in English, Italian and Greek.

Albania is currently a potential candidate for membership in the European Union and NATO. Since the fall of communism in 1990 Albania has made an impressive recovery, building a modern and diversified economy. Albania has launched economic programs towards a more open-market economy. Since 2000, Albania has experienced a rapid expansion of its economy. Recent administrations have also improved the country's infrastructure and opened competition

in seaports, railroads, telecommunications, electricity generation, natural gas distribution and airports.⁵ Albania's economy is divided evenly between agriculture and industry and includes a significant natural resources sector that is primarily oil, gas, coal, chromium and copper. Current oil production from existing fields is approximately 192,000 Barrels of Oil (26,194 tonnes) per month. Despite the presence of natural resources, Albania is historically the poorest country in Europe.

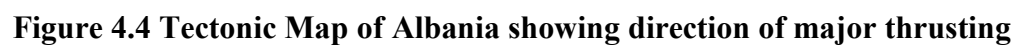
As shown on Figure 4.3 below, Albania (Albanides) is located between the Dinerides in the North and Hellenides in the South, and fits into the southern branch of the Alpine Mediterranean Orogenic Belt.



Figure 4.3 Geologic Map of Albania and Surrounding Area

⁵ Wikipedia

The Geological History of Albania is a tale of periods of intensive thrusting (Figure 4.4). Based on field geological surveys, there are a lot of indications of intensive thrusting generally from the East to the West with a horizontal displacement range between 9 - 31 miles (15 - 50 kilometers).



Albanian rocks record depositional and tectonic activities spanning from the Early Paleozoic to the present. Three dominant periods of sedimentation are seen; phase one spanning the Ordovician through Devonian, with a hiatus in the Carboniferous, followed by Permian activity; phase two, extending from the Triassic through the Cretaceous, and phase three Paleocene to Recent. These intervals of sedimentation are affected by numerous tectonic/orogenic intervals in the Ordovician (Caledonian) Carboniferous (Hercynian), Triassic, Jurassic, Late Cretaceous, Oligocene, Miocene and Pliocene. Oligocene through Pliocene tectonism reflects continuation of the Alpine Orogeny related to subduction of the Adriatic oceanic plate beneath present day Albania.

The rocks of Albania, in its intramontane regions, are separated by thrust faults and tectonized zones with various age sediments, volcanic deposits, intrusive igneous rocks, “ophiolitic crustal fragments,” and mid-to low-grade metamorphic rocks comprising these thrust sheets (Figure 4.5, regional geologic map of Albania).

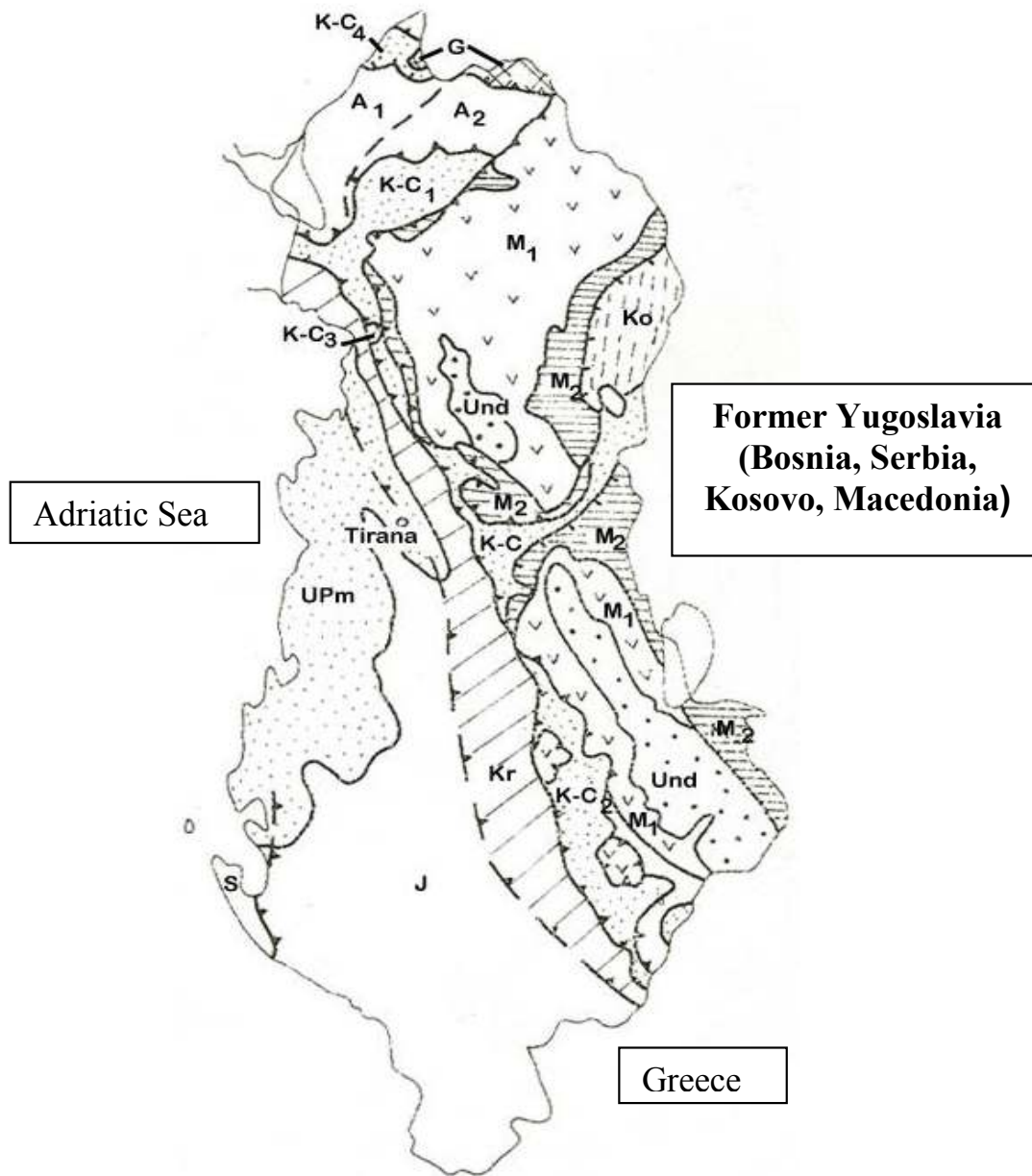


Figure 4.5 Geologic and tectonic provinces of Albania

S= Sazani Zone; UPM and J=Ionian Zone; Kr=Kruja Zone;
 KC=Cukali-Krasta Zone; M1, M2=Mirdita Zone; Ko=Korabi Zone;
 A1, A2 = Albanian Alps Zone; G=Gashi Zone; Und=Pliocene to recent
 Intermontane basin fill

Within these allocthonous tectonic slices are windows into the underlying para-autocthonous platformal rocks (refer to Figure 4.6, Korabi and Krasta zone nappes, Peshkopi region).

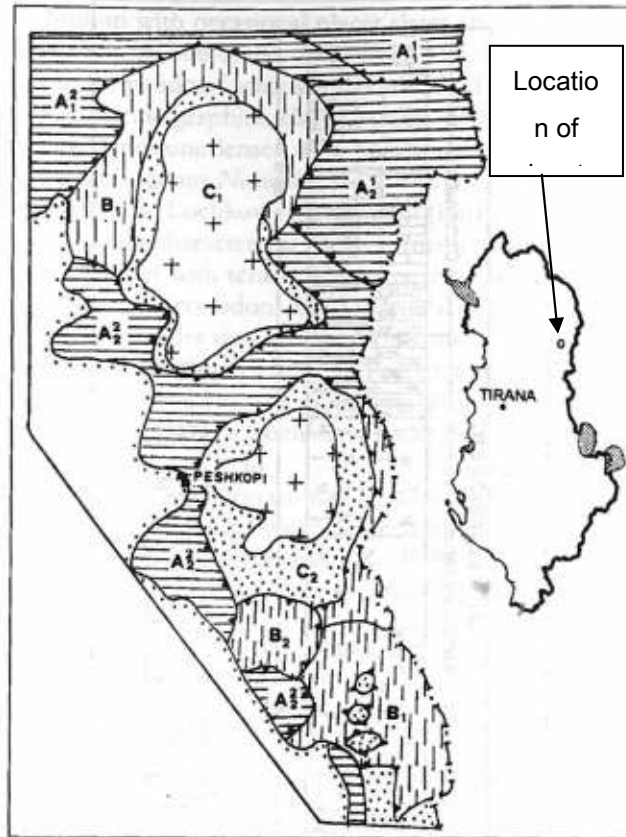


Fig. 60: Tectonic map of the Peshkopi region (after MELO et al. 1991). Tectonic nappes (A, B):

- A. Upper nappe (Korabi Zone):
 - A₁ – Ordovician to Devonian terrigenous deposits,
 - A₁¹ – Kollovozi Sub-zone, A₁² – Çaja Sub-Zone.
 - A₂ – Terrigenous-carbonatic and volcanogenic deposits (mainly Silurian-Devonian, Triassic).
 - A₂¹ – Korabi Highland Sub-Zone, A₂² – Grama Nappe.
- B. Lower nappe (Krasta Zone):
 - B₁ – Early flysch and Cretaceous limestones,
 - B₂ – Later terrigenous flysch (Maastrichtian to Palaeocene).
- C. Autochthon:
 - C₁ – Permo-Triassic gypsum (tectonic window),
 - C₂ – Eocene and Oligocene flysch.

Figure 4.6 Overlapping thrust nappes in northeastern Albania

Note windows (fensters) into underlying parautocthonous rocks of the Albanian platform: Permo Triassic evaporites and Eocene to Oligocene marine clastics.

(from Meco and others, 2000)

All of these tectonic features are indicative of accreted crustal provinces, reflecting successive crustal accretion from east to west of transitional, oceanic and continental crust through time with the closing of the proto-Tethyan ocean (Figure 4.7, model for accretion of Mirdita zone ophiolites). In front of and to the west of these tectonic zones is an Oligocene to Recent accretionary foredeep basin, with initial carbonate platform, shelf, slope and basin sedimentation of Triassic to Eocene age followed by clastic “flysch to molasse” sedimentation in a marine to alluvial setting. During tectonically quiet intervals without voluminous clastic input, carbonate sedimentation resumed, extending into the Middle Miocene.

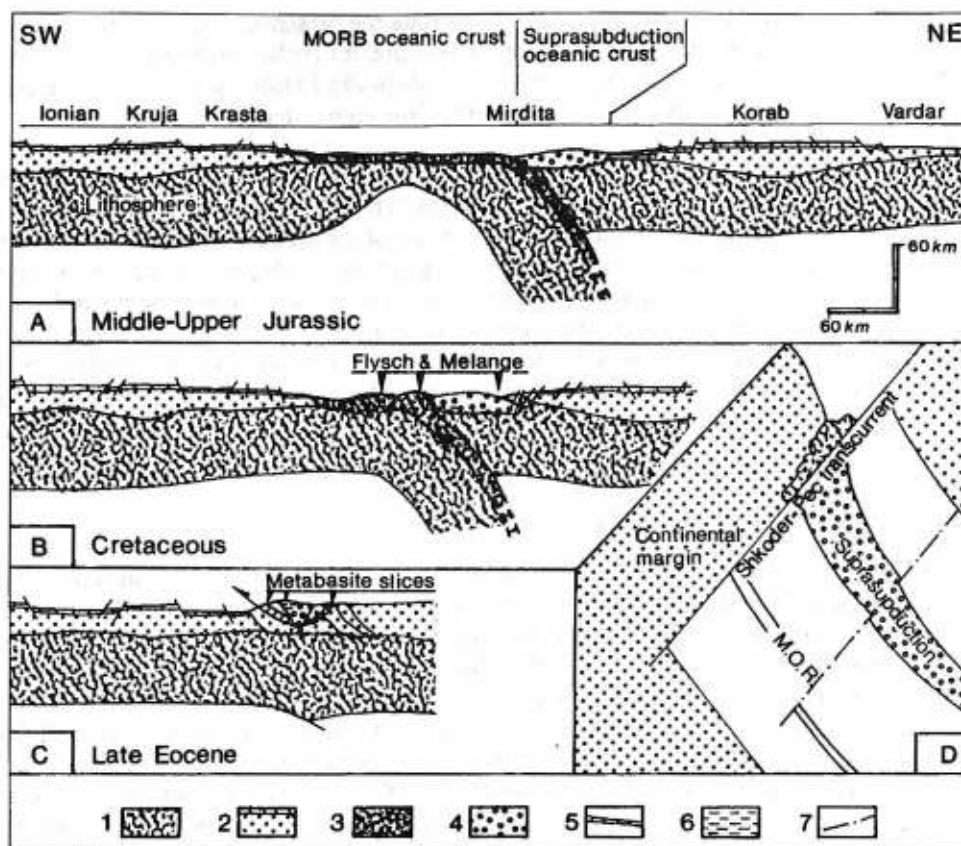


Fig. 73: Palaeogeographical evolution of the Albanian ophiolites from the Jurassic to the Eocene (from BECCALUVA et al. 1994). 1. Lithospheric mantle peridotites, 2. Continental crust and its Mesozoic sedimentary cover, 3. MORB-type oceanic crust, 4. Suprasubduction-type oceanic crust, 5. MORB-type deformed metabasites (greenschists to amphibolite facies), 6. Tithonian to Lower Cretaceous flyschoidal sediments and ophiolitic melange, 7. Thrusts and faults.

Figure 4.7 Model for ophiolite accretion in Albania

A, B, and C above illustrate successive closure of the Tethyan Ocean from the Jurassic to Eocene.
(from Meco and others, 2000)

There is geologic evidence of a westward migrating fold-thrust belt with in- and out-of-sequence thrusting (Balluri and others, 2003). An evaporitic basin fill of Late Permian to Early Triassic age is a locus for thrust planes and later diapiric piercement of overlying thrust sheets (refer to Figure 4.8 through Figure 4.11). To the north of the deeper thrusting, (Figure 4.6), thrusting and folding are more evident in the overlying Oligocene and younger flysch and molasse deposits. In effect these younger clastic units are transported basin fill (i.e. piggy-back basins) riding on the deeper thrust sheets involving the Ionian zone carbonates and evaporites.

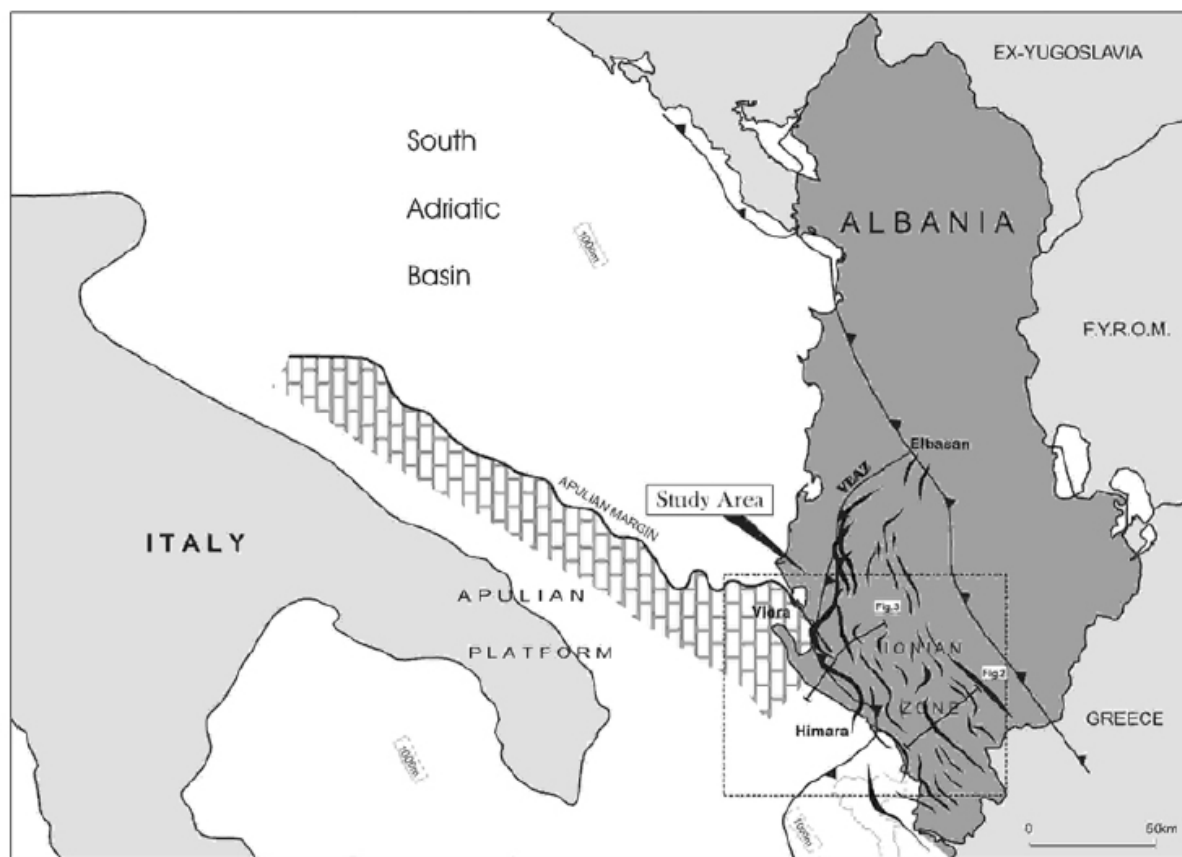


Figure 1. Main structural elements, SW Albania.

Figure 4.8 Generalized structural map of south central Albania

Fold axes in black bordered by major thrust fault boundaries, between structural Provinces. Note position of Apulian platform in Italy relative to Albania. Structural cross sections are shown in Figure 4.9 and Figure 4.10

(from Ballauri and others, 2003).

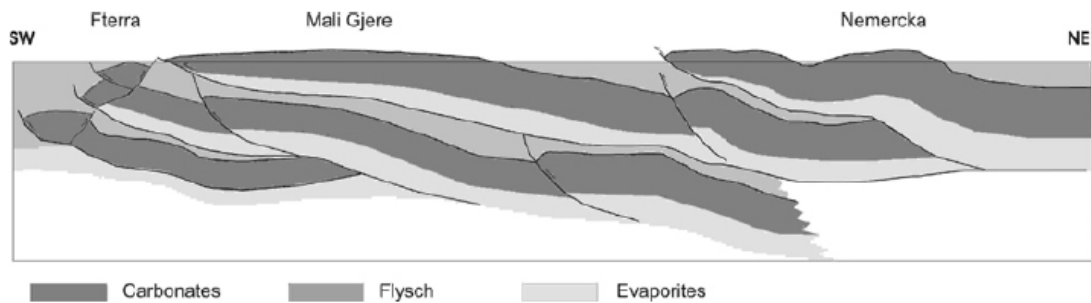


Figure 2. Simplified geological cross section across Fterra-Nemercka area, based on seismic lines, S Albania.

Figure 4.9 Normal sequence of thrusting from E to W of older over younger rocks
Oligocene flysch to Eocene to Jurassic carbonates overlie and detach / thrust on Permo-Triassic evaporates (*from Ballauri and others, 2003*).

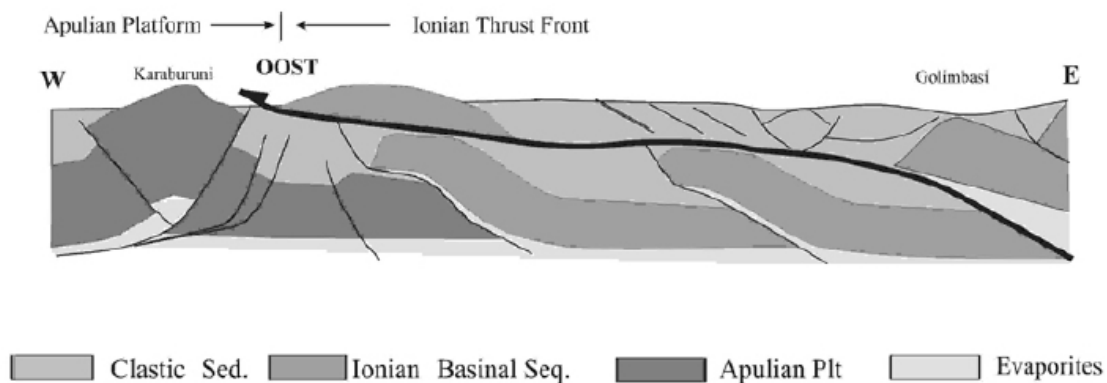


Figure 3. Simplified geological cross section across Llogora-Golimbasi area, based on seismic lines, SW Albania.

Figure 4.10 Out of Sequence thrusting placing younger over older rocks
Note back thrust in Apulian platform carbonates in front of imbricate thrust sheet of Ionian Zone. Evaporites form the basal detachment of the thrust sheets (*from Ballauri and others, 2003*).



Figure 4.11 Outcrop in Swiss Alps Showing a Thrust Fault with Fold

Thrusting in the Kruja and Ionian zones is bracketed by the age of the Oligocene to Pliocene clastic rocks involved in the deformation. Thrusting may have begun further to the East as early as the Oligocene, as indicated by the Oligocene clastic “flysch” deposited in the foredeep basin.

These Oligocene sediments are now folded as a result of the thrust front and sheets migrated westward from the Oligocene to Pliocene time. With westward migration of thrusting and attendant uplift to the east, clastic sediments were shed to the west into the evolving peri-Adriatic foredeep basins of the Ionian Zone. Figure 4.12 shows a generalized chronostratigraphy and hydrocarbon geology of the External Albanides.

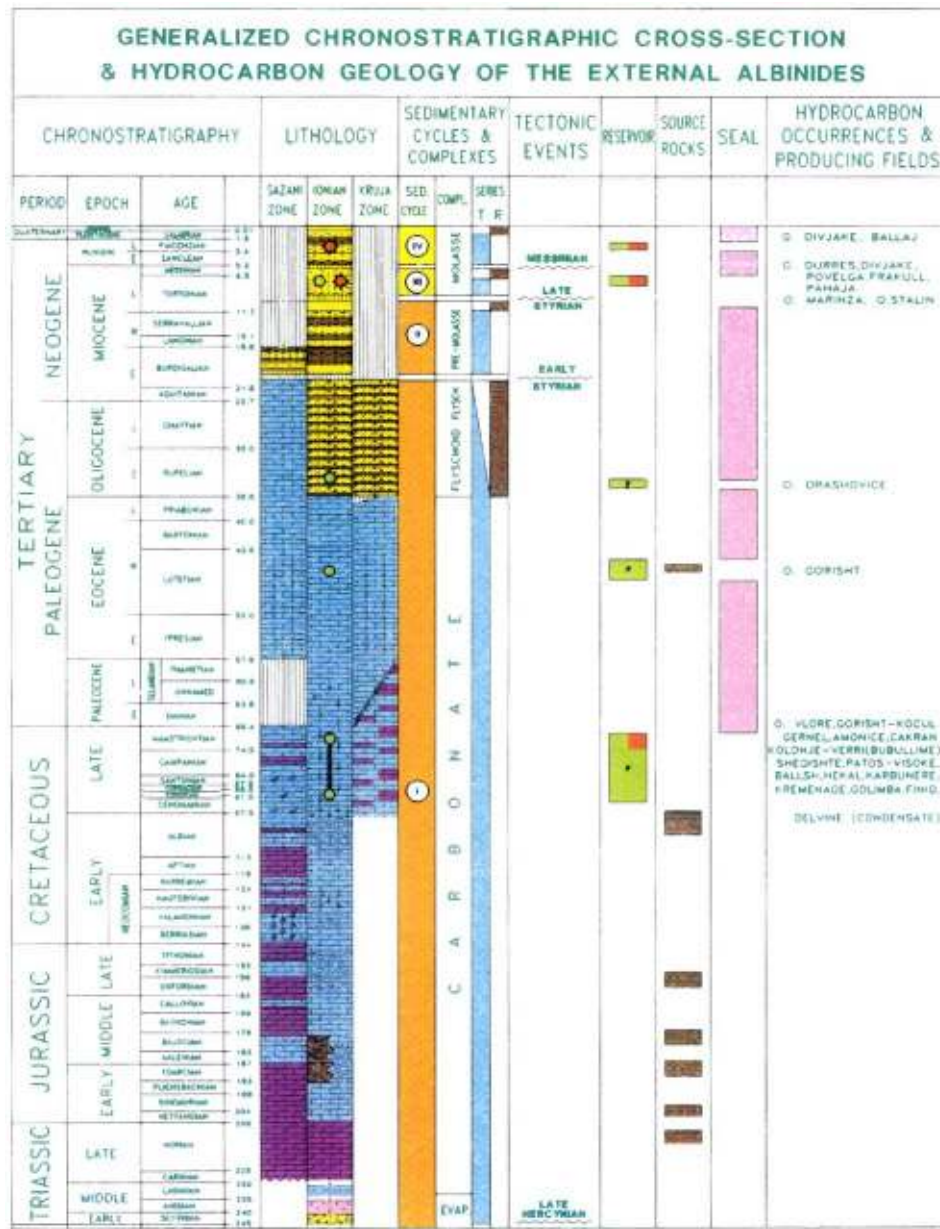


Figure 4.12 Internal Albanides Ophiolites of Mid to Upper Jurassic and Metamorphosed of Paleozoic to Paleocene

Sediments are present. No Oil Discoveries to date

External Albanides Thick carbonate series of Mesozoic to Tertiary and Molasse sediments of Oligocene to Quaternary have been encountered.

GOOD to EXCELLENT quality Source Rocks of Upper Triassic to Cretaceous have been proved. Fractured limestones of Cr-Pg2 and sandstones of Miocene to Pliocene are proven as good reservoirs. Flysch and clastic shaly section from Oligocene to Pliocene have been proven to be Good to Excellent Seals. A number of Oil and Gas fields have been discovered in the Ionian Zone.

4.3 PETROLEUM ACTIVITY HISTORY

The ancient Romans and Greeks mined bitumen surface occurrences in southwestern Albania at Selenice about nineteen centuries ago and gas seeps known as ‘eternal fires’ have been known since ancient times. In 1912, Austrian and Italian geologists started systematic mapping where oil seeps were observed in southwest Albania. Similar seeps also occur in the northwestern part of Albania where they do not occur at surface expressions of faults but the oil comes out of the outcropping carbonates. This led to the drilling of a well in 1918 that produced over 20 Bbl (2.7 tonnes) of oil per day for 2 years in Drashovica Field in a shallow 919 feet (280 meters) Oligocene clastic reservoir.

During 1925, the Albanian Government granted onshore Petroleum Exploration Concessions to Italian, French, British and American companies. Intensive drilling over the next few years focused mainly on the areas of the surface seeps, tar sands in Kasnica, Visoka, Kucova and other bitumen occurrences. This drilling led to the discovery of several Upper Miocene age clastic oil fields near Fier, such as Patosi (1927) and Kucova (1928), in the south-central part of Albania. In 1950, Soviet technicians and equipment entered the country to build a refinery at Cerrik. Onshore seismic acquisition began in 1951 and during the early 1960s the seismic data began to reveal the subsurface structures that resulted in the discovery of deeper subthrust carbonate reservoirs. A number of discoveries were made in Cretaceous to Eocene limestones related to thrust anticlines formed during the Neogene in the Ionian Zone. The most notable of these fields are Visoka(1963), Gorisht(1966), Ballshi(1967), Cakran(1977), Amonica (1980) and Delvina (1987).

From 1961 to 1971, Chinese technicians replaced the Soviet technicians until 1978 when the Albanian state oil company DPNG took over exploration and development operations. In 2001, Occidental announced the Spiragu 1 discovery when they tested and proved the presence of light oil in the Cretaceous-Eocene subthrust carbonate of the Sqepuri structure in the Block 2 concession in Albania.

4.4 CONCESSIONS

During 1925, the Albanian Government granted Petroleum Exploration Concessions to:

FSI (Ferro vie dell Stato Italiana), APOC (Anglo-Persian Oil Company), Syndicat Franco-Albanais, A.I.P.A. (Azienda Italiana Petroli Albanesi, a subsidiary of the Italian State Railways), SIMSA (Soc.Ital.Min.di Selenizza), and Standard Oil Co.

In 1990, following 50 years of isolation, the Albanian Government declared the opening of a licensing round for the offshore areas. The following five Petroleum Agreements were signed and entered into: Rodoni Block with Deminex and OMV, Adriatiku-2 Block (see Figure 4.13) with AGIP, Adriatiku-3 Block with Occidental Petroleum, Adriatiku-4 Block with Chevron, and Joni-5 Block with Hamilton Brothers.

In 1992, the first Onshore Licensing round was opened over a 1,622 square mile (4,200 Km²) area that was divided into six blocks: A, B, C, D, E and F. This resulted in 3 Production Sharing Contracts (PSCs) being signed and entered into for 1993 to 1994 as follows: Blocks B & F to Shell, Block C to INA Naftaplin and Block E to Coparex.

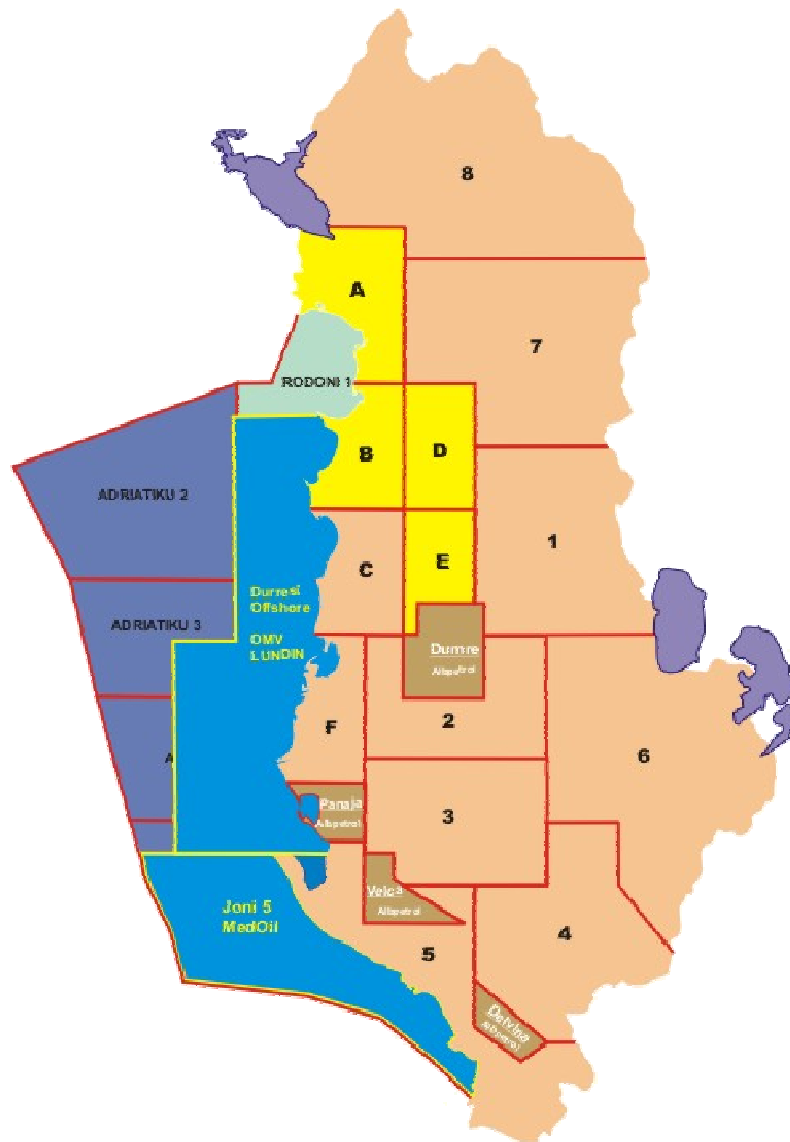


Figure 4.13 Concession Block Map of Manas A, B, D, and E Blocks (Manas Blocks in yellow)

In 1995, NPA offered international companies a total Area of 8,649 square miles (22,400 square kilometers) divided in eight new Blocks plus two Blocks that remained free from the first onshore licensing round. Six new PSC's were signed during 1998: Blocks 2, 3 & A were awarded to Occidental Petroleum, Anshutz and IPC; Blocks 1, 4 & 5 were awarded to OMV, Enterprise, Clyde, and MOL and Block D was awarded to Coparex.

The existing 2D seismic data over the concession area totals approximately 2,485 miles (4,000 kilometers) and was shot by AlbPetro, Shell, and Coparex.

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Coparex reprocessed 480 miles (773 kilometers) in 1995 that was shot by Albseis in Block E and shot an additional 193 miles (310 kilometers) in 1995 and 1996.

All vintages of data suffer from data quality deterioration in areas of rugged surface topography and complex subsurface geology.

Seismic costs are estimated to be approximately \$32,187 / mile (\$20,000 / kilometer) to acquire 2D and results vary as a result of the rock type at the surface. The Kruja carbonate is at the surface where Occidental Petroleum shot a lot of 2D seismic data using 164 foot (50 meter) shotholes drilled into the limestone. This data was poor due to the energy from the dynamite going into breaking the rocks instead of generating sound waves. There are analogous Italian fields with the same seismic problems. Surface rock types such as flysch or molasse yield better results.

Manas has reprocessed approximately 411 miles (662 kilometers) of the existing data; 204 miles (328 kilometers) in Blocks A & B and 208 miles (334 kilometers) in Blocks D & E. Manas acquired 118 miles (190 kilometers) of new data in Blocks A & B in 2008 at a cost of US\$3.0 MM. Manas plans to reprocess an additional 186 miles (300 kilometers) of existing seismic data and acquire 65 miles (105 kilometers) of new data in Blocks D & E to confirm and define their prospects.

5. MANAS CONCESSIONS

Manas Petroleum Corporation, a Baar, Switzerland based company with offices in Kyrgyzstan, Chile and Albania, obtained the rights to four onshore concession blocks with a total of approximately 780,853 acres (3,160 square kilometers) in Albania as of August 31, 2007 (Figure 5.1). The blocks that are identified as A, B, D and E are located in the northern part of Albania along a thrust belt system with a northwest – southeast trend.

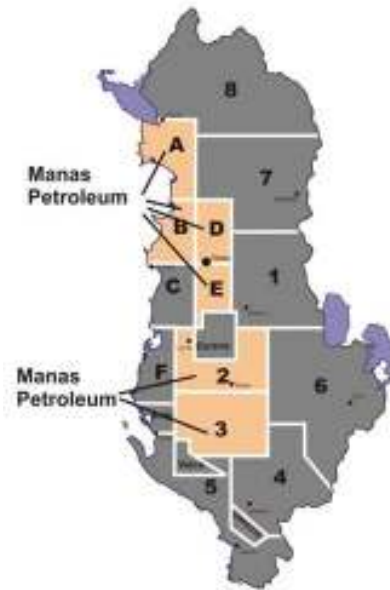


Figure 5.1 Location Map of Manas' Concessions

On July 31, 2007 two PSCs for oil and gas exploration in Blocks A & B and Blocks D & E were signed between the Ministry of Economy, Trading and Energy of Albania (as represented by the NANR-AKBN) and Manas Petroleum Corporation (Swiss Company) represented by DWM Petroleum AG.

These Blocks were licensed previously by Shell (Block B) and Coparex (Block D & E). These companies along with AlbPetrol shot 2,485 miles (4,000 kilometers) of 2D seismic data across this area from 1981 to 1996 in an attempt to define the supratherust structures as well as the subthrust structures.

5.1 DESCRIPTIONS

5.1.1 Geographic

- (1) Block A is approximately 233,020 acres (943 square kilometers) in area (Figure 5.1). The west boundary borders on Montenegro and the Adriatic coast. The eastern limit of the Block is a line made by the points defined as 19° 45' East longitude and 41° 40' North latitude to 19° 45' East longitude and 42° 2.5' North latitude. This Block is mountainous to the east with the Adriatic coastline on the west. The Buna River forms the border with Montenegro.
- (2) Block B is approximately 192,989 acres (781 square kilometers) in area (Figure 5.1). The western boundary is the Adriatic coastline and the eastern limit to the Block is a line made by the points defined as 19° 45' East longitude and 41° 20' North latitude, and 19° 45' East longitude and 41° 40' North latitude. This Block contains most of the prospective subsurface anticlinal features with mostly hills on the surface to the east and coastline to the west.
- (3) Block D is a rectangular block (Figure 5.1) approximately 194,225 acres (786 square kilometers) in area. The block is defined as 41° 20' North latitude to 41° 40' North latitude and 19° 45' East longitude to 20° 0' East longitude. The surface of this Block can be described as hills and mountains to the west and hills to the Southeast.
- (4) Block E is approximately 160,618 acres (650 square kilometers) in area (Figure 5.1). Defined roughly by the points from 41° 0' North latitude to 41° 20' North latitude and 19° 45' East longitude to 20° 0' East longitude. It is bounded by Dumre Block to the south and has rough surface topography.

5.1.2 Geologic Description

Field geological surveys in these blocks indicate intensive thrusting generally from the East to the West with a horizontal displacement range between 9 - 31 miles (15 - 50 kilometers; refer to Figure 4.4). The Cretaceous to Eocene aged Kruja and Ionian carbonates were contemporaneously deposited yet had different depositional environments. The Kruja is a shallow-water platform limestone with some dolomitization and the Ionian limestone is a deep basin carbonate deposited to the west. The Kruja was deposited further east and was thrust over the Ionian limestone creating the subthrust prospects on these Blocks.

The figure below (Figure 5.2) is a photograph of a cliffside near Lake Lucerne, Switzerland that clearly shows a subthrust section with post thrust folds and flexural slip horizons meaning that the discrete layers of carbonates in the gross interval slide or slip against each other when folded.

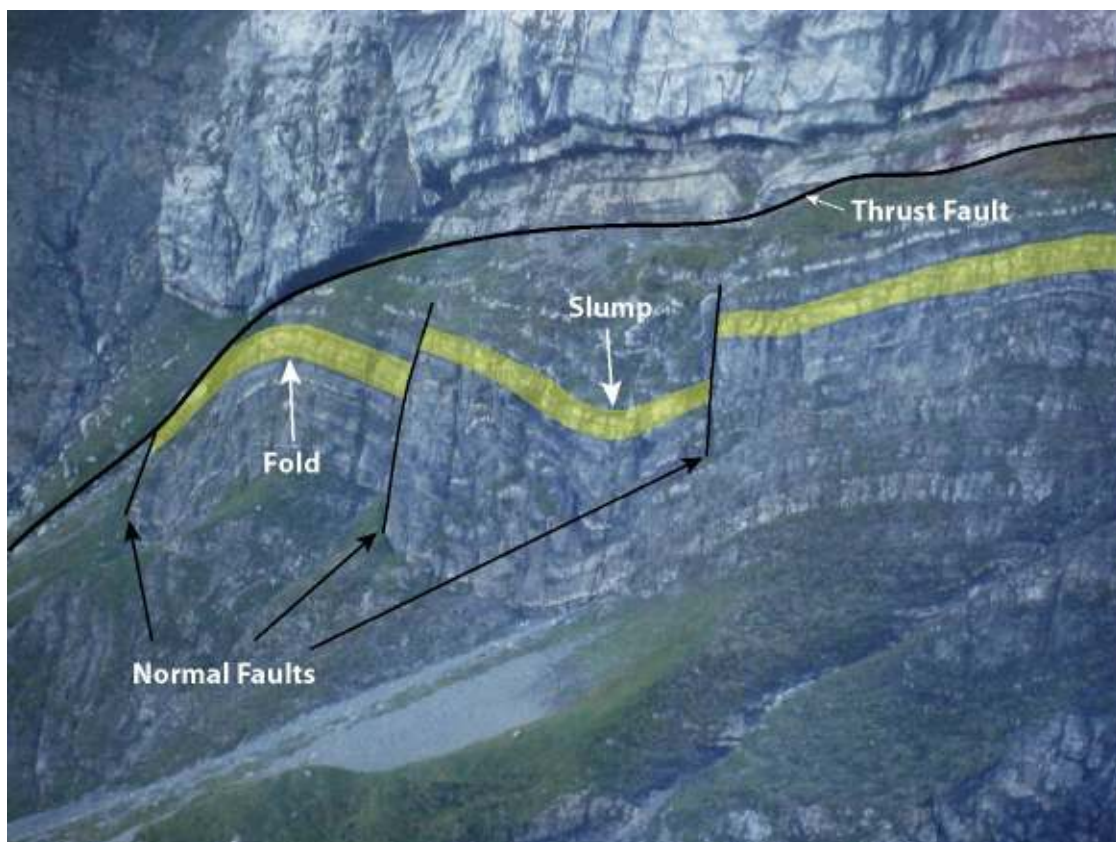


Figure 5.2 Outcrop in the Swiss Alps depicting post-thrust folds and flexural slip horizons

5.2 REFINERIES AND INFRASTRUCTURE

There are three refineries including Fier and Balshi (the largest with a 7.3 million barrel per year (1 million tonnes per year) capacity but it is in need of reconstruction at this time.

The Porto Romano Jetty, a terminal for importing refined petroleum products and Liquid Petroleum Gas (LPG) has been built by Romano Port Sh.a. on the coast in the Dures area. This terminal became operational April 2009 and has the capacity for 24,000 cubic meters of liquids and is projected to have the capacity for 102,620 barrels (14,000 tonnes) of oil per day and 141.2 MCF (4,000 cubic meters) of LPG per day. This terminal could be modified to enable oil exports from the Manas blocks by tanker from Albania to Italy. Also, there is a proposal for the construction of a power plant in the area that would use the imported hydrocarbons or the potential production from the Manas concession areas and a proposal for another hydrocarbon terminal.

6. ANALOGS AND PROSPECTS

6.1 TARGET RESERVOIR

The prospective section is an upper Triassic to Eocene age deepwater carbonate known as the Ionian Carbonate that was contemporaneously deposited with the shallow water Kruja limestone. Subsequent thrusting from the east placed the massive Kruja limestone over the fracture prone Ionian carbonates.

The Kruja carbonate sequence is a massive unfractured section that was partially dolomitized, but has no apparent reservoir capacity. The Kruja limestone is a platform shallow-water carbonate deposit in contrast to the Ionian that is a deeper water carbonate sequence. The Kruja was thrust over the Ionian and was subsequently eroded and even exposed to the south. The entire Kruja section is thinner and therefore the Ionian section is shallower to the south where the analogous production was discovered.

The Ionian carbonate has high permeability zones associated with slump folds and flexural slip horizons in the Cretaceous and Eocene age sections.

The analogous producing structures to the south are Ionian carbonates that consist of a sequence of fractured limestones. These structures apparently fill to spill point with no lower limit defined by stratigraphy per the geological information from the analogous Cakran field and others to the south.

The Ionian stratigraphic section occurs from the upper Triassic to the Eocene and is approximately 8,202 - 9,842 feet (2,500 to 3,000 meters) thick as seen in outcrop and drilled wells.

Cores from existing oil wells show an average matrix porosity of 2.5 to 3.0%. The maximum porosity including fractures is estimated to be 6.0%. An independent petrophysical analysis of a recently drilled well calculated a matrix porosity of 3.0 – 5.0 % in the Ionian carbonate. The

numerous fractures in the Ionian contribute to the total porosity and can have up to 200 md permeability.

The seal for all existing oil fields is an impermeable Oligocene flysch zone that overlays the Ionian carbonates and can vary in thickness from 8,202 - 9,842 feet (2,500 - 3,000 meters). The marls in the flysch zone act as the seal for the trap and can be as thin as 30 meters in existing oil fields. The source for the oil is from deeper Upper and Lower Jurassic limestones but since the prospective zones on the Manas Blocks are deeper than the analog production there is a possibility that the Ionian reservoirs may contain gas rather than oil.

6.2 ANALOG FIELDS

The structural setting for the trap is a roll over associated with a thrust fault overlain by an impermeable layer. The analog fields have had the Kruja section eroded away and are shallower found at depths less than 6,562 feet (2,000 meters). There are several analogous oil fields to the south that exhibit characteristics similar to the expected structures in the prospective areas on the Blocks licensed to Manas. The seismic data acquired over the existing fields exhibits a strong reflector at the flysch (seal) Ionian Carbonate (reservoir) boundary on the flank of the hydrocarbon accumulation. This reflector disappears across the hydrocarbon accumulation probably due to a change in density caused by the presence of hydrocarbons.⁶ The seismic over the Manas prospects also exhibits a similar character change.

The shallow analog fields have a zone of oxidation that causes the oil to be weathered and consequently have a lower gravity (5° - 10° API) and the oil has some sulfur in it. The deeper fields such as Cakran have a higher gravity (12° - 37° API) oil.

6.2.1 Cakran Field

Cakran Field has been in production for 30 years. The publicly available production data ends in 1992, but the field has continued to produce. The produced gas contains 1% to 6% hydrogen

⁶ Anecdotal communication with DWM geophysicist.

sulfide (H_2S). The field had a blowout in the 1980s caused by the drilling of Well #37 by the Albanian National Petroleum Company (AlbPetrol) that unfortunately demonstrated that the entire reservoir was in communication. The blowout was the result of using outdated drilling equipment and a lack of spare parts combined with the carelessness of the drilling crew who ignored the fluid coming out of the formation into the wellbore. The blowout occurred while the rig was waiting for new mud pumps (about 24 hours) because both of the pumps on location were out of service due to mechanical defects.

Since the mud could not be circulated, gradually the mud in the hole was contaminated with gas from the formation causing a total aeration of the mud and the result was a blowout. By the time the blowout was noticed, the crew was unable to close the blowout preventers installed on the well because a lot of gas and condensate griffins had appeared around the wellhead. A relief well, the Cakran-#37/B, was drilled in an attempt to kill the well by intersecting the hole of the Cakran #37 and then using a high weight mud, but the attempt was unsuccessful. All of the other wells in the field reacted with production falling nearly to zero until the blowout was brought under control. The blowout continued uncontrolled for about 3 years due to the technical and financial inabilities of AlbPetrol to address the situation. At this time the political and economic system in Albania was in almost total collapse. The blowout continued until finally it killed itself the moment the gas condensate column in the well was displaced by an oil column.

The three years long blowout resulted in an unknown amount of hydrocarbons lost from the reservoir into the atmosphere. Based on reports from the Albanian Geological and Technological Institutes the following are the estimated results: lost gas reserves as a result of the Cakran #37 blowout are calculated to be 50% of the initial gas reserves of the Cakran Oil field or approximately 177 billion cubic feet or 5×10^9 normal cubic meters (Nm³), while the lost oil reserves are calculated to be 11.0 million bbl oil (MMBO) or 1.5 million tonnes.

Prior to this disaster Well #32 had the highest initial production rate of 4,000 barrels of oil per day (BOPD) or 546 tonnes of oil per day and also had the thickest column of oil. Figure 6.1 below is a synopsis of the field parameters and a depiction of the structure.

CAKRAN

LOCATION: 6 km West of Ballshi town
SIZE : 10.7 km²
RESERVOIR AGE : Cr-Pg2 limestones Depth: 26
Gross thick: 400m-800m
Matrix Porosity: 1 %
Total Porosity: 2.4 %
Permeability: 2-600 md
Oil Gravity: 12°-37°API

OIL RESERVES

Initial Recoverable Oil : 56.9 MMBO

GAS RESERVES

Initial Recoverable Gas : $8 \times 10^9 \text{ Nm}^3$

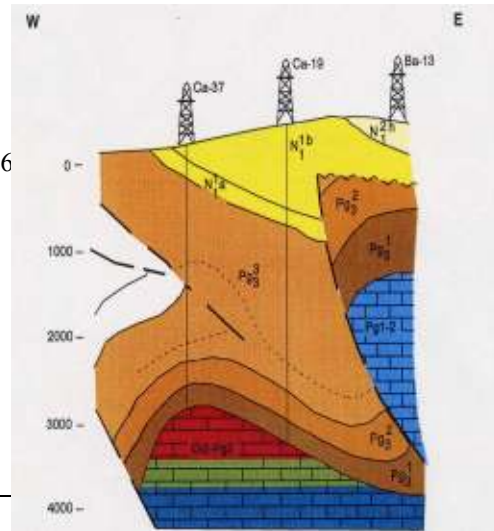


Figure 6.1 Schematic Cross-Section and Data Listing, Cakran Field

The behavior of the Cakran Field indicates the presence of a strong natural water drive. The reservoir pressure, which was depleted by about 50% during the blowout, recovered over the next five to six years up to about 85% of the initial pressure. The ultimate recovery percent expected from this field is high, in the range of 30-35%.

In the Cakran Field and other oil fields in the south, the overlying flysch has been removed by erosion along with 8,202 feet (2.5 kilometers) of limestone. Slump faulting caused fracturing along with the folding which causes flexural slipping of the carbonate beds. Cakran Field has a gas cap with oil with some of the oil being low gravity. The low gravity of some of the oil is the result of biodegradation in shallower oil reservoirs that is caused by weathering due to proximity to surface at some point in the geological history

6.2.2 Other Analogs

Other fields in the area may be appropriate analogs for the Manas prospects. These fields have reservoir qualities and structural settings that would be expected on the blocks in similar strata.

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BALLSH-HEKAL

LOCATION: 29km SE Fieri
 SIZE : 13km²
 RESERVOIR AGE : Cr-Pg2 limestones
 Depth:450-1700m
 Gross thick: 350m
 Matrix Porosity: 0.62%
 Total Porosity: 2.2%
 Permeability: 40-300md
 Oil Gravity: 130API
Oil RESERVES
 Init.Recov.Oil : 44,5 MMBO
Gas RESERVES
 Init.Recov.Gas : 239x10⁶Nm³

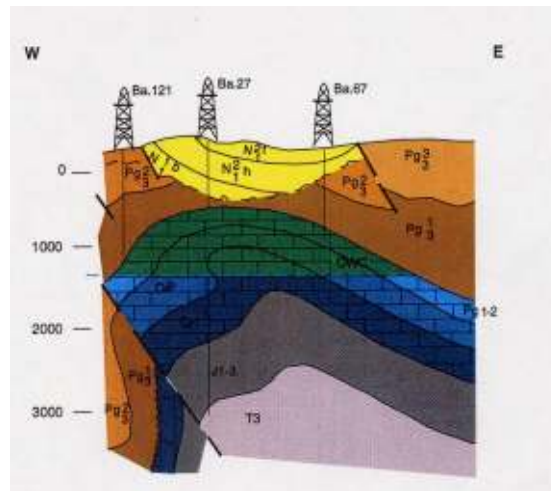
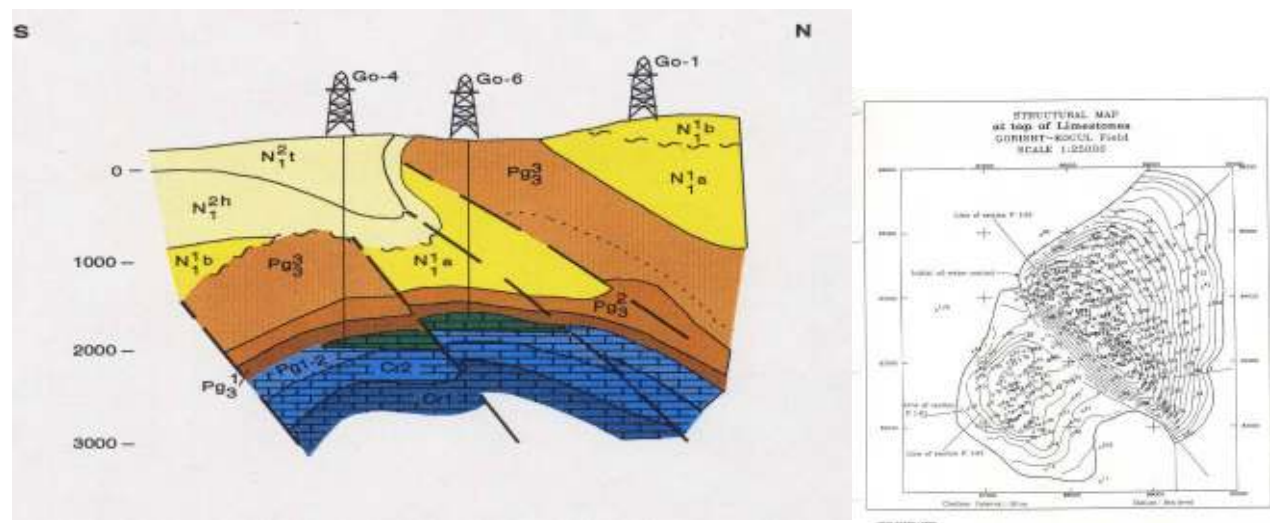


Figure 6.3 Schematic Cross-Section and Data Listing, Ballsh-Hekal Field

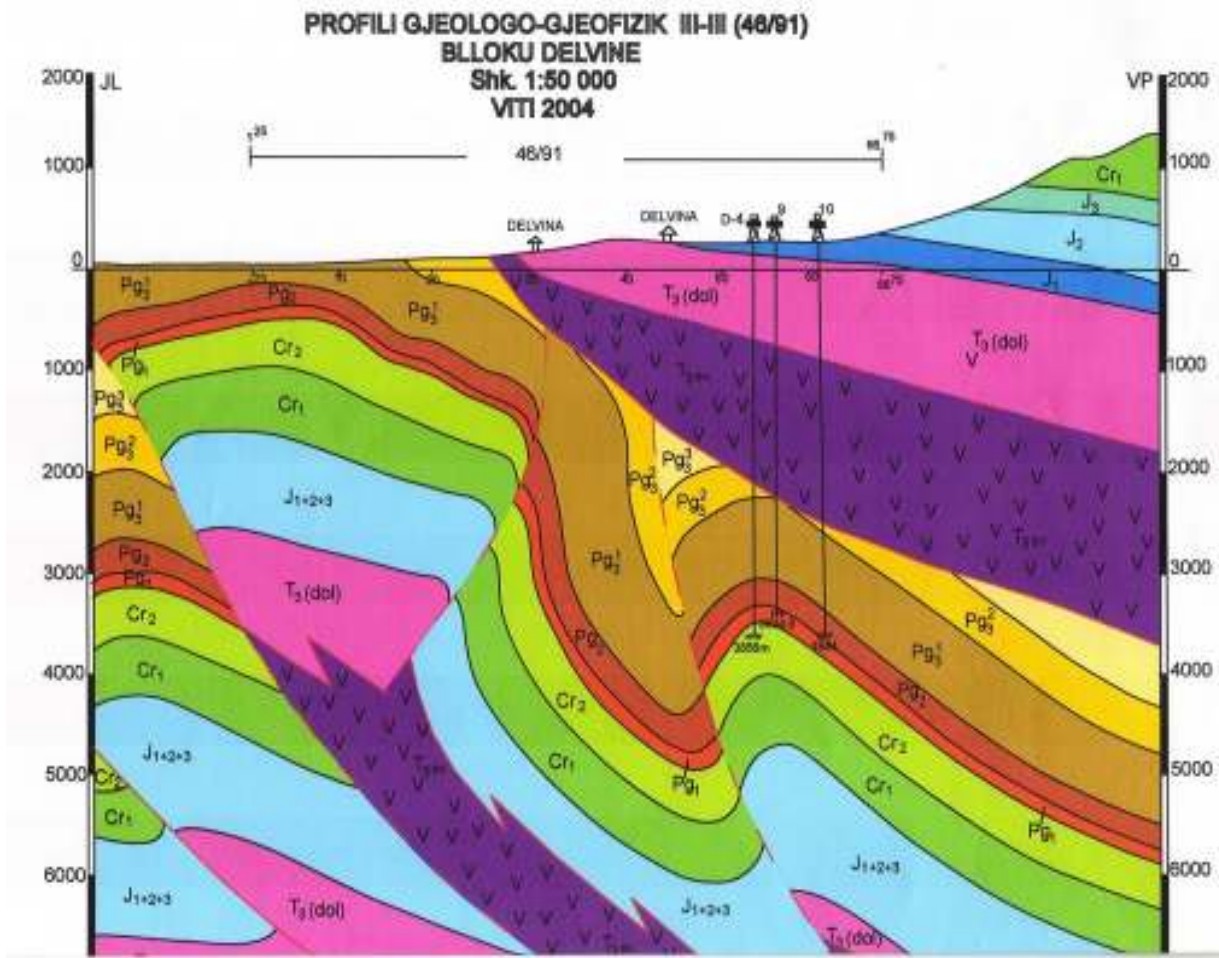


GORISHT-KOCUL

LOCATION: 20 km East of VLORA town
 SIZE:8.6 km²
 RESERVOIR AGE : Cr2-Pg2 limestones
 Depth: 400-1250 m
 Gross thick: 350-400m
 Matrix Porosity: 1.08 %
 Total Porosity: 2-2.98 %

Permeability: 300 md
 Oil Gravity: 130-160API
RESERVES
 Init.Recov.Oil : 102,7 MMBO
Gas RESERVES
 Init.Recov.Gas : 594x10⁶Nm³

Figure 6.4 Schematic Cross-Section and Data Listing, Gorisht-Kocul Field



DELVINA OIL FIELD

RESERVOIR Age: Cr₂-Pg₂ limestones
 Depth: 2800-3500 m
 Matx Porosity: 1-6 %
 Frac Porosity: 0.1 %
 Permeability: 0.2 md
 Oil Gravity: 26⁰-62.5⁰API

Figure 6.5 Schematic Cross-Section and Data Listing, Delvina Field

Table 6.1 Other Examples of Carbonate Reservoir Oil Fields in Albania

<u>Name</u>	<u>Discovery Year</u>	<u>Age-Reservoir Type</u>
Visoka	1963	Cr-Pg2-limestone
Finiq-Krane	1973	Cr-Pg2- limestone
Amonica	1980	Cr-Pg2- limestone
Shpiragu	2001	Cr-Pg2- limestone

6.3 MANAS PETROLEUM CORPORATION PROSPECTS

6.3.1 General

There are currently eleven identified prospects on the license areas (Figure 6.6). They have been identified on 2D seismic data as subthrust complex structures that resulted from several episodes of thrusting and occur from 12,139 - 20,997 feet (3,700 - 6,400 meters) deep.

The currently identified prospects are on a NW/SE structural thrust feature. The prospect named Jubani (10) located in Block A (Figure 6.6) will be tested first followed by Papri (7) in the southeast of Block E, Rova West (9) located in the western side of Block E (Figure 6.6), West Gjurice (11) located in the western part of Block B, Rinas (2) located in Block B, Sauk (5) and then Gjurice (1). If successful, Manas would then test the remaining prospects. The Ionian carbonate is an 8,202 - 9,842 feet (2,500 - 3,000 meters) thick upper Triassic to Eocene age sequence that has demonstrated fractures that can be hydrocarbon bearing. This Ionian carbonate section is interpreted to extend from the south, as seen in the analog fields, northwestward into the concession blocks as depicted in the cross-section (Figure 6.7).

The structural setting for these prospects is a series of subthrust roll over anticlines with the trap formed by an overlying impermeable marl. Expected depths of the prospects are from 4,265 feet to 18,045 feet (1,300 meters to 5,500 meters) deep. Fracturing and jointing is caused by slipping along bedding planes during deformation creating highly permeable zones of slump folds and flexural slip horizons in the Cretaceous and Eocene age sections.

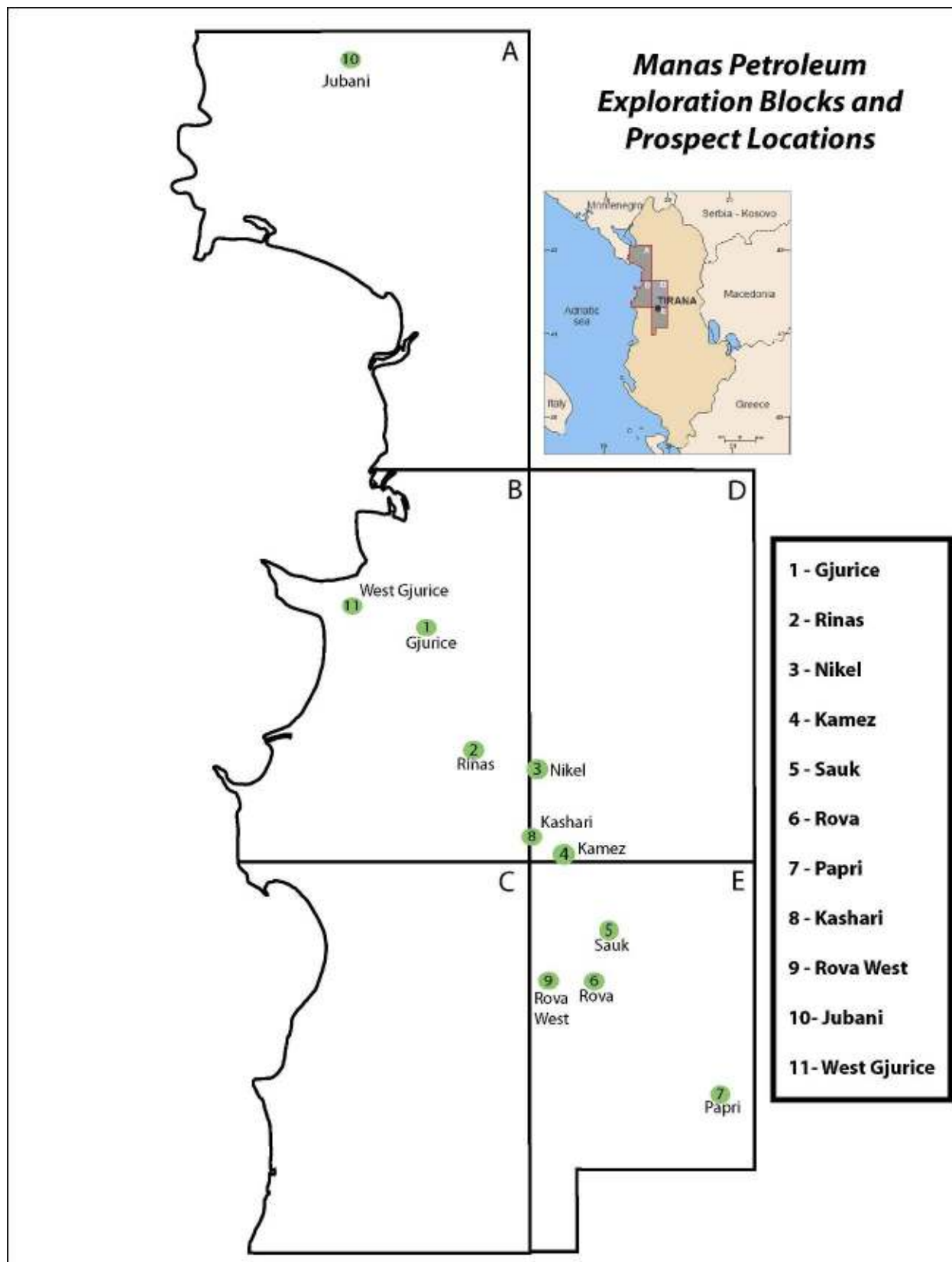


Figure 6.6 Index Map of Manas License Blocks and Prospect Locations

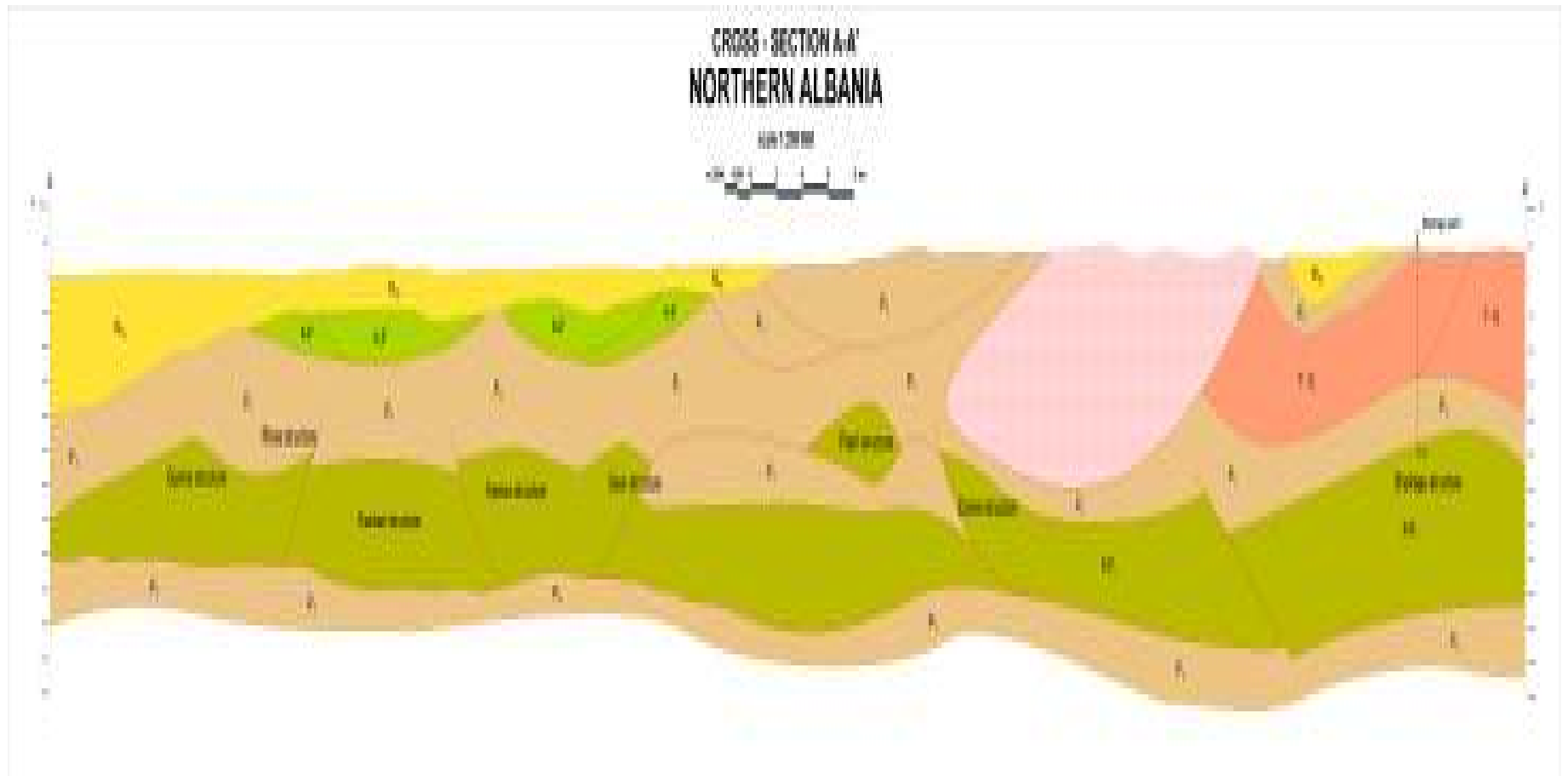


Figure 6.7 North-South Cross-Section across Prospects Showing the Structural Similarity to the Analog Fields

6.3.2 Gjurice

The Gjurice Prospect (Location 1 on Figure 6.6) is located on the extreme northwest part of the thrust anticline in the NW Corner of Block B. The surface elevation of the notional drill site is approximately 328 feet (100 meters) with the estimated top of the reservoir being -15,584 feet (-4,750 meters) (ss) and the maximum fill down to -20,341 feet (-6,200 meters) (ss). Shell & AlbPetro both shot 2D seismic over this prospect (Figure 6.8).

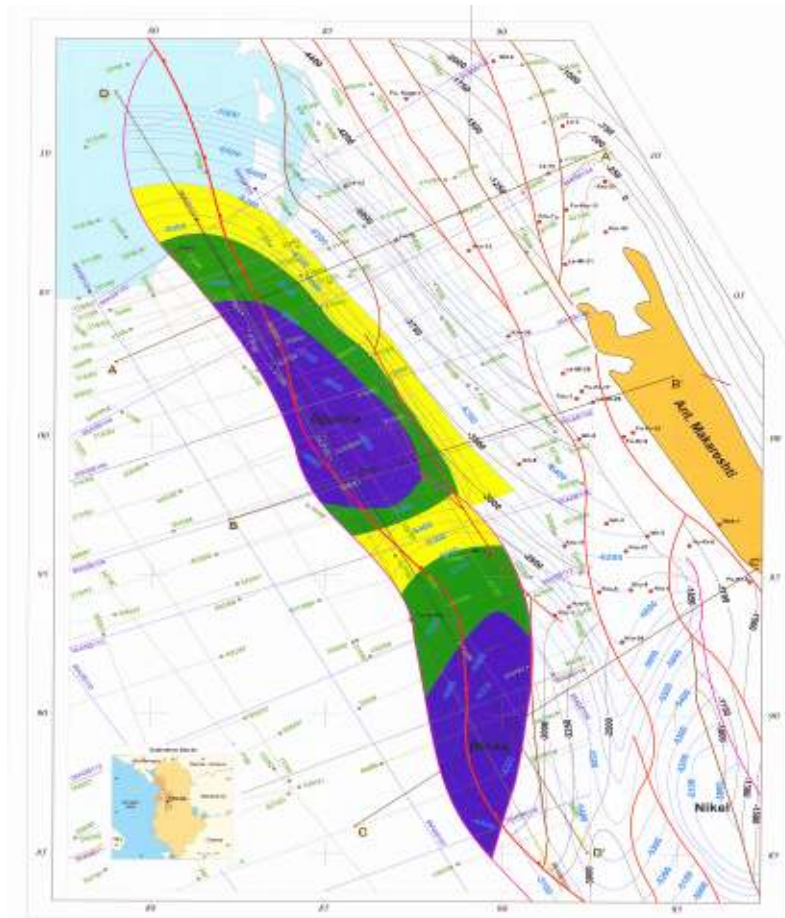


Figure 6.8 Structure Map of the Gjurice and Rinas Areas (Manas Petroleum)

The Rinas Prospect (Location 2 on Figure 6.6) is located approximately 7.5 miles (12 kilometers) SE of Gjurice in the southeastern part of Block B (Figure 6.8). The surface elevation of the notional drill site is approximately 82 feet (25 meters) with the estimated depth to the Ionian carbonate from 13,615 feet (-4,150 meters) (ss) to 18,044 feet (-5,500 meters) (ss). AlbPetro shot 2D seismic across the Block B area from 1981 to 1990. Shell had 534 miles (860 kilometers) of the existing data reprocessed and shot approximately 254 miles (409 kilometers) of new data in order to delineate the prospect. Shell's montage for this prospect is shown in Figure 6.9.



6.3.4 Papri

The Papri Prospect (Location 7 on Figure 6.6) is located in the SE Corner of Block E North of Dumre Block. The surface elevation of the notional drill site is approximately 2,297 feet (700 meters) on rugged topography with the estimated top of the reservoir being -12,631 feet (-3,850 meters) (ss) and the maximum fill down to -17,060 feet (-5,200 meters) (ss) (Figure 6.10). Coparex & AlbPetrol both shot 2D seismic over this prospect. The Kruja reflector is stronger and shallower (1.4 S) than the Ionian reflector. AlbPetrol drilled Papri #4, a dry hole, prior to the Coparex seismic shoot and drilled off structure. Manas will reprocess the existing 2D seismic data and shoot 31 miles (50 kilometers) of new seismic before drilling to delineate the best place to drill.

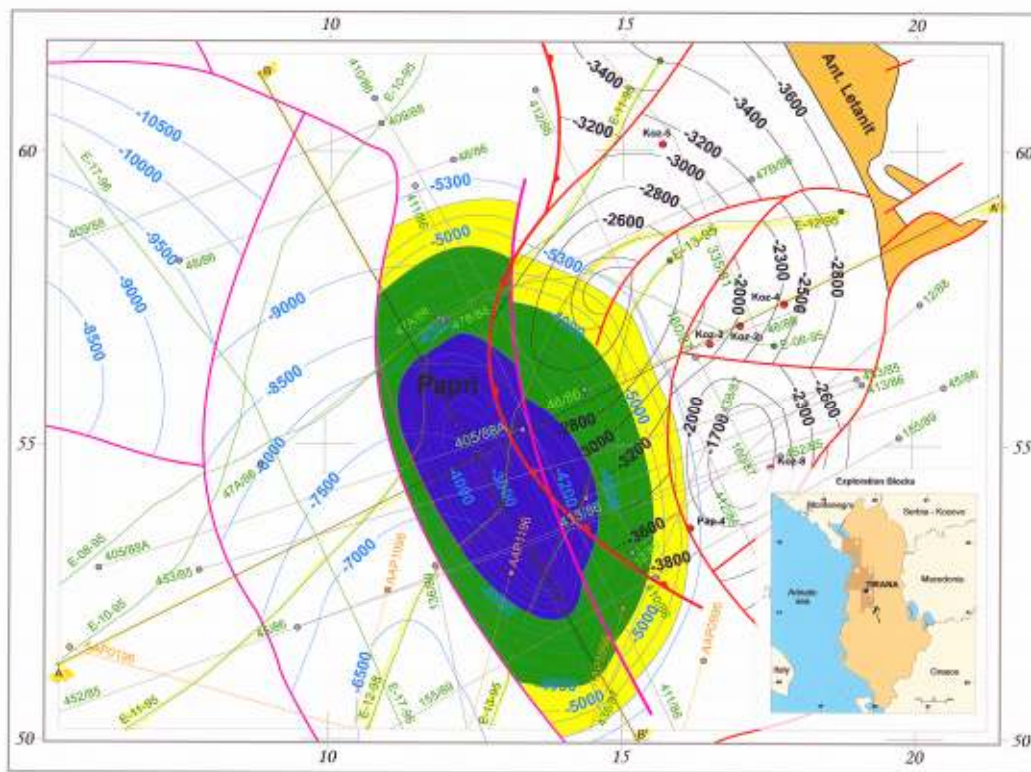


Figure 6.10 Structure Map of the Papri Area (Manas Petroleum)

The Sauk Prospect (Location 5 on Figure 6.6) is located on the north of Block E (SE of Tirana). The surface elevation of the notional drill site is approximately 656 feet (200 meters) with the estimated top of the reservoir being -15,912 feet (-4,850 meters) (ss) and the maximum fill down to -20,341 feet (-6,200 meters) (ss) (Figure 6.11). Coparex, AlbPetro and INA shot 2D seismic over this prospect. This prospect is less complicated structurally but a deeper play than the others in this area. The seismic is not as good here as compared to the other data and needs to be reprocessed. The Kruja zone is seen in the Tirana #2 well.



6.3.6 Other Prospects

These prospects are not delineated as well as the first four listed above. They have the same general structural setting, Ionian fractured carbonate target and reserve potential, but at this point have a higher risk associated with them. As Manas acquires more seismic over this area and drills wells in the better-defined prospect areas, the risk associated with these prospects will be lowered.

Nikel (Location 3 on Figure 6.6)

Surface Elevation – 295 feet (90 meters)

Estimated Depth to Target – -16,404 feet (-5,000 meters) (ss)

Estimated Closure – 1,674 Hectares (4,137 acres)

Figure 6.12

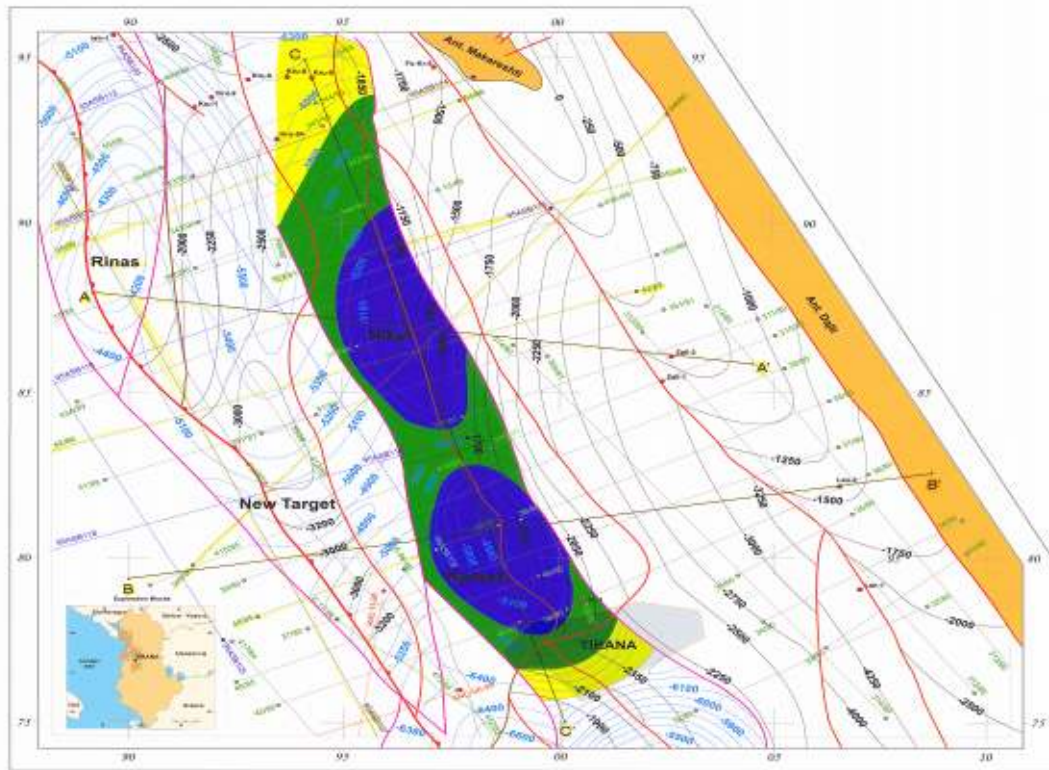


Figure 6.12 Structure Map of the Nikel and Kamez areas (Manas Petroleum)

Kamez (Location 4 on Figure 6.6)

Surface Elevation – 262 feet (80 meters)

Estimated Depth to Target – -16,076 feet (-4,900 meters) (ss)

Estimated Closure – 1,344 Hectares (3322 acres)

Figure 6.12

Rova (Location 6 on Figure 6.6)

Surface Elevation – 919 feet (280 meters)

Estimated Depth to Target – -18,045 feet (-5,500 meters) (ss)

Figure 6.11

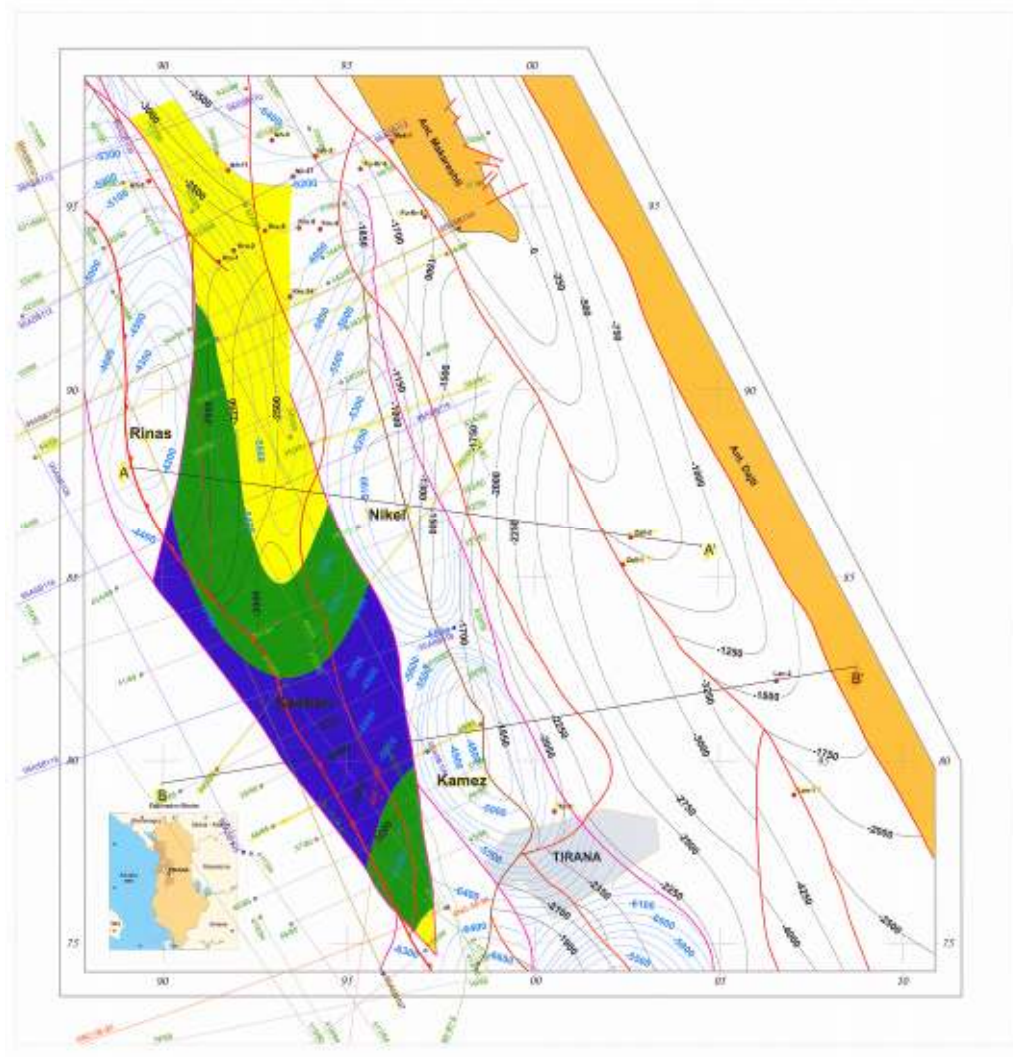


Figure 6.13 Structure of the Kashari area (Manas Petroleum)

Kashari (Location 8 on Figure 6.6)

Surface Elevation – 279 feet (85 meters)

Estimated Depth to Target – -15,748 feet (-4,800 meters) (ss)

Estimated Closure – 1,509 Hectares (3,728 acres)

Figure 6.13

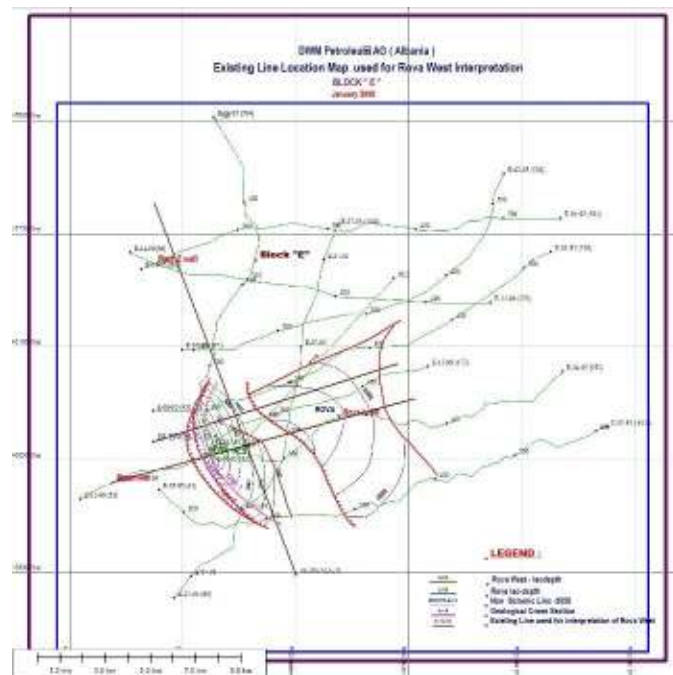


Figure 6.14 - Structure Map of Rova West (Manas Petroleum)

Rova West (Location 9 on Figure 6.6)

Surface Elevation – 1,247 feet (380 meters)

Estimated Depth to Target – -12,139 feet (-3,700 meters) (ss)

Estimated Closure – 836 Hectares (2,066 acres)

Figure 6.14

Jubani (Location 10 on Figure 6.6)

Surface Elevation – 20 feet (6 meters)

Estimated Depth to Target – -4,265 feet (-1,300 meters) (ss)

Estimated Closure – 2,899 Hectares (7,164 acres)

Figure 6.15

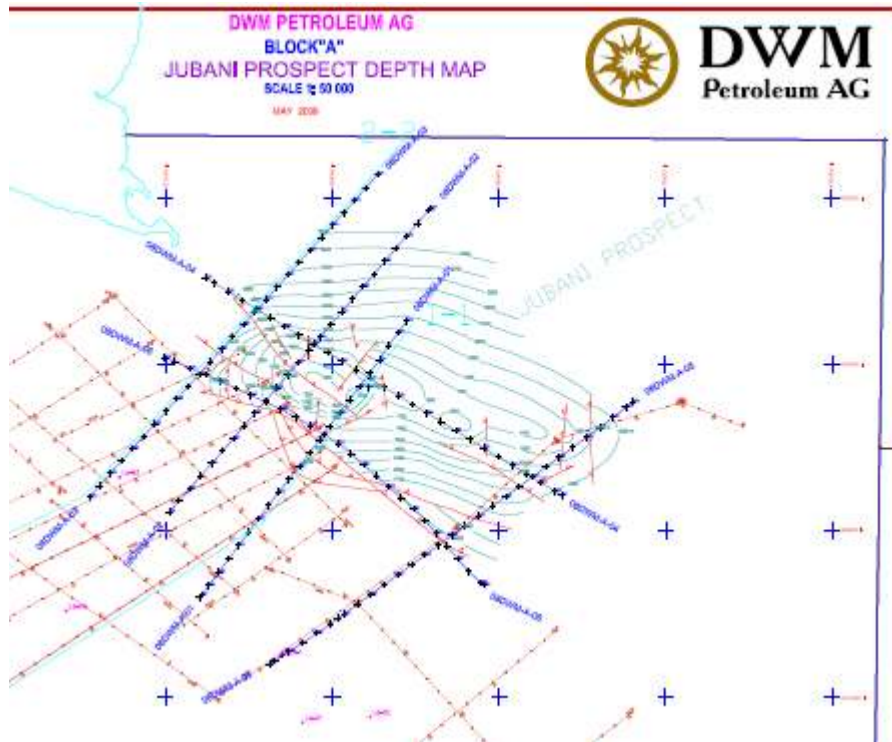


Figure 6.15 Time Structure Map of Jubani Prospect in Block A

West Gjirice (Location 11 on Figure 6.6)

Surface Elevation – 541 feet (165 meters)

Estimated Depth to Target – -14,108 feet (-4,300 meters) (ss)

Estimated Closure – 2,526 Hectares (6,242 acres)

Figure 6.16

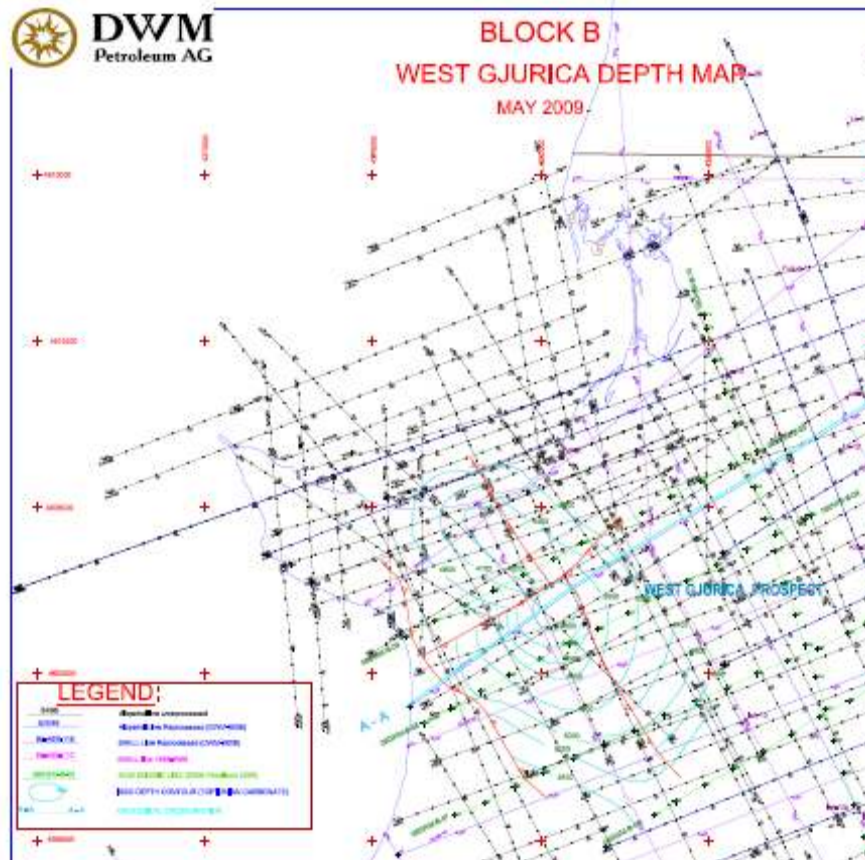


Figure 6.16 West Gjorica Prospect Depth Structure Map and Seismic coverage

6.4 PRODUCT TYPES REASONABLY EXPECTED

The hydrocarbon type that could occur in these reservoirs is an unknown, due to their depth and lack of exploration nearby. Therefore, three cases were assumed to be possible in this estimation: 1) Oil with associated gas, 2) Oil with gas cap, and 3) Gas. It is expected that if oil is present at the depths of these prospects, it will be good quality oil with API gravity in the range of 30 to 37 degrees.

6.4.1 Source Rock

The hydrocarbon source rock is from the Upper and Lower Jurassic that correlates regionally with 2 – 37% TOC. A Type I & II organic matter with 1,323 - 1,764 pounds/ton (600 - 800

kg/ton) and vitrinite reflectance ranging from 0.5 to 0.88. The Spiragu well drilled through 1,968 feet (600 meters) of shale that could be a potential source rock.⁷

The source rock may be the same as the reservoir rock. Derived from surface data the Triassic and Lower Jurassic are sources that correlate well with Italian analogs across the Adriatic Sea. In the “Carbonatic Series” (including the Ionian zone) several organic-rich shale intercalations, predominantly with kerogen types I and II, have been observed in outcrops of the different zones (Figure 6.17).

In the Ionian Zone: Black shale intercalations of Late Triassic age; they are thin cm-thick organic-rich layers, comparable to those of the Burano FM (Early Triassic) in southern Italy. The Toarcian (Early Jurassic) limestones comprise a somewhat thicker and locally more organic-rich interval, corresponding to the widespread Posidonia Shale. Following the handbooks on Geology of Albania (1970, 1990), its thickness ranges from 66 – 525 feet (20 - 160 meters). According to other Albanian sources (AlbPetrol 1992) TOC values average up to 5% and locally may reach 25%.⁸

Geochemical studies of organic matter extracts from Potential Source Rock (PSR) zones in the Mesozoic Ionian sequence have indicated:

- a. The presence of no less than seven PSR intervals, at least four of major importance. Some are quite rich (TOC values up to at least 15% – 20%, mainly sapropelic and all oil-prone. Most are rather thin where sampled 2 - 8 inches (5-20cm), but could be thicker in the paleobasinal areas.
- b. Most of the oil and a part of the gas are derived from a deep, Late Triassic and Jurassic source. The older PSR entered the oil window in the Oligocene, peak maturation started in the last times of flysch deposition (Late Oligocene-Aquitainian) and since then there has been a persistent state of maturation and migration, owing to continued tectonic and sedimentation activity, which has involved the entire basin. A high level of PSR

⁷ Manas

⁸ Moorkens, Thierry & Dohler, Mattias, 1994, Albania / Albanien

maturity has been evidenced in the thrust belt (central-south Albania), with even middle Cretaceous PSR in the katagenetic stage.

- c. Most oils are heavy because of a combination of early expulsion and of biodegradation, the latter a consequence of accumulation in reservoirs near the surface (or brought to the surface by uplift). There are, however, light oils considered to be of late migration: Cakran, Mollaj, Amonice, Gernec⁹.

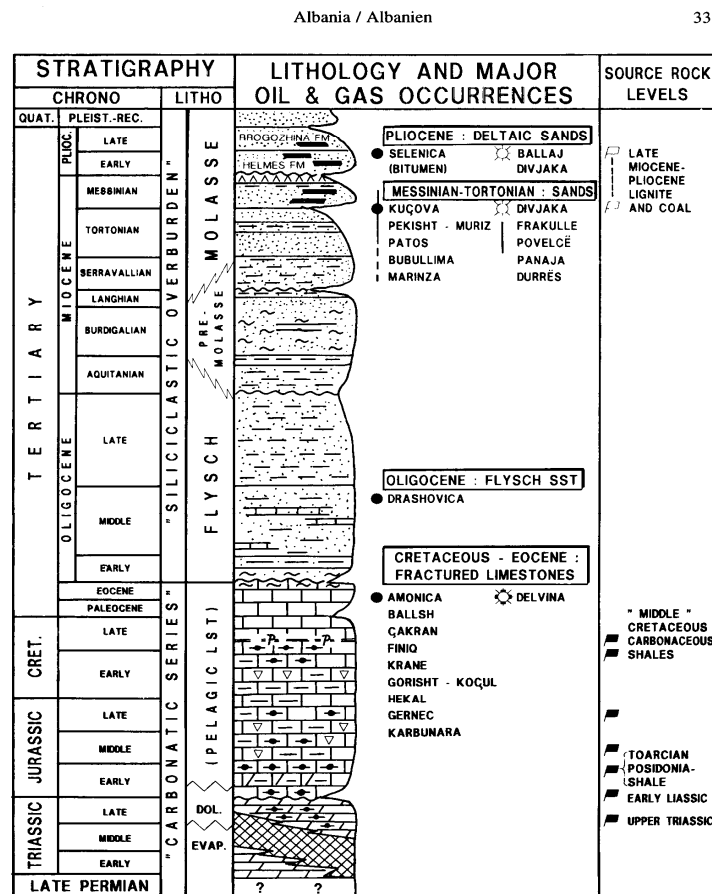


Fig. AL-5. Generalized lithostratigraphic column of the Ionian Zone in Albania. Reservoirs, source rocks and field examples are indicated (from Dalipi et al., 1971; Sejdi, 1990; I.G.C.P. 262 Excursion Guide, 1991; Albpetrol, 1992).
Abb. AL-5. Schematisches lithostratigraphisches Profil durch die Ionische Zone Albaniens mit Angabe der Speicher- und Muttergesteine sowie ausgewählter Felder (Quellen: s. oben).

Figure 6.17 Stratigraphic Section Showing Source Beds

⁹ GEOMIN Ltd, 1991, Albania – South Adriatic Geology & Petroleum Potential

Timing of oil generation and expulsion in southern Albania can be demonstrated to have occurred in two distinct phases, Burdigalian and Late Pliocene. The second-generation phase, which continues in the present day, post-dates the main structural events in Middle Miocene and Pliocene. Oil from the first generation phase has also been trapped in the fields of southern Albania.¹⁰

6.5 EXPLORATION PLAN

6.5.1 Seismic Reprocessing

For the first Phase, Manas reprocessed up to 411 miles (662 kilometers) of existing 2D seismic data in order to better delineate the optimal drilling locations to test their prospective areas. The total existing 2D seismic data totals approximately 2,485 miles (4,000 kilometers). Shell had shot 261 miles (420 kilometers) in Block B and AlbPetrol shot data from 1980 to 1992 all of which needs to be reprocessed. Future plans include reprocessing an additional 186 miles (300 kilometers) of existing 2D seismic data.

6.5.2 New Seismic Acquisition

Manas has acquired 118 miles (190 kilometers) of new data in the northwest part of their concessions and plans to acquire 65 miles (105 kilometers) of new data in Blocks D & E in 2010 prior to drilling their exploration wells there. They will acquire additional data in the future, if needed. At this time, Manas has defined two new prospects, Jubani and West Gjurice with the benefit of the new and reprocessed old seismic. Manas is continuing the reinterpretation of the seismic data over their other nine prospects; however, preliminary results confirm the presence of these prospects.

¹⁰ Pritti, Valbona and Oudmayer, 1996, Review of Geochemical Data in Coastal Albania

6.5.3 Prospect Order

Manas, at this time, plans to delineate and drill the Jubani, Papri and Rova West prospects first. The remaining prospects will be drilled following a successful outcome. It should be noted that the Jubani Prospect is approximately 37 miles (60 kilometers) north of the nearest other Prospects.

6.5.3.1 Drilling of Wells

The northern part of Albania where these prospects are is a relatively remote area. The depth of the proposed wells will require a large drilling rig that will have to be transported from another country. The support services will all have to be brought in from out of country, which will add to the cost of the project. Some economy could be realized if several wells are drilled consecutively.

6.5.3.2 Testing of Wells

The wells will be mudlogged while drilling in order to better identify the target Ionian carbonate. After a successful drilling of the well it will be logged and assuming the target horizon is found, it will be Drill Stem Tested in order to determine the commerciality of the discovery.

6.6 DRILLING COSTS

Wells drilled in Albania typically are drilled over balanced to the intermediate pipe point and then drill out with a light weight CaCO_3 mud system; therefore, if the mud invades the fractures, it will all react to acid stimulation.

Drilling costs for a single test well are estimated to be US\$17 million for a well to the depth of 17,388 feet (5,300 meters) and US\$10 million for a well to the depth of 9,842 feet (3,000 meters). These estimated costs were provided by the client, and are somewhat higher than the costs estimated by Gustavson in our previous report.

7. PROBABILISTIC RESOURCE ESTIMATES

7.1 GENERAL

A probabilistic resource analysis is most applicable for projects such as evaluating the potential resources of an exploratory area like the Manas concessions, where a great deal of uncertainty exists in the reservoir parameters. The uncertainty in the reservoir data is quantified by probability distributions, and an iterative approach yields an expected probability distribution for potential resources. This approach allows consideration of most likely resources for planning purposes, while gaining an understanding of what volumes of resources may have higher certainty, and what potential upside may be for the project.

The analysis for this project was carried out considering uncertainty for all parameters in the volumetric resource equations.

7.2 INPUT PARAMETERS

This method involves estimating probability distributions for uncertain reservoir parameters and performing a statistical risk analysis involving multiple iterations of resource calculations generated by random numbers and the specified distributions of reservoir parameters. To do this, each parameter incorporated in our resource calculation was evaluated for its expected probability distribution. For the area evaluated, insufficient data were available to estimate or confirm detailed probability distributions for the reservoir parameters. For this analysis, triangular probability distributions were used, with input of minimum, maximum, and most likely values.

The parameters for these input distributions were selected based on a review of all available data, for this and analogous areas. Note that these parameters represent average parameters over the entire play. So, for example, the porosity ranges do not represent the range of what porosity might be in a particular well or a particular interval, but rather the reasonable range of the average porosity for the whole play.

Gustavson Associates reviewed the data provided by the Client that included 2D seismic sections, structural cross-sections and maps based on their interpretation. Gustavson Associates independently interpreted the available 2D seismic lines and planimetered the map areas to determine the range of values used in the probabilistic analysis. This work confirmed that Manas' maps and estimated rock volumes were reasonable. For each prospect, bulk volume of the potential reservoir was estimated at a minimum, most likely, and maximum depth of hydrocarbon/water contact in the mapped structure.

Ranges for other reservoir parameters were estimated based on all available industry literature and well data in the area. A recent petrophysical analysis completed for a typical well, identified more accurate parameters for the Ionian zone. This petrophysical data was used as input parameters for the probabilistic analysis of all of the prospects.

The input parameters used in the resource estimates for each prospect are presented in Appendix A. The values were used to estimate resources for three potential reservoir cases that include Oil with associated gas, Oil with gas cap, and Gas with condensate.

7.3 METHODOLOGY

Probabilistic resource analysis was performed for each prospect using the Monte Carlo simulation software called “@ Risk”. This software allows for input of a variety of probability distributions for any uncertain parameter. Then the program performs a large number of iterations, either a large number specified by the user, or until a specified level of stability is achieved in the output. The results include a probability distribution for the output, sampled probability for the inputs, and sensitivity analysis showing which input parameters have the most effect on the uncertainty in each output parameter.

After distributions were defined, a series of simulations were run wherein points from the distributions were randomly selected and used to calculate one iteration of estimated potential resources. The iterations were repeated for 5,000 iterations.

7.4 RESULTS

The output distributions were then used to characterize the potential resources. Tables of cumulative probability versus prospective resources were constructed. Results are summarized in Table 7.1 through Table 7.6 below. Graphs for each potential prospect are presented in Appendix B. Key points from the resource distribution include the 50 percent point (most likely) the 90 percent point (downside case) and 10 percent point (upside potential). The 50 percent probability value for each distribution is considered the most likely value of potential resources.

These resource estimates are based on P_{90} , P_{50} and P_{10} values from probabilistic analysis, and as such the arithmetic sum of the estimates for individual reservoirs and plays do not equal the estimates based on probabilistic simulation of the total system as shown in Figure 7.1 through Figure 7.9. This is because each prospect's resources vary independently of the others, and in the probabilistic simulation, all the different prospects are not likely to be very low or very high at the same time¹¹.

It should be noted that the shape of the probability distributions all result in fairly wide spacing between the minimum and maximum expected resources. This is reflective of the high degree of uncertainty associated with any evaluation such as this one prior to actual field discovery, development, and production. Also note that, in general, the high probability resource estimates at the left side of these distributions represents downside risk, while the low probability estimates on the right side of the distributions represent upside potential. These distributions do not include consideration of the probability of success of discovering commercial quantities of oil or gas, but rather represent the likely distribution of oil or gas discoveries, if successfully found.

¹¹ The client requested that the arithmetic Sum of Prospects numbers be presented in place of the Probabilistic Total

Table 7.1 Summary of Resource Estimates, Case 1 – Oil Filled (Imperial)

	Prospective Oil in Place, Million Barrels			Prospective Recoverable Oil Resources, Million Barrels			Prospective Recoverable Associated Gas Resources, Billions of Cubic Feet		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	1,460	2,628	4,229	345	644	1,090	350	652	1,112
Rinas Prospect	1,349	2,509	4,273	324	611	1,106	324	617	1,131
Nikel Prospect	815	1,516	2,402	196	373	620	196	375	620
Kamez Prospect	876	1,496	2,302	208	367	595	209	369	597
Sauk Prospect	989	1,633	2,477	229	404	642	226	407	649
Rova Prospect	143	222	328	33	54	85	33	55	87
Papri Prospect	797	1,426	2,209	188	351	570	188	352	588
Kashari Prospect	443	742	1,247	104	184	318	105	185	321
Rova W Prospect	81	170	283	20	42	73	19	42	73
Jubani Prospect	308	617	1,151	72	151	293	70	154	303
W Gjurice Prospect	260	466	711	61	114	187	63	115	188
Sum of Prospects	7,521	13,425	21,612	1,780	3,295	5,579	1,783	3,323	5,669

Table 7.2 Summary of Resource Estimates, Case 1 – Oil Filled (Metric)

	Prospective Oil in Place, Million Tonnes			Prospective Oil Resources, Million Tonnes			Prospective Associated Gas Resources, Billions of Cubic Meters		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	199.2	358.5	576.9	47.1	87.9	148.7	9.9	18.5	31.5
Rinas Prospect	184.0	342.3	582.9	44.2	83.4	150.9	9.2	17.5	32.0
Nikel Prospect	111.2	206.8	327.7	26.7	50.9	84.6	5.6	10.6	17.6
Kamez Prospect	119.5	204.1	314.1	28.4	50.1	81.2	5.9	10.4	16.9
Sauk Prospect	134.9	222.8	337.9	31.2	55.1	87.6	6.4	11.5	18.4
Rova Prospect	19.5	30.3	44.7	4.5	7.4	11.6	0.9	1.6	2.5
Papri Prospect	108.7	194.5	301.4	25.6	47.9	77.8	5.3	10.0	16.7
Kashari Prospect	60.4	101.2	170.1	14.2	25.1	43.4	3.0	5.2	9.1
Rova W Prospect	11.1	23.2	38.6	2.7	5.7	10.0	0.5	1.2	2.1
Jubani Prospect	42.0	84.2	157.0	9.8	20.6	40.0	2.0	4.4	8.6
W Gjurice Prospect	35.5	63.6	97.0	8.3	15.6	25.5	1.8	3.3	5.3
Sum of Prospects	1,026.0	1,831.5	2,948.3	242.7	449.7	761.3	50.5	94.2	160.7

Table 7.3 Summary of Resource Estimates, Case 2 – Oil with Gas Cap (Imperial)

	Prospective Oil in Place, Million Barrels			Prospective Recoverable Oil Resources, Million Barrels			Prospective Recoverable Total Gas Resources, Billions of Cubic Feet		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	677	1,231	2,068	160	304	538	1,887	3,377	5,670
Rinas Prospect	624	1,171	2,109	148	290	540	1,669	3,142	5,558
Nikel Prospect	372	709	1,196	88	175	310	1,023	1,972	3,224
Kamez Prospect	398	704	1,153	93	173	297	1,103	1,943	3,109
Sauk Prospect	438	773	1,236	102	190	320	1,235	2,119	3,364
Rova Prospect	64	105	166	15	26	43	180	295	456
Papri Prospect	360	667	1,115	85	164	283	989	1,816	2,970
Kashari Prospect	200	347	623	47	86	158	553	961	1,683
Rova W Prospect	37	80	140	9	20	36	99	212	364
Jubani Prospect	136	293	567	33	72	144	252	551	1,080
W Gjurice Prospect	120	218	356	28	53	93	343	611	964
Sum of Prospects	3,426	6,298	10,729	808	1,553	2,762	9,333	16,999	28,442

Table 7.4 Summary of Resource Estimates, Case 2 – Oil with Gas Cap (Metric)

	Prospective Oil in Place, Million Tonnes			Prospective Oil Resources, Million Tonnes			Prospective Total Gas Resources, Billions of Cubic Meters		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	92.4	167.9	282.1	21.8	41.5	73.4	53.4	95.6	160.6
Rinas Prospect	85.1	159.8	287.7	20.2	39.6	73.7	47.3	89.0	157.4
Nikel Prospect	50.8	96.7	163.2	12.0	23.9	42.3	29.0	55.8	91.3
Kamez Prospect	54.3	96.0	157.3	12.7	23.6	40.5	31.2	55.0	88.0
Sauk Prospect	59.8	105.5	168.6	13.9	25.9	43.7	35.0	60.0	95.3
Rova Prospect	8.7	14.3	22.6	2.0	3.5	5.9	5.1	8.4	12.9
Papri Prospect	49.1	91.0	152.1	11.6	22.4	38.6	28.0	51.4	84.1
Kashari Prospect	27.3	47.3	85.0	6.4	11.7	21.6	15.7	27.2	47.7
Rova W Prospect	5.0	10.9	19.1	1.2	2.7	4.9	2.8	6.0	10.3
Jubani Prospect	18.6	40.0	77.4	4.5	9.8	19.6	7.1	15.6	30.6
W Gjurice Prospect	16.4	29.7	48.6	3.8	7.2	12.7	9.7	17.3	27.3
Sum of Prospects	467.5	859.1	1,463.7	110.1	211.8	376.9	264.3	481.3	805.5

Table 7.5 Summary of Resource Estimates, Case 3 – Gas-Filled (Imperial)

	Prospective Gas in Place, Billions of Cubic Feet			Prospective Recoverable Gas Resources, Billions of Cubic Feet			Prospective Recoverable Condensate Resources, Million Barrels		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	4,615	8,178	13,342	3,401	6,105	10,047	22	58	118
Rinas Prospect	4,219	7,579	13,003	3,103	5,669	9,856	21	54	112
Nikel Prospect	2,590	4,793	7,575	1,948	3,576	5,667	12	34	66
Kamez Prospect	2,755	4,718	7,350	2,041	3,521	5,529	13	33	65
Sauk Prospect	3,057	5,207	7,798	2,278	3,913	5,907	14	37	70
Rova Prospect	461	723	1,077	342	541	809	2	5	10
Papri Prospect	2,455	4,415	6,853	1,834	3,285	5,184	12	31	61
Kashari Prospect	1,399	2,307	3,921	1,041	1,724	2,975	7	17	34
Rova W Prospect	242	515	848	180	385	641	1	4	7
Jubani Prospect	410	845	1,593	301	632	1,206	2	6	14
W Gjurice Prospect	754	1,327	2,000	552	993	1,523	4	9	18
Sum of Prospects	22,957	40,607	65,360	17,021	30,344	49,344	110	288	575

Table 7.6 Summary of Resource Estimates, Case 3 – Gas-Filled (Metric)

	Prospective Gas in Place, Billions of Cubic Meters			Prospective Recoverable Gas Resources, Billions of Cubic Meters			Prospective Recoverable Condensate Resources, Million Tonnes		
Prospect Name	P90	P50	P10	P90	P50	P10	P90	P50	P10
Gjurice Prospect	130.7	231.6	377.8	96.3	172.9	284.5	2.6	6.8	13.9
Rinas Prospect	119.5	214.6	368.2	87.9	160.5	279.1	2.5	6.4	13.2
Nikel Prospect	73.3	135.7	214.5	55.2	101.3	160.5	1.4	4.0	7.8
Kamez Prospect	78.0	133.6	208.1	57.8	99.7	156.6	1.5	3.9	7.6
Sauk Prospect	86.6	147.4	220.8	64.5	110.8	167.3	1.6	4.4	8.2
Rova Prospect	13.1	20.5	30.5	9.7	15.3	22.9	0.2	0.6	1.2
Papri Prospect	69.5	125.0	194.1	51.9	93.0	146.8	1.4	3.6	7.2
Kashari Prospect	39.6	65.3	111.0	29.5	48.8	84.2	0.8	2.0	4.0
Rova W Prospect	6.9	14.6	24.0	5.1	10.9	18.2	0.1	0.5	0.8
Jubani Prospect	45.1	92.8	172.5	33.4	68.9	130.9	0.3	0.7	1.6
W Gjurice Prospect	44.7	77.1	116.3	32.8	57.7	87.9	0.4	1.1	2.1
Sum of Prospects	707.0	1,258.2	2,037.8	524.1	939.8	1,538.9	12.8	34.0	67.6

Note: Condensate is assumed to be 55⁰ API – 8.5 Bbls/Tonne

8. IDENTITY AND RELEVANT EXPERIENCE OF THE OPERATOR

Manas Petroleum Corporation is a Baar, Switzerland headquartered international oil exploration and development company with offices in Kyrgyzstan, Chile, and Albania. It was founded as a private company in 2004 and has spent approximately US\$7 million acquiring and advancing its Kyrgyz and Albanian projects. In Kyrgyz, Manas has acquired and farmed out to Santos International Holdings Pty Ltd., 70% of its interest in six licenses covering 1,217 square miles (3,152 square kilometers). In addition to the Albania concessions in Blocks A, B, D & E, Manas has obtained the Block 2 & 3 concession in Albania, concessions in southern Chile and in Mongolia.

9. RISKS AND PROBABILITY OF SUCCESS

The quantification of risk for this play can be characterized with the following variables:

Structure: defined as the presence of a structure that could act as a trap for hydrocarbons;

Seal: defined as an impermeable barrier that would prevent hydrocarbons from leaking out of the structure;

Reservoir: defined as the rock that is in a structurally favorable position having sufficient void space present whether it be matrix porosity or fracture porosity to accumulate hydrocarbons in sufficient quantities to be commercial and

Presence of Hydrocarbons: defined as the occurrence of hydrocarbon source rocks that could have generated hydrocarbons during a time that was favorable for accumulation in the structure.

Table 9.1 shows the range of the Chance of Success (COS) or favorability that the above defined variables would occur. The overall COS is the product of all four variables.

Table 9.1 Range of the Chance of Success (COS)

Chance of Success (COS)	%	Comments
Structure	60	Seismically defined by older seismic
Seal	75	Marl section occurrence pervasive
Reservoir	50	Dependent on fracture and joint presence
Presence of HC	80	Analogous field production; source beds contained in section
Overall	18	- Shell calculated with a COS rate of 10% - Coparex calculated with a COS rate of 15%

The overwhelming risk, in these prospects, is in the interpretation of these complex structural plays and the presence of reservoir quality Ionian carbonate. Some of the 2D seismic has difficulty imaging the earth clearly below the shallowest thrust faulting. Although the Kruja limestone has been encountered in wells drilled on these concession blocks, the Ionian carbonate has not been penetrated in a drilled well at present. The seismic suffers from multiples and other artifacts that may taint the interpreter's view of the deeper structure. The seismic data has benefited from reprocessing and the new seismic has aided in defining the prospects. Velocity control from an exploratory well would help to further define the target depth. The interpreted seismic lines should include the surface geology with the type, strike and dip of rock units and any surface expressions of faults with their strike and dip so that these data are incorporated into

the interpretation. The structural sections need to be balanced and undergo palinspastic reconstruction to make sure that the interpretation makes sense and to mitigate risk.

The probability of success for a wildcat well in a structurally complex area such as this is relatively high due to the fact that it is in a structurally favorable area, there exists a proven hydrocarbon source, and analogous production exists only 12.4 to 18.6 miles (20 to 30 kilometers) away. The structural risk may be mitigated by the acquisition of additional new seismic data and the reprocessing of more of the old seismic data.

10. AGREEMENTS WITH ALBANIAN GOVERNMENT

The Production Sharing Contracts (PSCs) for Exploration, Development and Production of Petroleum in Onshore Albania were signed on July 31, 2007 between the Government of Albania represented by the Ministry of Economy, Trade and Energy of Albania and Manas Petroleum Corporation represented by DWM Petroleum AG (see press release on page 10-5 below). These agreements govern exploration, development and production of the Blocks A, B, C and D in northern Albania and were ratified by the Albanian government as of December 13, 2007. The PSC terms establish a framework designed to provide flexibility and fair return to the company and the government while limiting undue administrative burden and interference.

Manas Petroleum Corporation operates under two PSCs. Each of these contracts cover Blocks A and B and Blocks D and E, respectively. PSC terms specify two primary economic aspects related to the work commitment and fiscal terms. The work commitment represents the capital investments that Manas Petroleum Corporation will spend on the exploration of their blocks, while fiscal terms govern the allocation of revenues resulting from oil and gas production. The PSC terms are summarized in Tables 10.1 through 10.4 below.

Table 10.1 PSC Duration Terms

PSC Terms	Block A-B	Block D-E
Exploration		
Initial exploration period, years	3	3
Second Exploration period, years	2	2
Third Exploration period, years	2	2
Relinquishment		
If entering First and Second Exploration period, % of acreage	25%	25%
At termination of exploration period, relinquish all the remaining acreage except a development and production area, % of acreage	100%	100%
Commercial Production		
Production period, years	20	20
Extension of production period (subject to approval), years	5	5
Total Duration of production license, years	25	25

Table 10.2 PSC Work Commitments

Work Program	Block A-B	Block D-E
Initial Exploration period		
Geological and geophysical, US\$ million	0.40	0.40
Seismic re-processing, US\$ million	0.12	0.15
Seismic acquisition (186 miles (300 km) 2D), US\$ million	2.50	2.50
Or		
Drilling one Exploration Well (9,842 ft (3,000m) or until it reaches the Carbonates of Eocene or Cretaceous), US\$ million	6.00	6.00
Min Work Program, US\$ million	3.02 / 6.52	3.05 / 6.55
Second Exploration Period		
Geological and geophysical, US\$ million	0.30	0.30
Drilling one Exploration Well (9,842 ft (3,000m) or until it reaches the Carbonates of Eocene or Cretaceous), US\$ million	6.00	6.00
Min Work Program, US\$ million	6.30	6.30
Third Exploration Period		
Geological and geophysical, US\$ million	0.30	0.30
Drilling one Exploration Well (9,842 ft (3,000m) or until it reaches the Carbonates of Eocene or Cretaceous), US\$ million	6.00	6.00
Min Work Program, US\$ million	6.30	6.30
If Contractor Fails to Complete a Firm Obligation		
Pay US\$13,411/mile (US\$8,333/km) for every line km of new quality 2D seismic data not acquired and processed	Applicable	Applicable
Pay US\$966/mile (US\$600/km) for every line km of existing 2D seismic data not processed	Applicable	Applicable
Failure to drill an obligatory exploratory well or abandon the well, Pay the balance of Min Expenditure on exploratory well	Applicable	Applicable

Table 10.3 PSC Fiscal Terms

	Block A-B		Block D-E	
Allocation on Production (Production Share for Oil and Gas)	Government		Government	
R-Factor less than 1.5	10%		10%	
R-Factor more than 1.5 but less than 2.0	12.5%		12.5%	
R-Factor more than 2.0	15%		15%	
Cost Recovery				
After the Government Allocation, the portion of Available Petroleum to recover exploration, development and operating expenditures (Cost Recovery Petroleum)	100%		100%	
<u>Carry Forward:</u> Unrecovered costs can be carried forward until fully recovered.	Applicable		Applicable	
Profit Sharing (for Oil and Gas)	Contractor	Government	Contractor	Government
R-Factor less than 1.5	100%	0%	100%	0%
R-Factor more than 1.5 but less than 2.0	95%	5%	95%	5%
R-Factor more than 2.0 but less than 2.5	90%	10%	90%	10%
R-Factor more than 2.5	85%	15%	85%	15%
Taxes				
Albanian Income Tax	50%		50%	
VAT	0%		0%	
Exemption from VAT, duties, and other levies with respect to the importation of equipment, machinery, materials	Applicable		Applicable	
Bonuses				
Signature bonus, US\$ million	0.10		0.10	
Production bonus on the start of commercial production, US\$ million	0.10		0.10	
Production Bonus when average daily Oil production reaches 15,000bpd(2,046tpd), US\$ million	0.50		0.50	
Production bonus when 90 day average average daily oil production reaches 30,000bpd(4,093tpd), US\$ million	1.00		1.00	
Abandonment Cost				
Annual contribution, percent of Operating Costs	1%		1%	
Accruing abandonment cost on unit of production basis whichever of the condition is met	Last 10 years or cum production exceeds 75% of exp recovery		Last 10 years or cum production exceeds 75% of exp recovery	

Table 10.4 PSC Terms Related to Labor and Subcontracts

Employment Rights and Training		
Contractor is free to select its employees: Select Albanian personnel if their professional skills are adequate	Applicable	Applicable
Training Programs during Exploration periods (Part of exploration cost), US\$ million per year	0.10	0.10
Subcontracts		
Competitive bidding for any contracts with the estimated value in excess of the specified limit, US\$	2,000,000	2,000,000

Government production allocation and the entitlement of contractor and government to profit petroleum are determined by R-Factor. R-Factor is calculated as the ratio of Contractor's cumulative receipts from the effective date until the end of the preceding calendar year to the Contractor's cumulative expenditures incurred from the effective date until the end of the preceding calendar year. The Contractor's cumulative receipts are calculated as the aggregate value of Contractor's share of profit petroleum plus cost recovery petroleum and less Albanian taxes paid from the effective date until the end of the preceding calendar year. The Contractor's cumulative expenditures are estimated as the aggregate value of all bonuses, costs, expenses and expenditures previously incurred by Contractor under the contract.

Recoverable costs are recoverable first from the cost recovery crude oil, if any, and second from the cost recovery gas, if any. PSC terms specify that exploration, development and operating expenditures, including those accumulated prior to the date of initial commercial production, are recoverable in full without amortization: (1) in the month when they are incurred or (2) in the month in which the Date of Initial Commercial Production has occurred.

The following is a press release relative to the acquisition of DWM Petroleum AG by Manas Petroleum Corporation.

ZURICH, SWITZERLAND. -- DATE APRIL 12, 2007 -- Manas Petroleum Corporation (Trading Symbol: MNAP) closes acquisition of DWM Petroleum AG.

Manas Petroleum Corporation is pleased to announce the share exchange as agreed in a letter of intent dated November 24th, 2006 between Manas Petroleum Corporation, a Nevada Corporation (formerly known as Express Systems Corporation) and DWM Petroleum AG, a Swiss corporation, has closed as of April 10th, 2007. Simultaneously with the closing of the reverse transaction, and as a condition of its completion on April 10th, 2007, the Company completed a private placement of 10,330,152 units at \$1.00 per unit. Each "Unit" consists of 1 share of Company common stock, 50% warrant coverage for Series A warrants which are exercisable for one share of common stock at \$2 per share for 2 years, and 50% warrant coverage for Series B warrants which are exercisable for one share of common stock at \$4 per share for 3 years.

11. CERTIFICATE OF QUALIFICATION

I, Letha Chapman Lencioni, Professional Engineer of 5757 Central Avenue, Suite D, Boulder, Colorado, 80301, USA, hereby certify:

1. I am an employee of Gustavson Associates, which prepared a detailed analysis of the oil and gas properties of Manas Petroleum Corporation. The effective date of this evaluation is October 20, 2007.
2. I do not have, nor do I expect to receive, any direct or indirect interest in the securities of Manas Petroleum Corporation or its affiliated companies, nor any interest in the subject property.
3. I attended the University of Tulsa and I graduated with a Bachelor of Science Degree in Petroleum Engineering in 1980; I am a Registered Professional Engineer in the State of Colorado, and I have in excess of 24 years' experience in the conduct of evaluation and engineering studies relating to oil and gas fields.
4. A personal field inspection of the properties was not made; however, such an inspection was not considered necessary in view of information available from public information and records, the files of Manas Petroleum Corporation, and the appropriate state regulatory authorities.



A handwritten signature in black ink, appearing to read "Letha Chapman Lencioni".

Letha Chapman Lencioni
Chief Reservoir Engineer/
Vice-President, Petroleum Sector
Gustavson Associates, LLC
Colorado Registered Engineer #29506

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APPENDIX A

Tables of Input Data for Probabilistic Resource Estimates

	Papri Prospect			Gyurice Prospect			Rinas Prospect			Nikel Prospect		
Parameter	Minimum	Most Likely	Maximum	Minimum	Most Likely	Maximum	Minimum	Most Likely	Maximum	Minimum	Most Likely	Maximum
Temperature gradient, °F/ft	0.009	0.010	0.012	0.009	0.010	0.012	0.009	0.010	0.012	0.009	0.010	0.012
pressure gradient, psi/ft	0.5	0.55	0.58	0.5	0.55	0.58	0.5	0.55	0.58	0.5	0.55	0.58
Depth, ft	13,288	14,929	17,143	14,272	15,913	18,292	12,058	13,698	15,913	14,929	16,569	18,620
Bulk Volume, acre-ft	2,120,838	8,987,578	15,258,039	4,586,998	14,372,101	30,312,814	4,137,512	11,825,504	31,905,449	1,920,823	9,510,718	16,694,447
Water Saturation, %	15.0	20.0	25.0	15.0	20.0	25.0	15.0	20.0	25.0	15.0	20.0	25.0
Porosity, %	2.5	3.5	6.0	2.5	3.5	6.0	2.5	3.5	6.0	2.5	3.5	6.0
% N2	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5	1.0
% CO2	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5	1.0
% H2S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<u>Oil Case</u>												
Oil Gravity, °API	35	37	38	35	37	38	35	37	38	35	37	38
Gas-Oil Ratio, SCF/Bbl	500	1,000	1,500	500	1,000	1,500	500	1,000	1,500	500	1,000	1,500
Gas Gravity, relative to air	0.70	0.79	0.83	0.70	0.79	0.83	0.70	0.79	0.83	0.70	0.79	0.83
Oil Recovery Factor, %	15%	25%	35%	15%	25%	35%	15%	25%	35%	15%	25%	35%
Solution Gas Recovery / Oil Recovery	0.9	1.0	1.2	0.9	1.0	1.2	0.9	1.0	1.2	0.9	1.0	1.2
<u>Oil with Gas Cap Case</u>												
% Bulk Volume in Gas Cap	30%	56%	70%	30%	56%	70%	30%	56%	70%	30%	56%	70%
Free Gas Recovery Factor, %	60%	75%	85%	60%	75%	85%	60%	75%	85%	60%	75%	85%
<u>Gas Case</u>												
Gas Gravity, relative to air	0.60	0.63	0.65	0.60	0.63	0.65	0.60	0.63	0.65	0.60	0.63	0.65
Condensate Content, Bbl/MMCF	0	10	20	0	10	20	0	10	20	0	10	20
Gas Recovery Factor, %	60%	75%	90%	60%	75%	90%	60%	75%	90%	60%	75%	90%

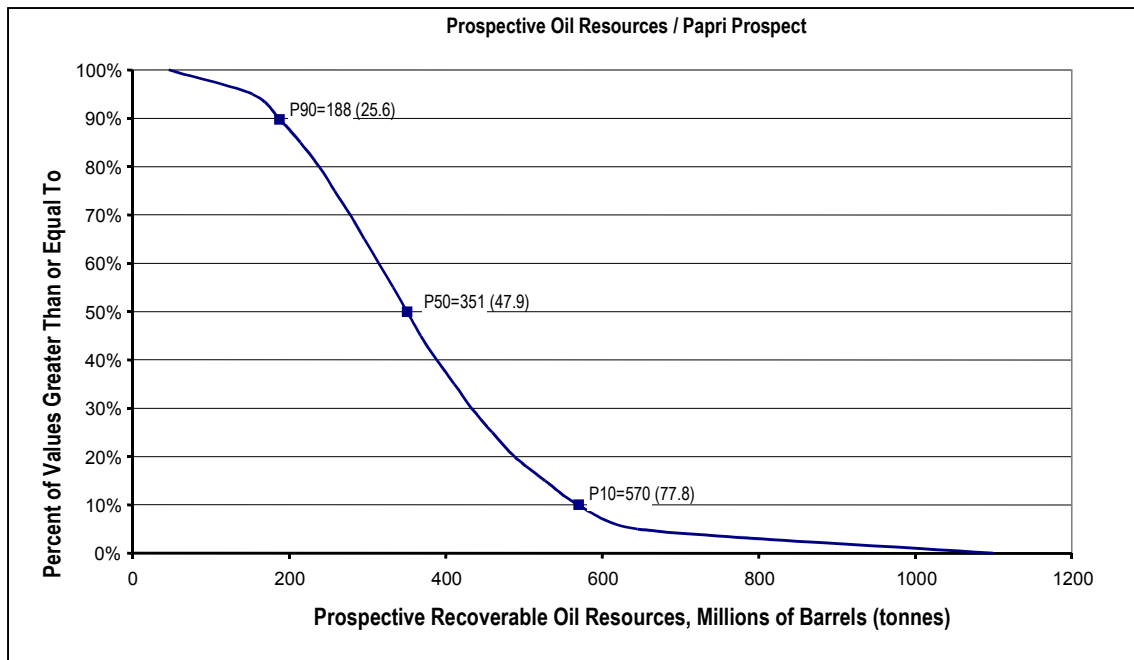
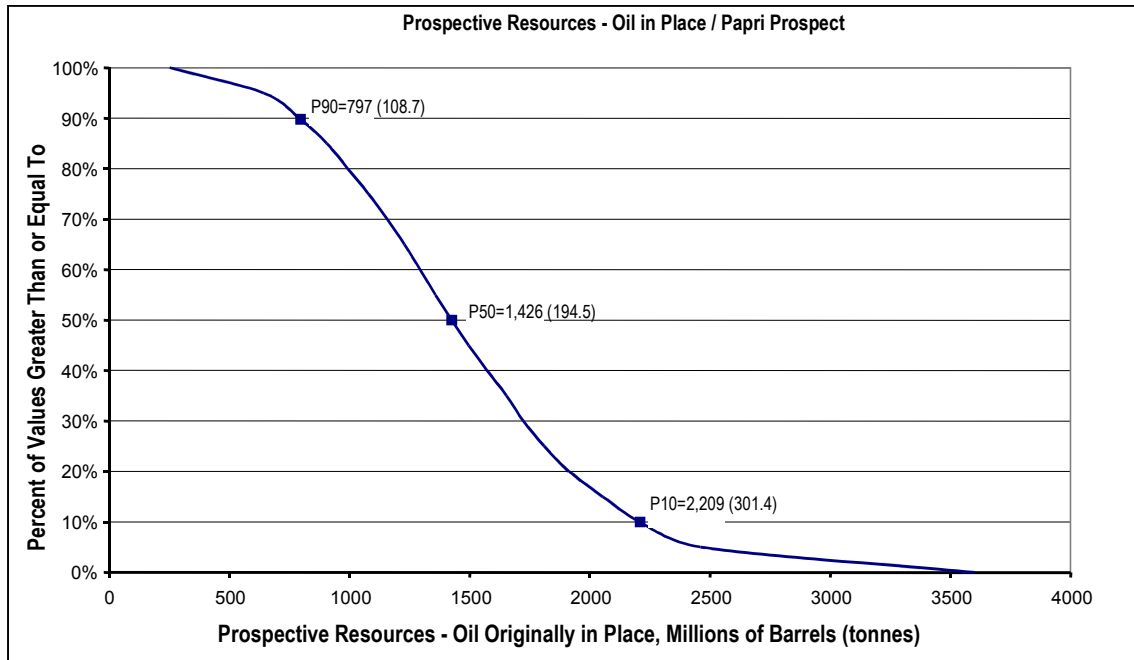
	Kamez Prospect			Sauk Prospect			Rova Prospect			Kashari Prospect		
Parameter	Minimum	Most Likely	Minimum	Most Likely	Maximum	Minimum	Most Likely	Maximum	Maximum	Minimum	Most Likely	Maximum
Temperature gradient, °F/ft	0.009	0.010	0.009	0.010	0.012	0.009	0.010	0.012	0.012	0.009	0.010	0.012
pressure gradient, psi/ft	0.5	0.55	0.5	0.55	0.58	0.5	0.55	0.58	0.58	0.5	0.55	0.58
Depth, ft	14,502	16,143	17,783	18,767	19,998	14,994	15,978	17,209	15,913	14,929	16,569	18,620
Bulk Volume, acre-ft	2,784,400	9,308,614	562,030	1,449,720	2,117,610	2,165,107	2,861,983	9,295,734	31,905,449	1,920,823	9,510,718	16,694,447
Water Saturation, %	15.0	20.0	15.0	20.0	25.0	15.0	20.0	25.0	25.0	15.0	20.0	25.0
Porosity, %	2.5	3.5	2.5	3.5	6.0	2.5	3.5	6.0	6.0	2.5	3.5	6.0
% N2	0.0	0.5	0.0	0.5	1.0	0.0	0.5	1.0	1.0	0.0	0.5	1.0
% CO2	0.0	0.5	0.0	0.5	1.0	0.0	0.5	1.0	1.0	0.0	0.5	1.0
% H2S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<u>Oil Case</u>												
Oil Gravity, °API	35	37	35	37	38	35	37	38	38	35	37	38
Gas-Oil Ratio, SCF/Bbl	500	1,000	500	1,000	1,500	500	1,000	1,500	1,500	500	1,000	1,500
Gas Gravity, relative to air	0.70	0.79	0.70	0.79	0.83	0.70	0.79	0.83	0.83	0.70	0.79	0.83
Oil Recovery Factor, %	15%	25%	15%	25%	35%	15%	25%	35%	35%	15%	25%	35%
Solution Gas Recovery / Oil Recovery	0.9	1.0	0.9	1.0	1.2	0.9	1.0	1.2	1.2	0.9	1.0	1.2
<u>Oil with Gas Cap Case</u>												
% Bulk Volume in Gas Cap	30%	56%	30%	56%	70%	30%	56%	70%	70%	30%	56%	70%
Free Gas Recovery Factor, %	60%	75%	60%	75%	85%	60%	75%	85%	85%	60%	75%	85%
<u>Gas Case</u>												
Gas Gravity, relative to air	0.60	0.63	0.60	0.63	0.65	0.60	0.63	0.65	0.65	0.60	0.63	0.65
Condensate Content, Bbl/MMCF	0	10	0	10	20	0	10	20	20	0	10	20
Gas Recovery Factor, %	60%	75%	60%	75%	90%	60%	75%	90%	90%	60%	75%	90%

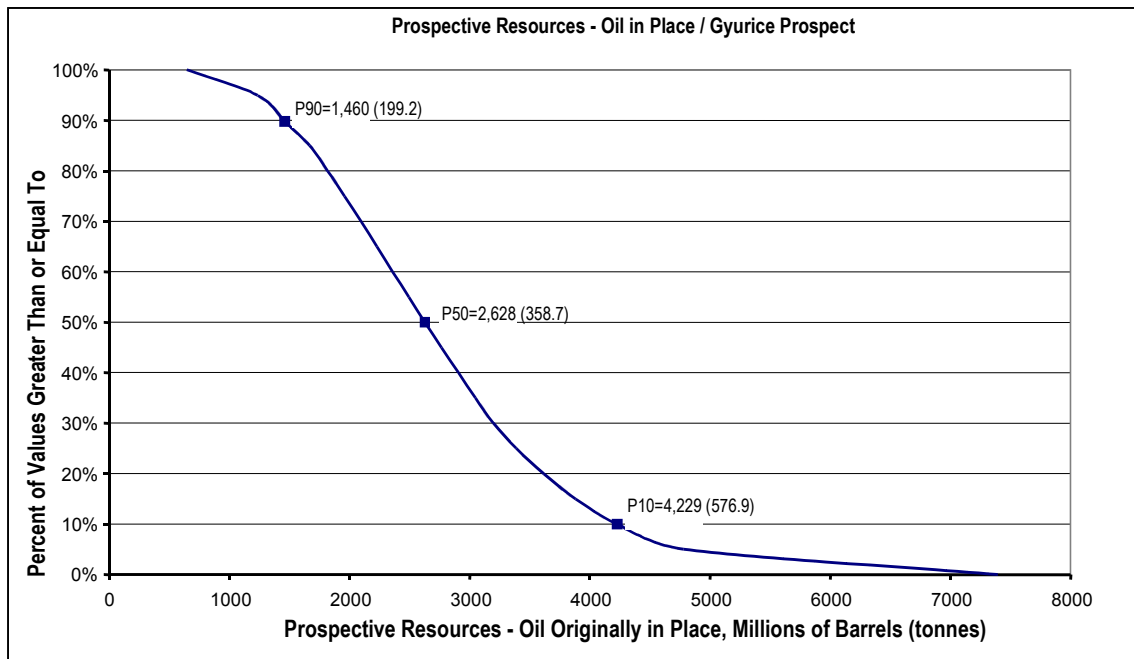
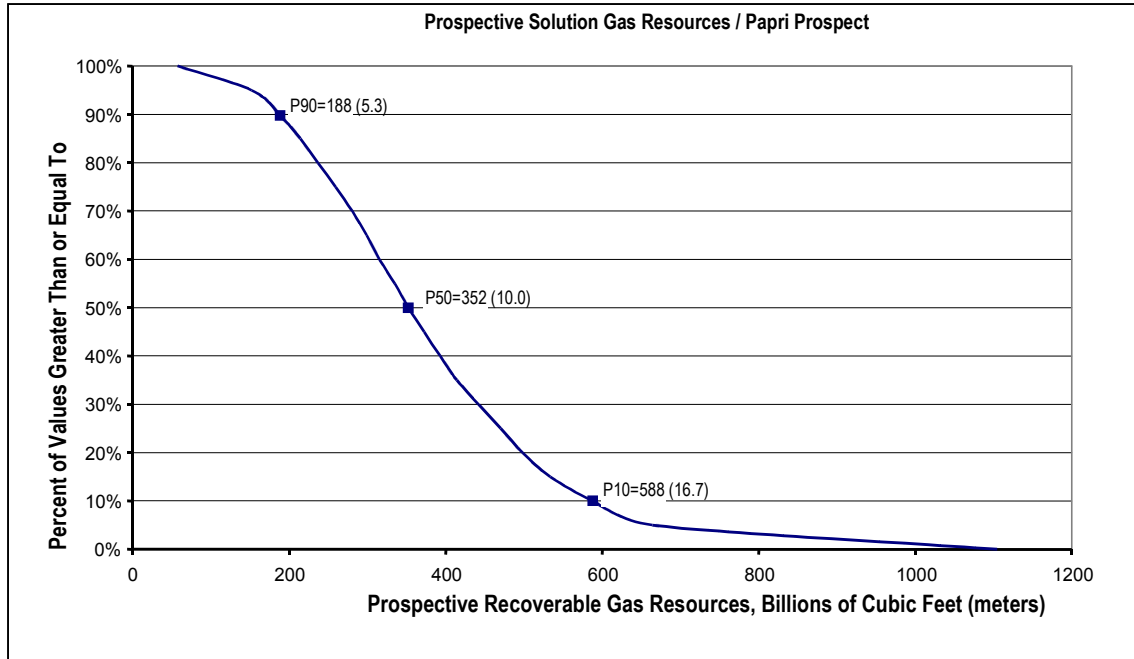
	West Gyurice Prospect			Jubani Prospect			Rova W Prospect		
Parameter	Minimum	Most Likely	Maximum	Minimum	Most Likely	Maximum	Minimum	Most Likely	Maximum
Temperature gradient, °F/ft	0.009	0.010	0.012	0.009	0.010	0.012	0.009	0.010	0.012
pressure gradient, psi/ft	0.5	0.55	0.58	0.5	0.55	0.58	0.5	0.55	0.58
Depth, ft	14,322	15,306	15,798	3,465	4,449	4,941	12,402	13,386	14,207
Bulk Volume, acre-ft	737,692	3,108,799	4,646,552	756,061	2,091,235	8,226,631	73,461	1,053,642	2,033,823
Water Saturation, %	15.0	20.0	25.0	15.0	20.0	25.0	15.0	20.0	25.0
Porosity, %	2.5	3.5	6.0	2.5	3.5	6.0	2.5	3.5	6.0
% N2	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5	1.0
% CO2	0.0	0.5	1.0	0.0	0.5	1.0	0.0	0.5	1.0
% H2S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<u>Oil Case</u>									
Oil Gravity, °API	35	37	38	35	37	38	35	37	38
Gas-Oil Ratio, SCF/Bbl	500	1,000	1,500	500	1,000	1,500	500	1,000	1,500
Gas Gravity, relative to air	0.70	0.79	0.83	0.70	0.79	0.83	0.70	0.79	0.83
Oil Recovery Factor, %	15%	25%	35%	15%	25%	35%	15%	25%	35%
Solution Gas Recovery / Oil Recovery	0.9	1.0	1.2	0.9	1.0	1.2	0.9	1.0	1.2
<u>Oil with Gas Cap Case</u>									
% Bulk Volume in Gas Cap	30%	56%	70%	30%	56%	70%	30%	56%	70%
Free Gas Recovery Factor, %	60%	75%	85%	60%	75%	85%	60%	75%	85%
<u>Gas Case</u>									
Gas Gravity, relative to air	0.60	0.63	0.65	0.60	0.63	0.65	0.60	0.63	0.65
Condensate Content, Bbl/MMCF	0	10	20	0	10	20	0	10	20
Gas Recovery Factor, %	60%	75%	90%	60%	75%	90%	60%	75%	90%

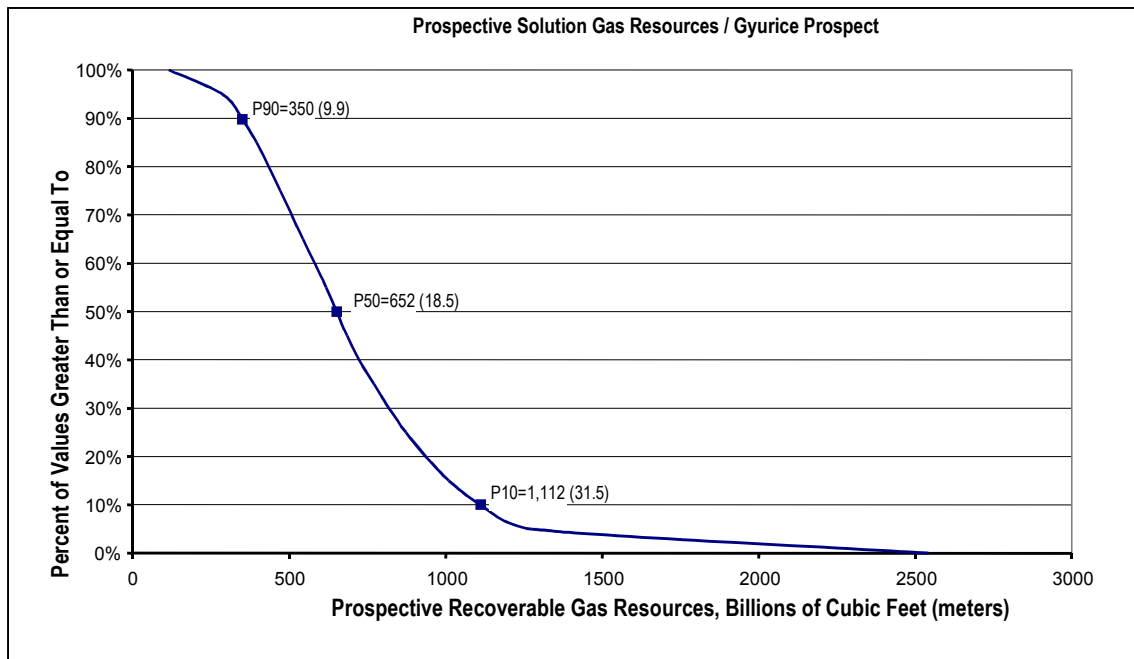
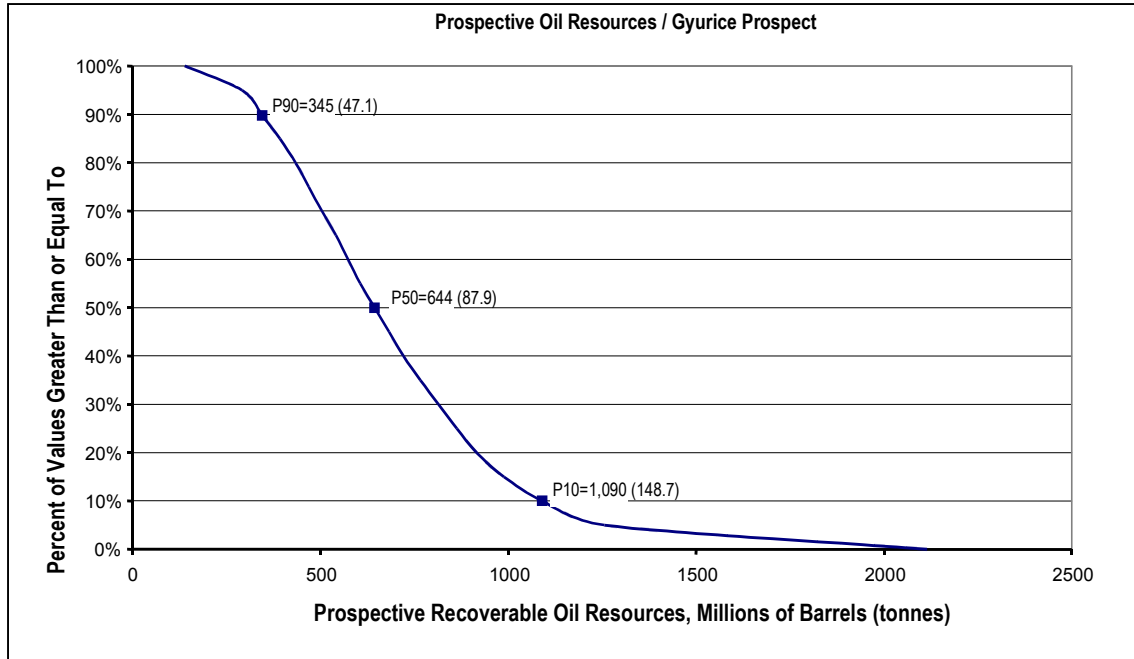
APPENDIX B

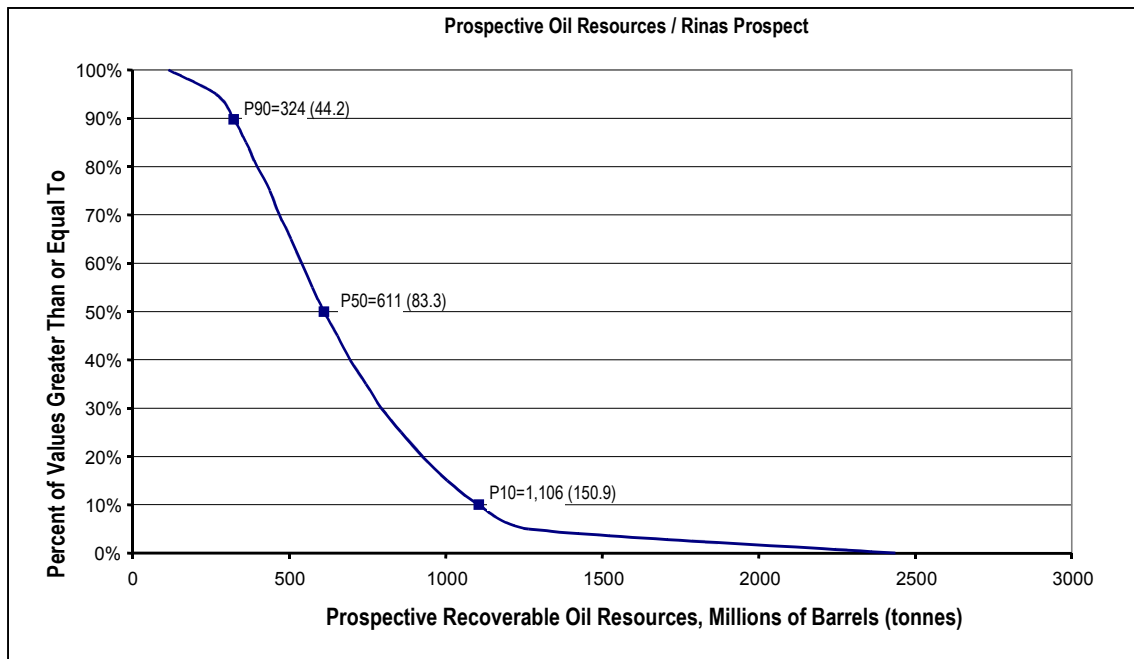
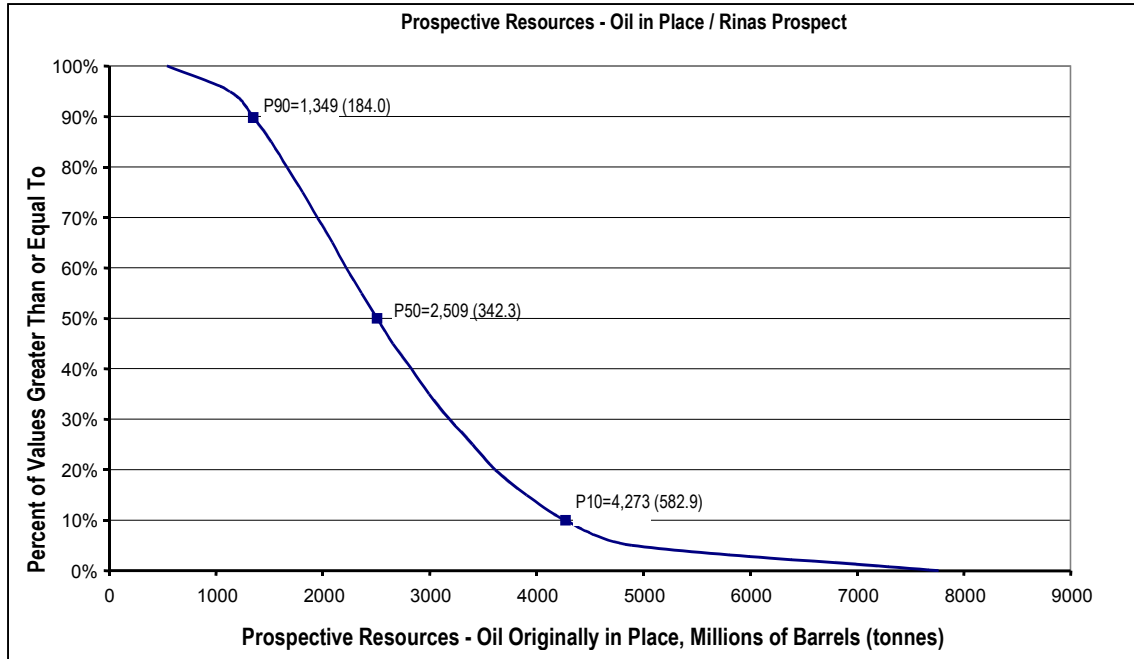
GRAPHS OF PROBABILISTIC RESOURCE DISTRIBUTION BY RESERVOIR AND PLAY AREA

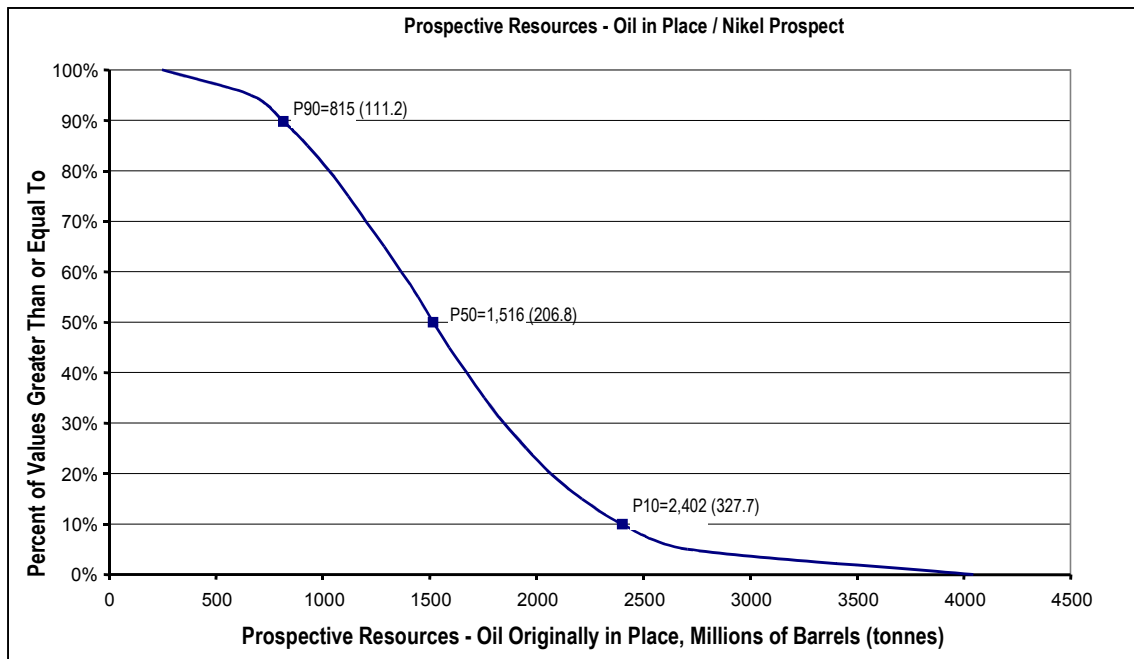
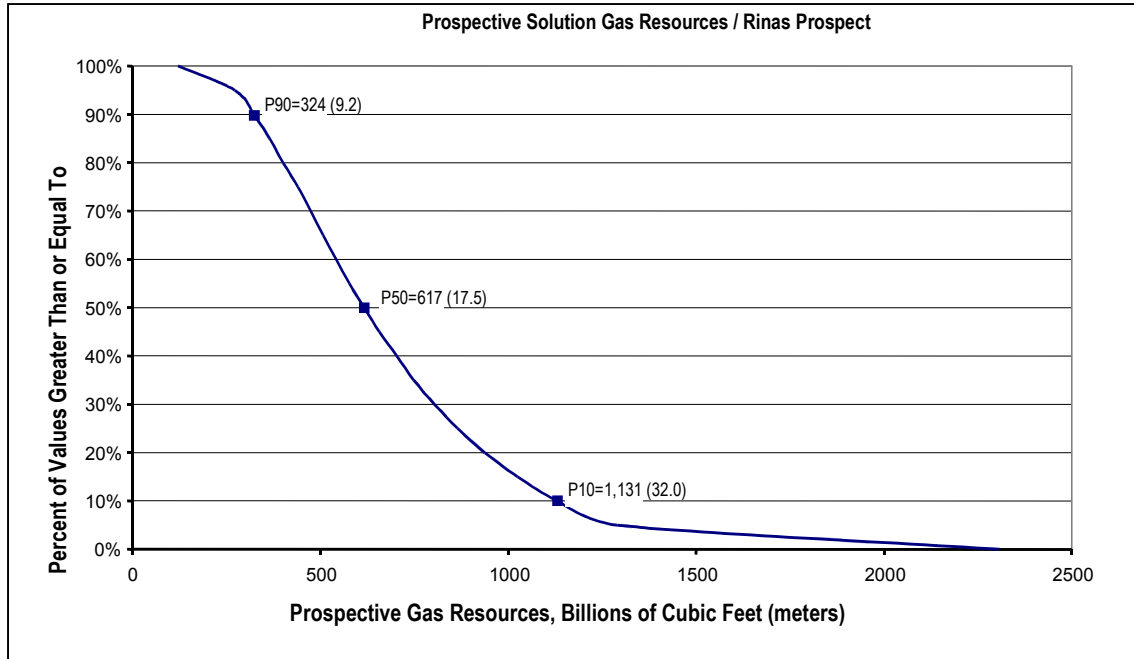
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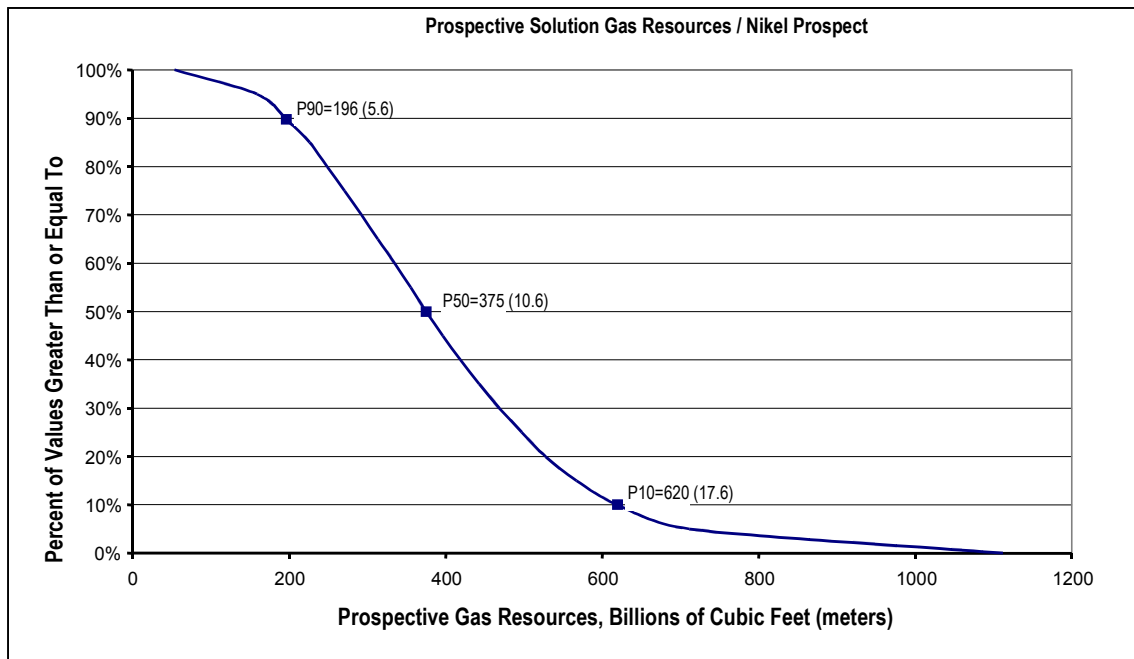
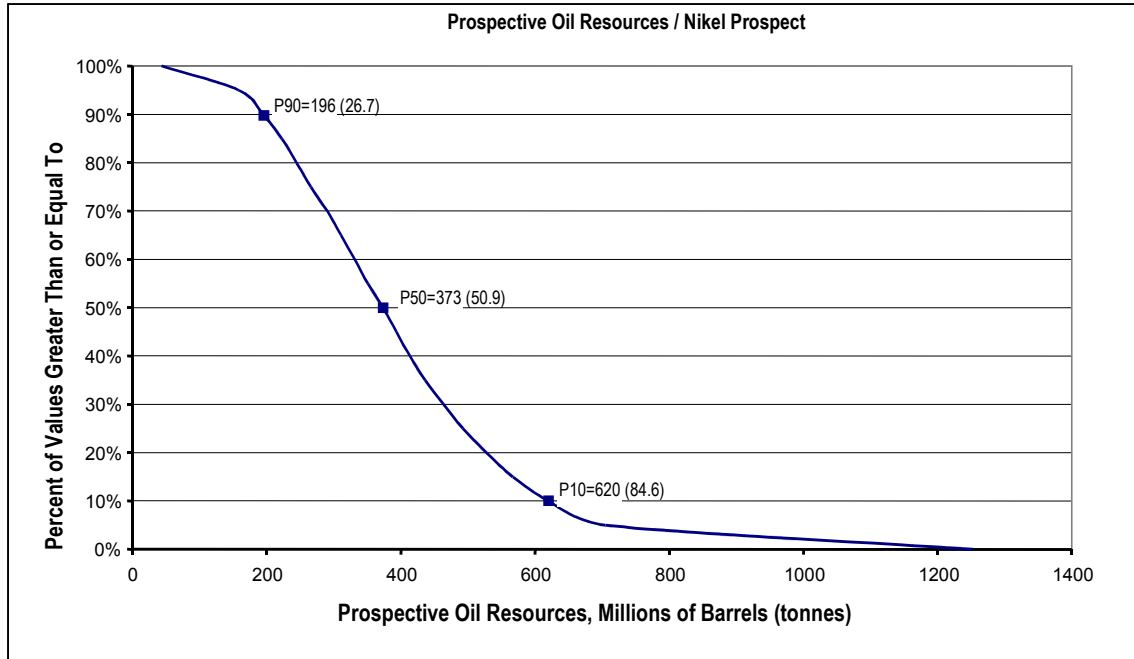


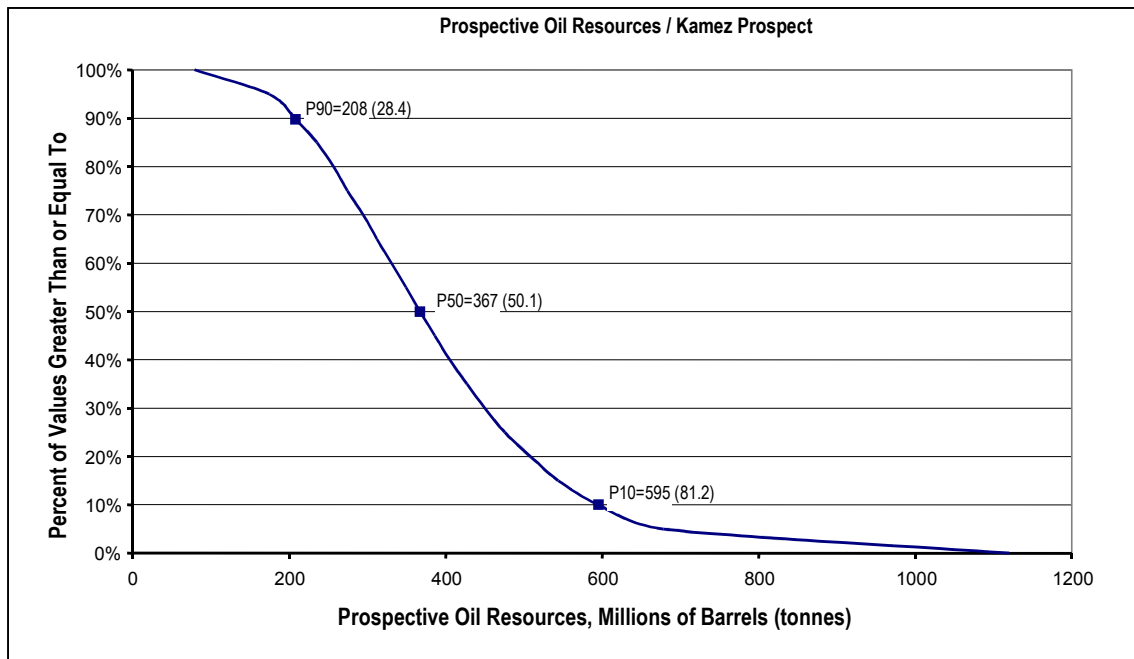
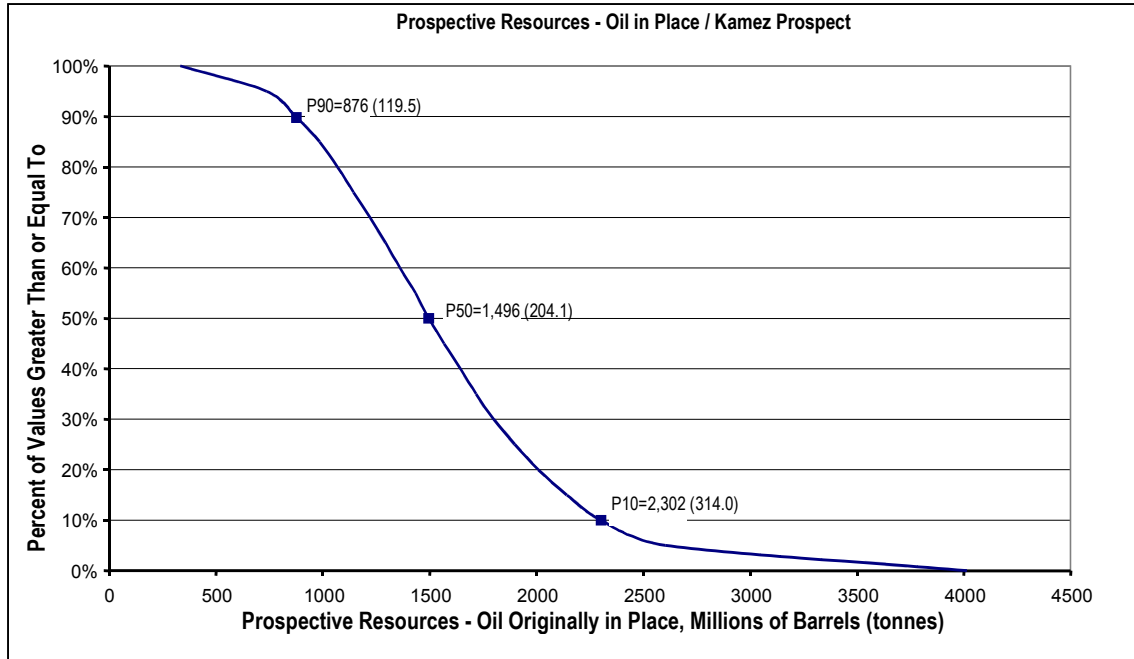


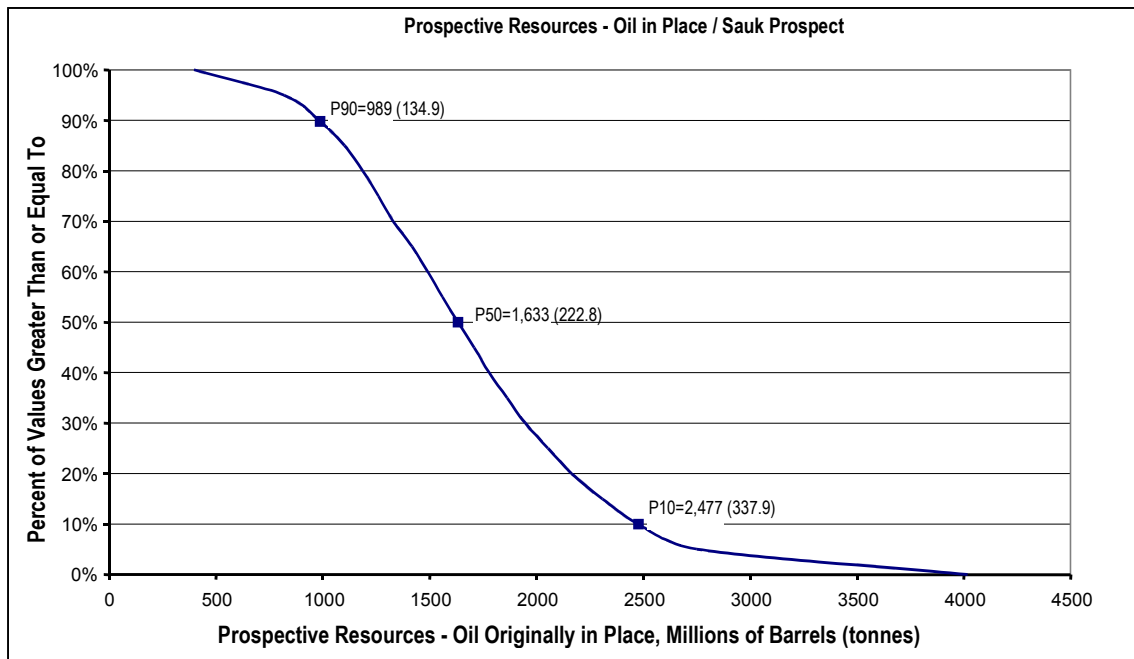
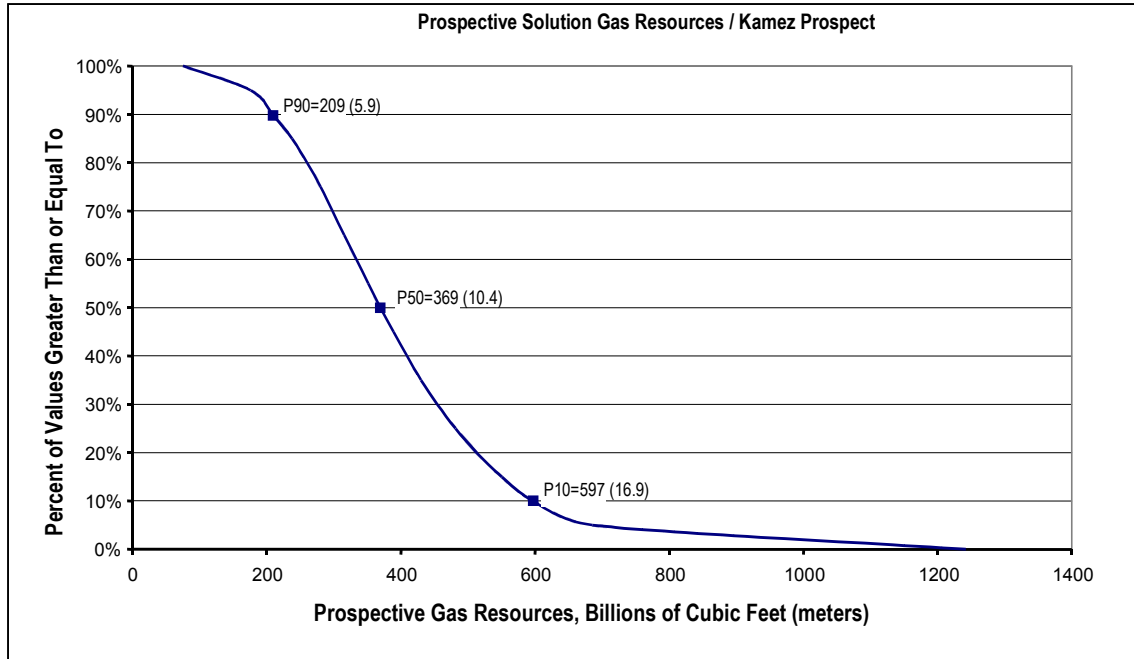


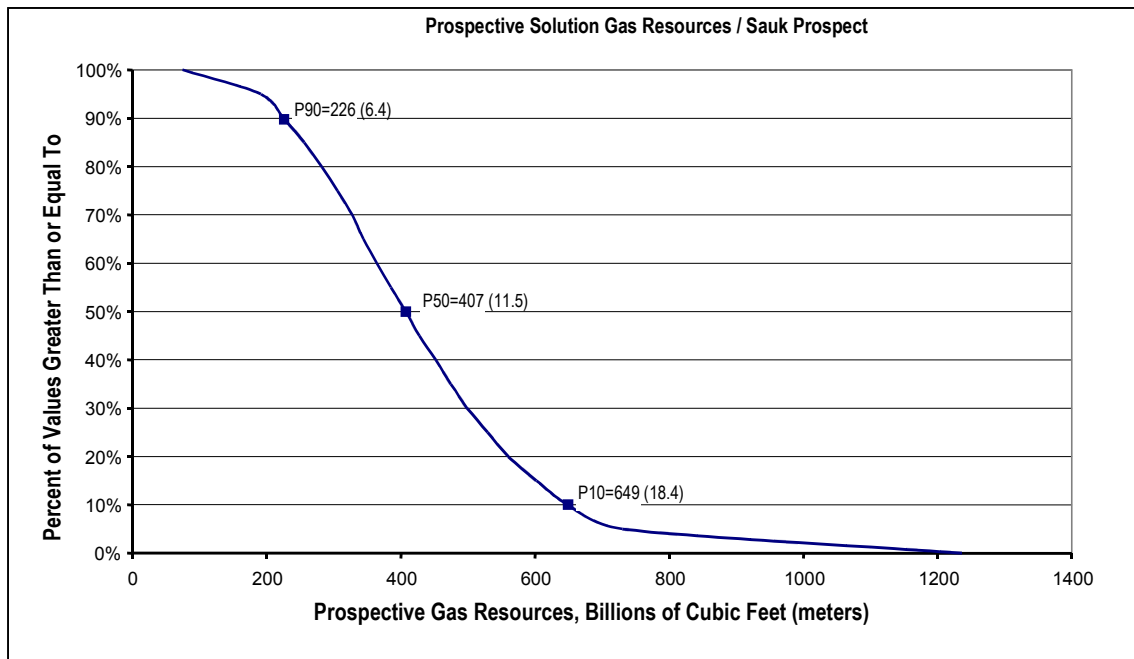
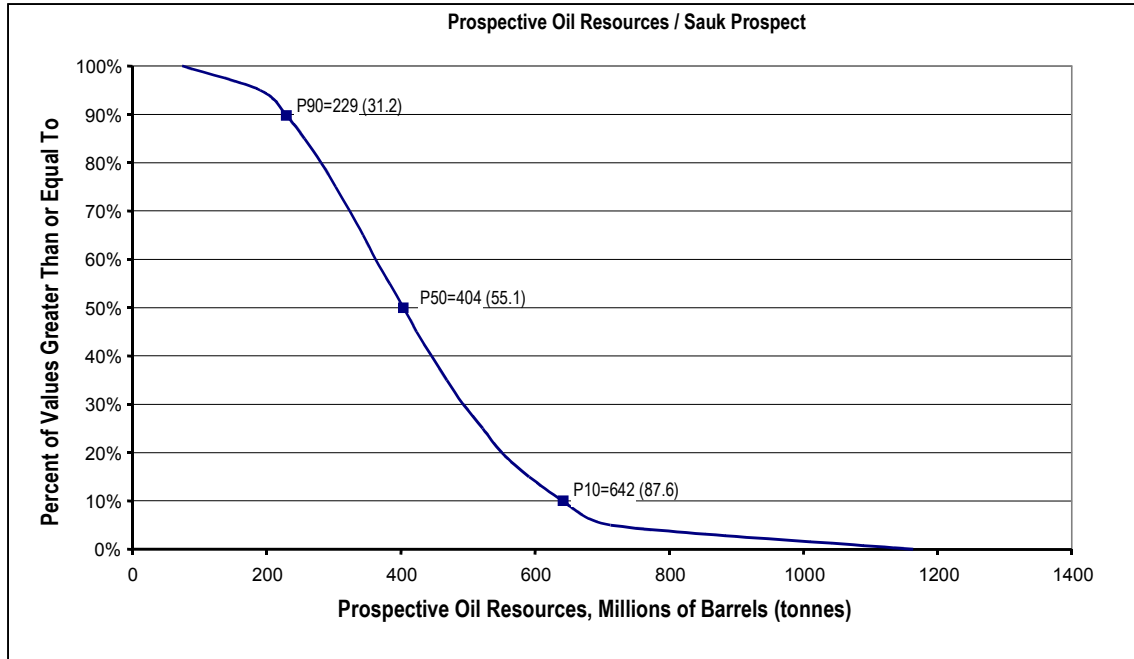


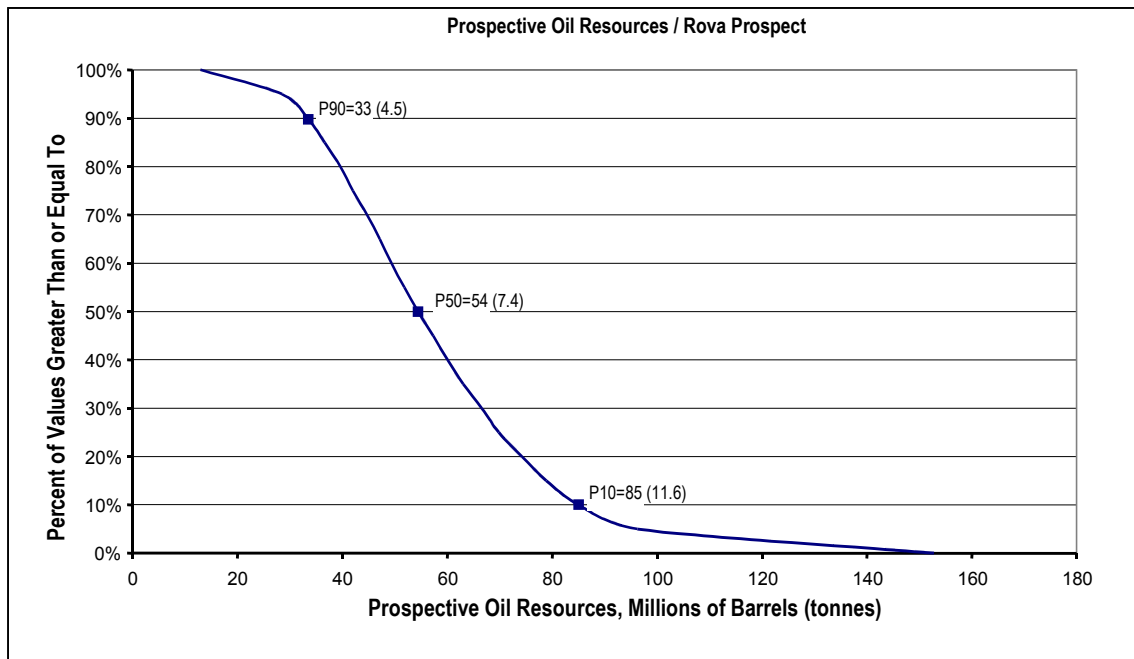
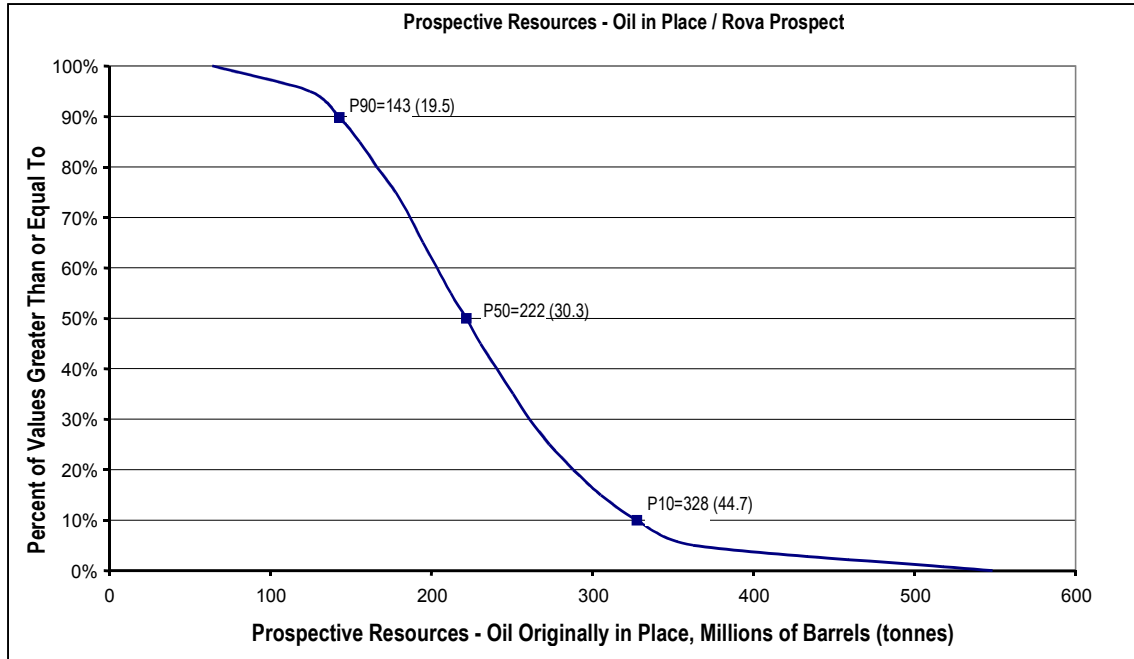


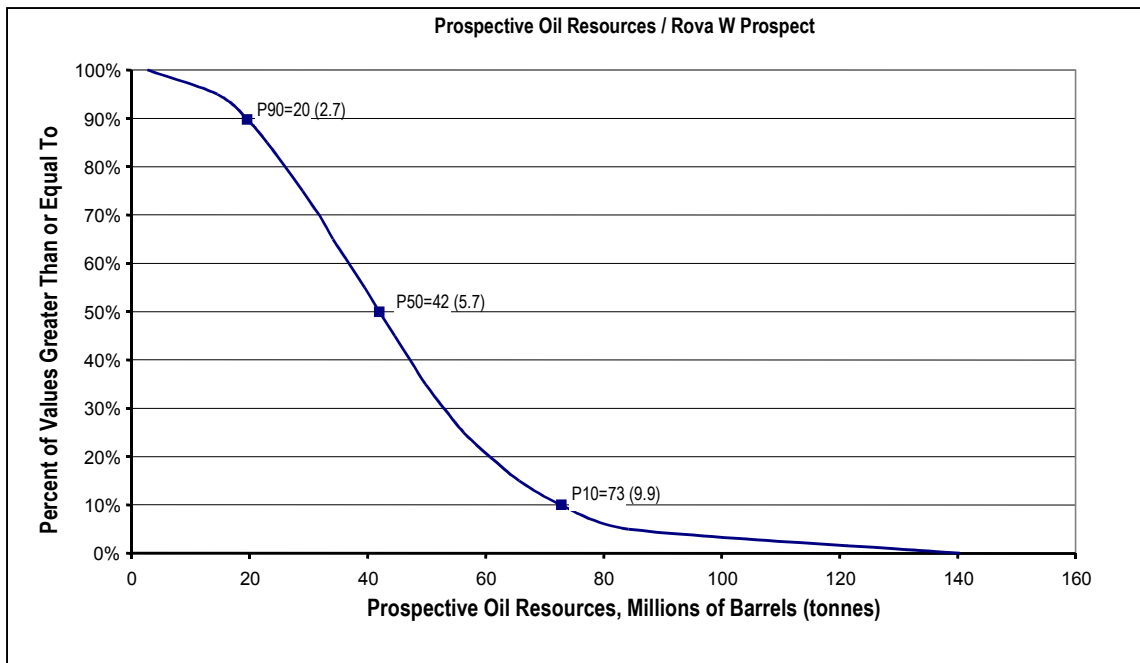
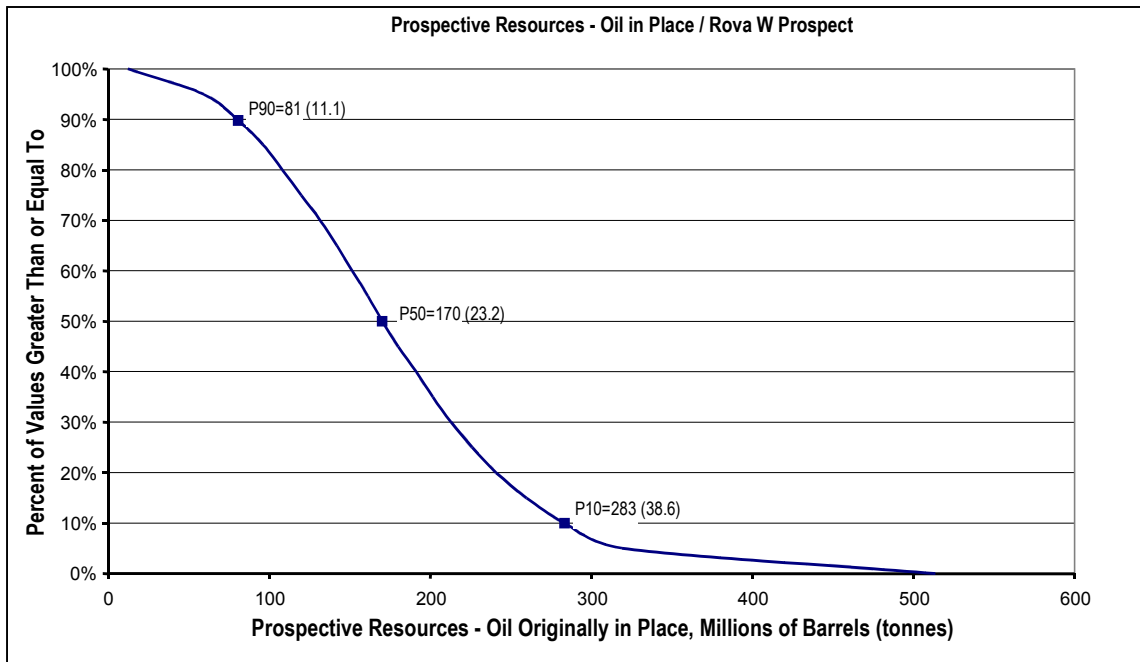


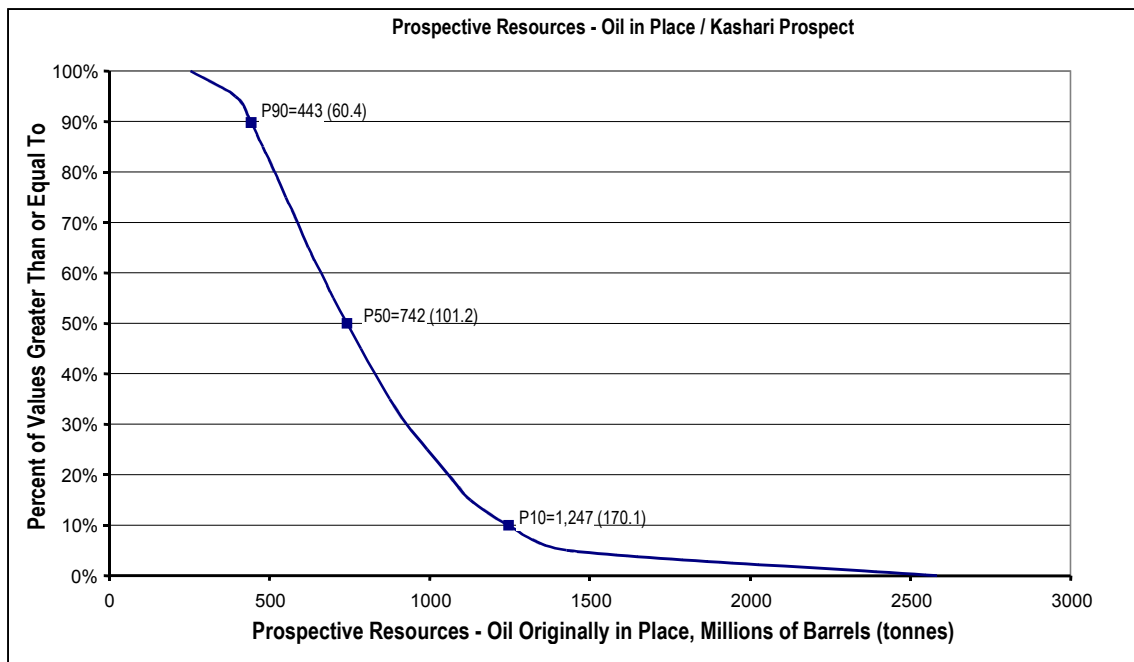
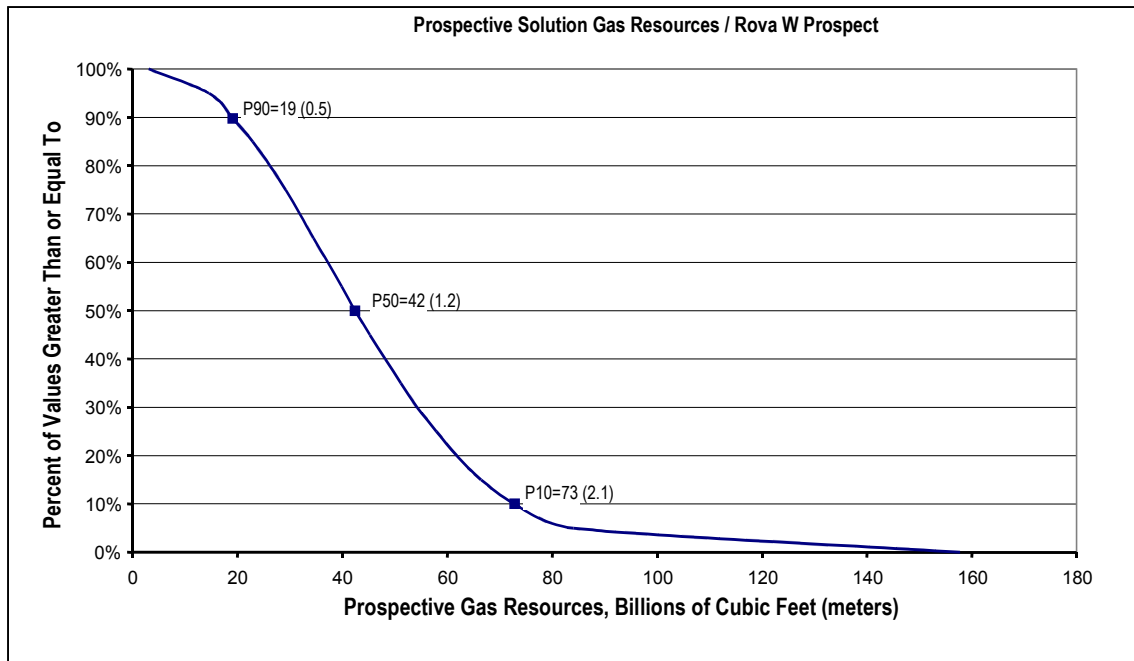


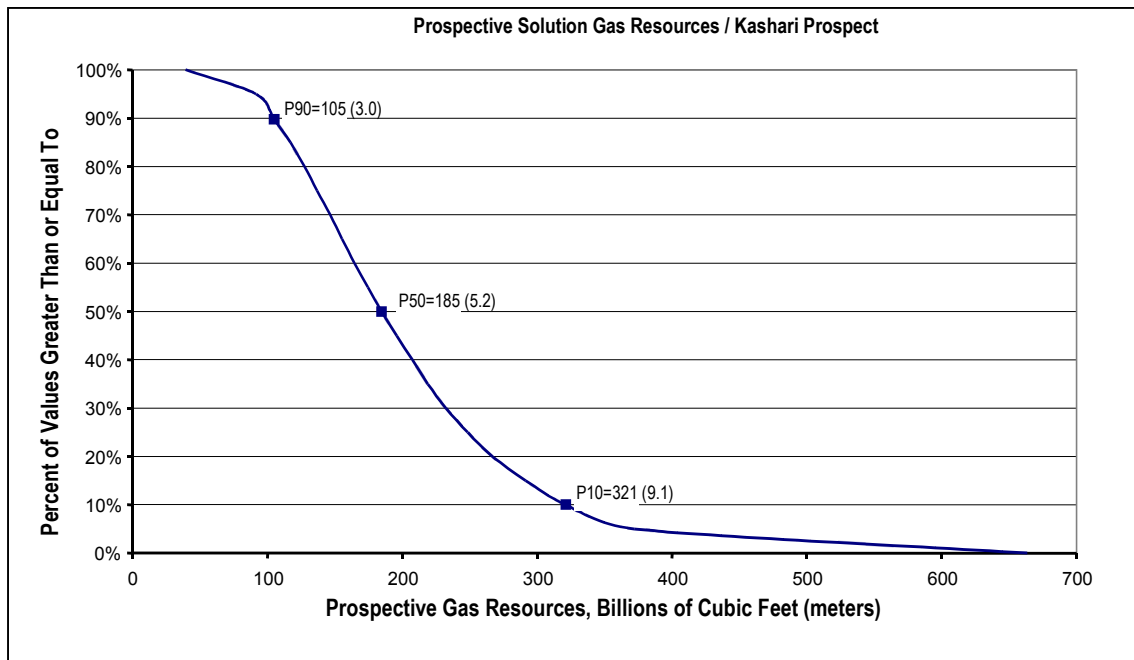
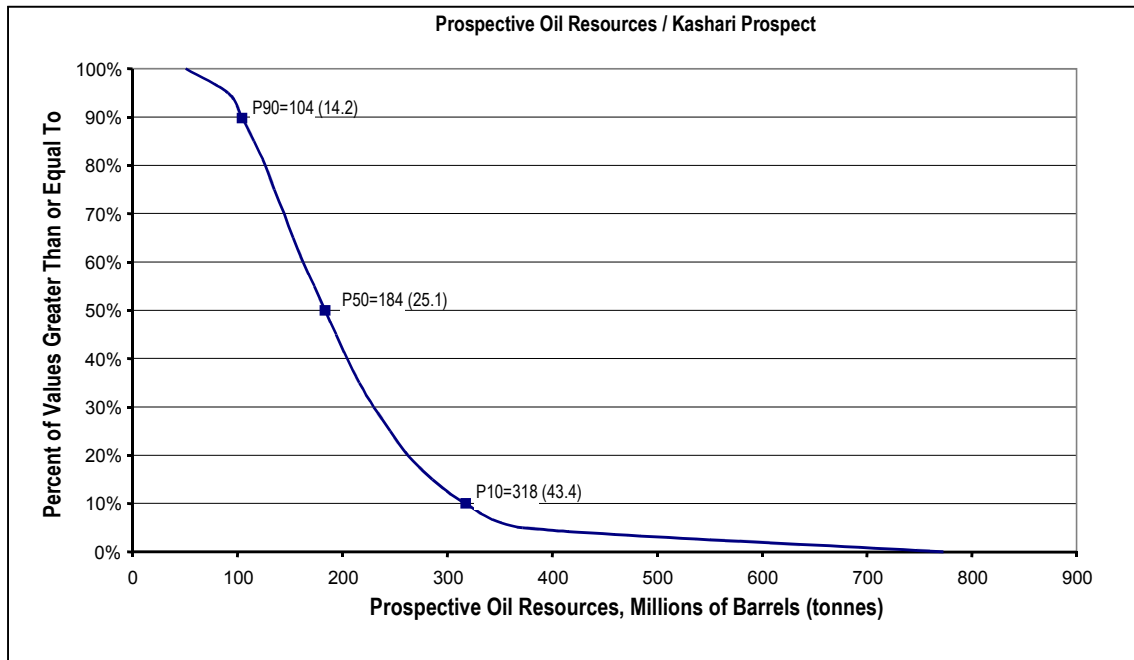


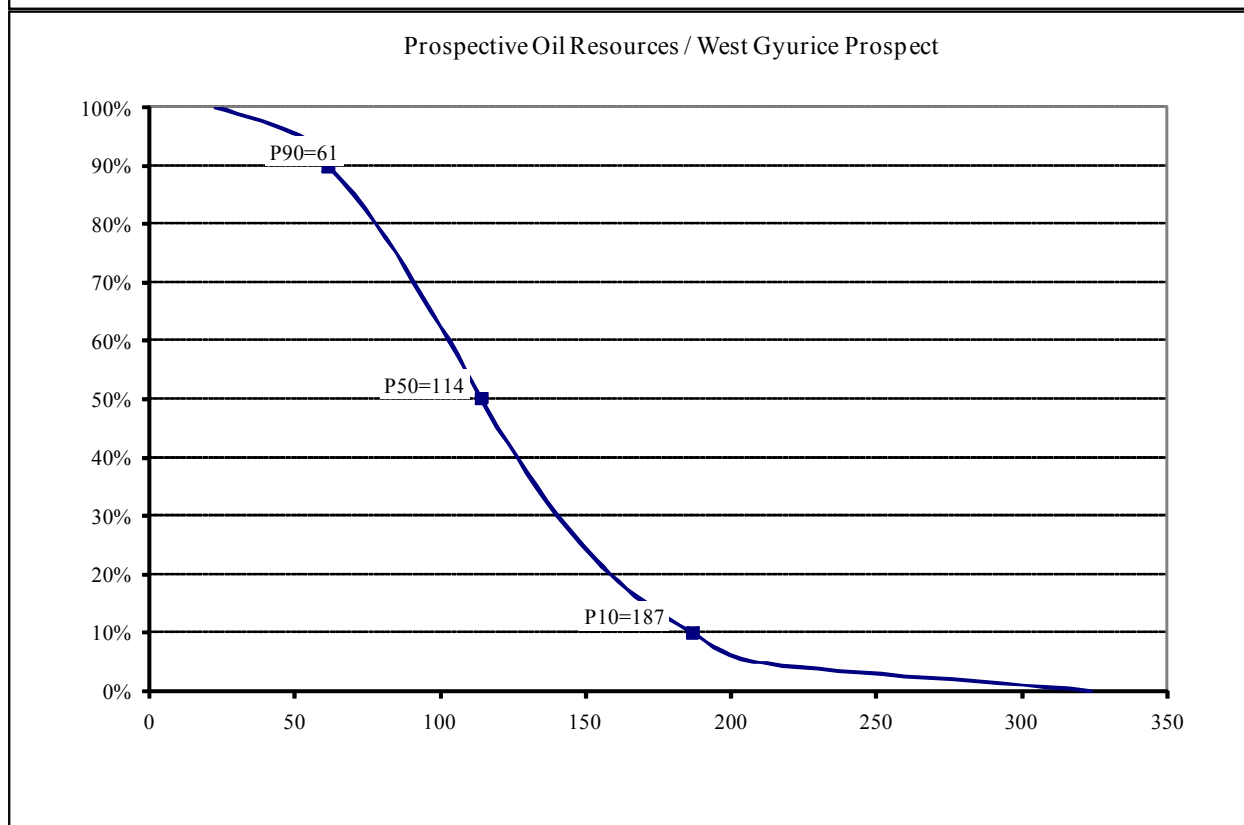
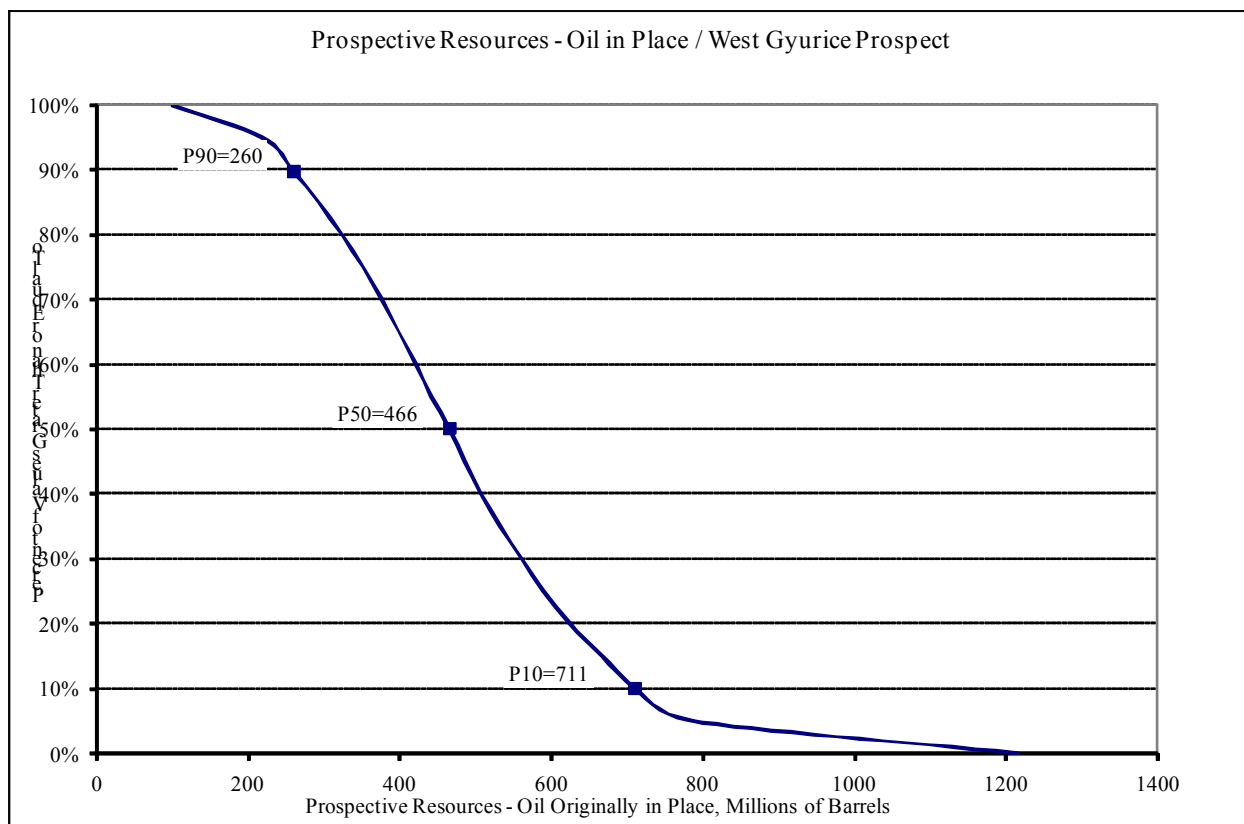




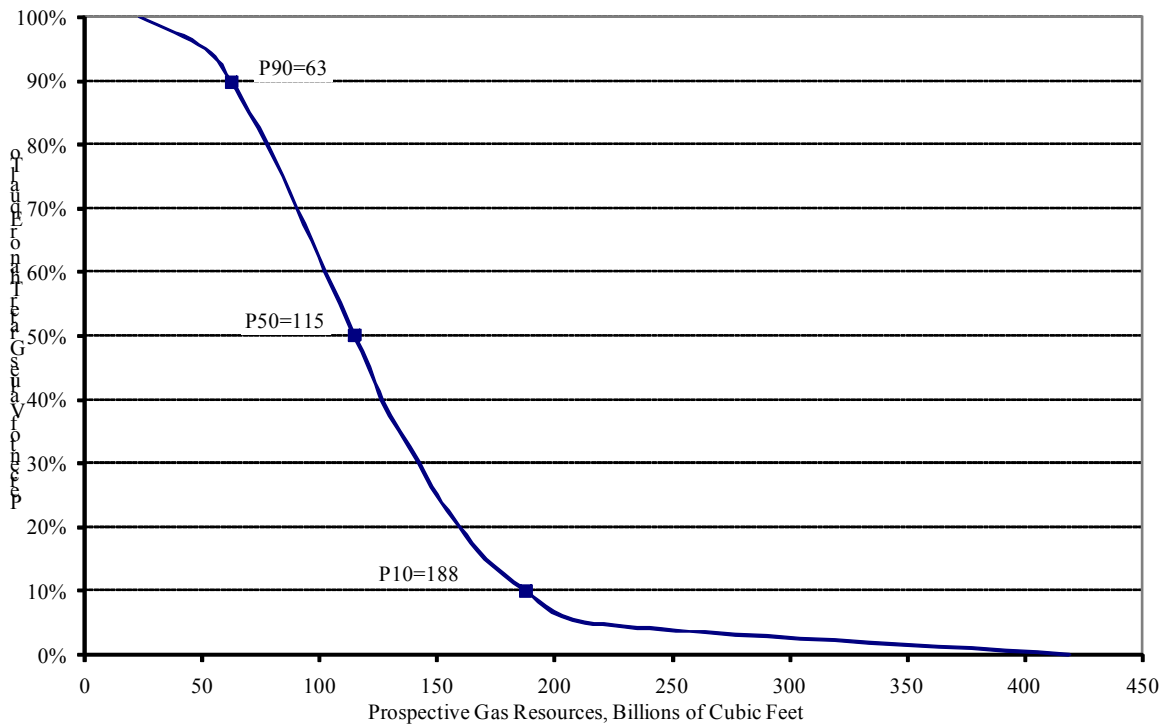




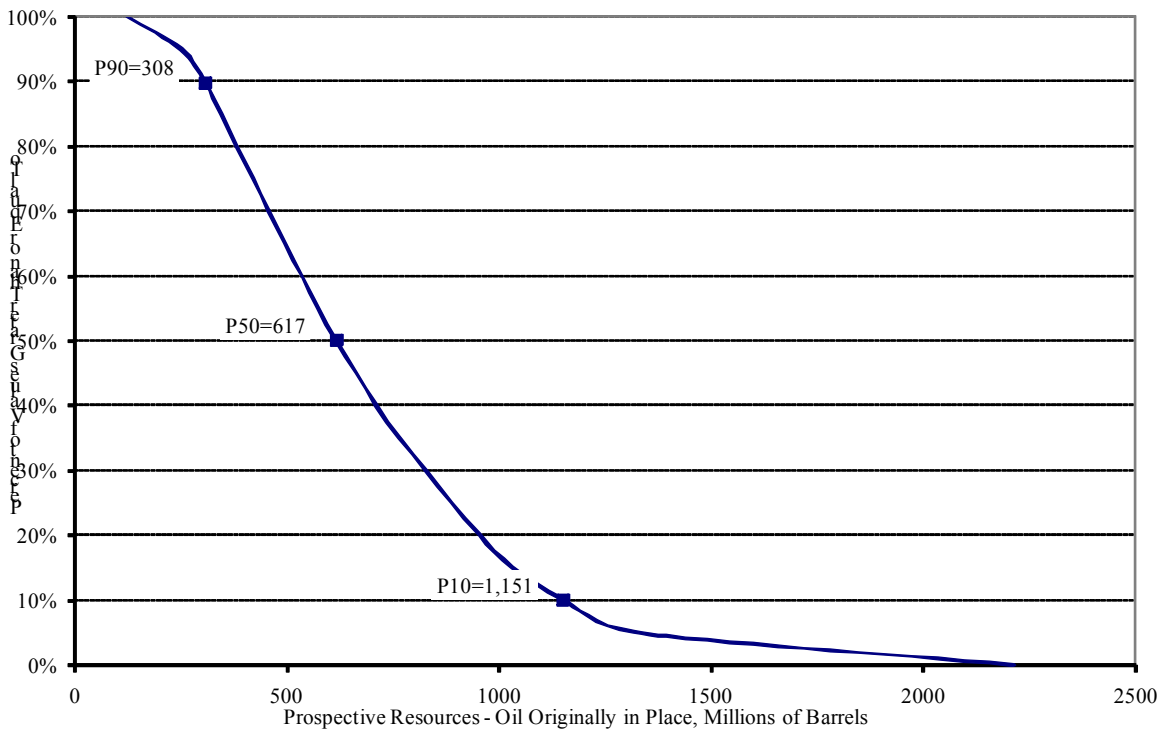




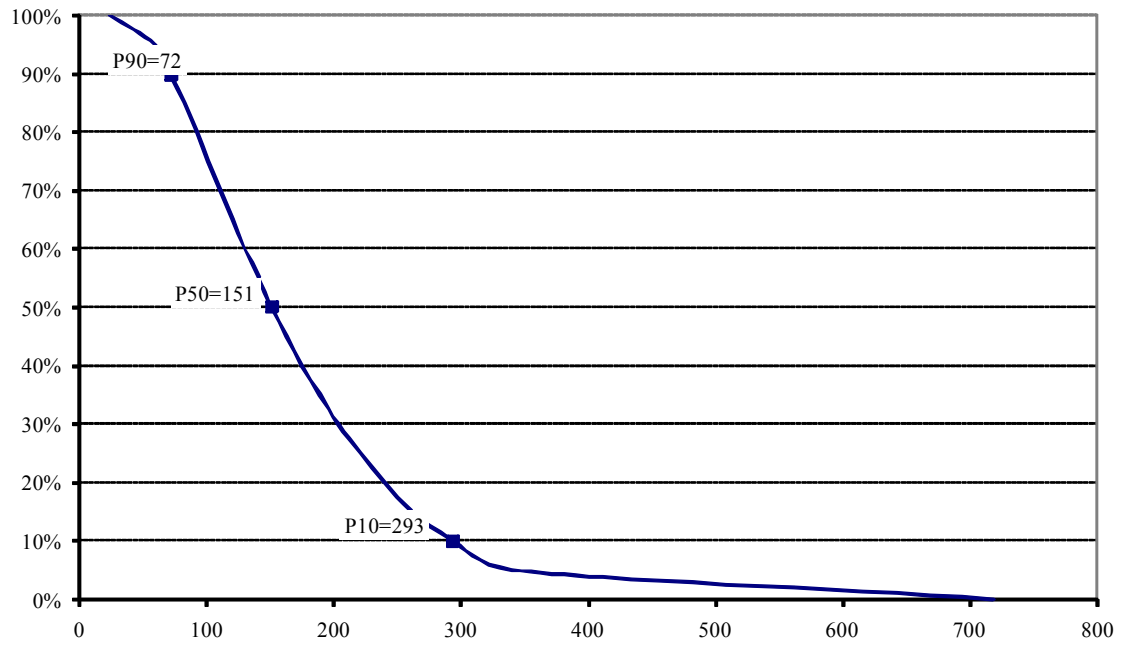
Prospective Sln Gas Resources / West Gyurice Prospect



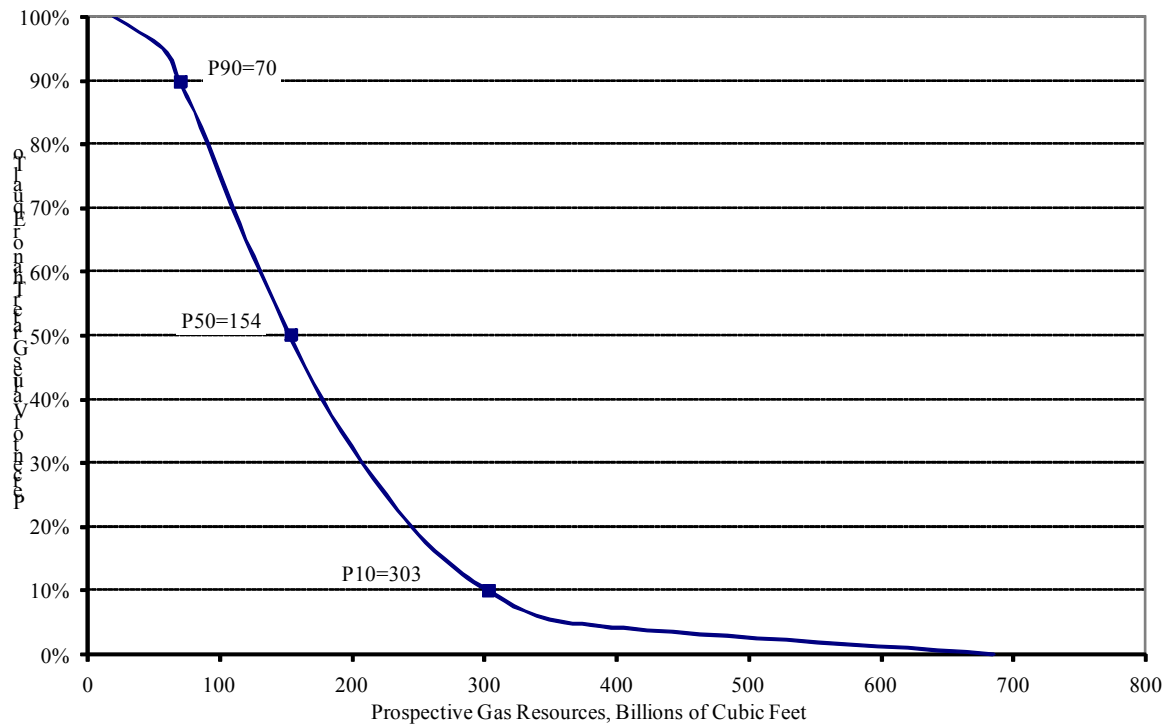
Prospective Resources - Oil in Place / Jubani Prospect



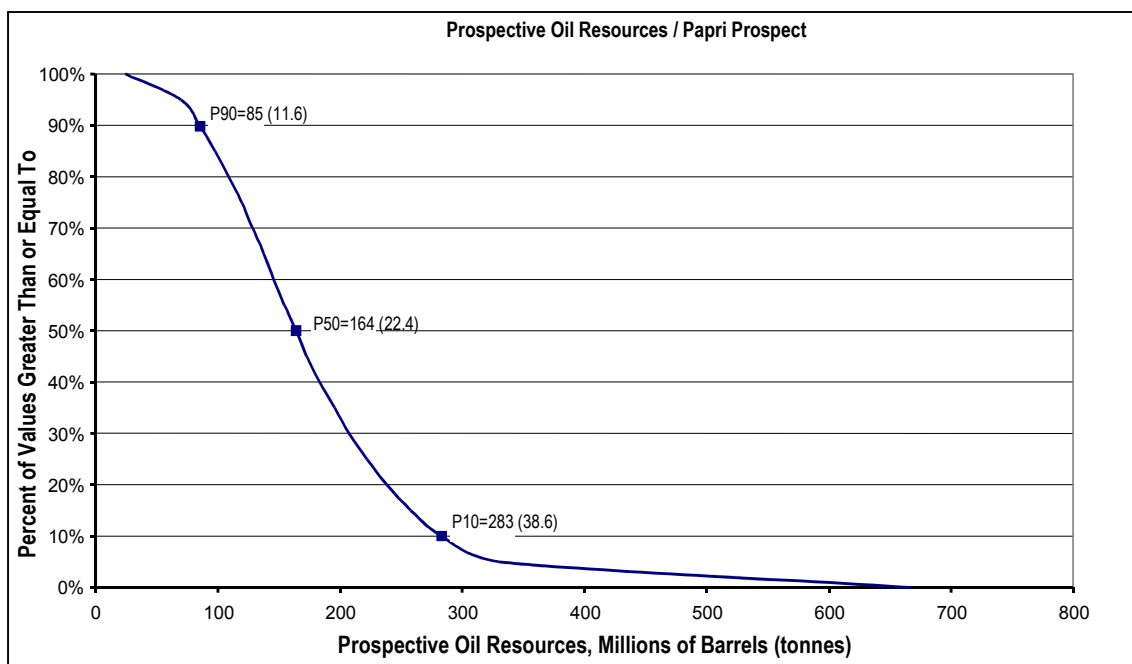
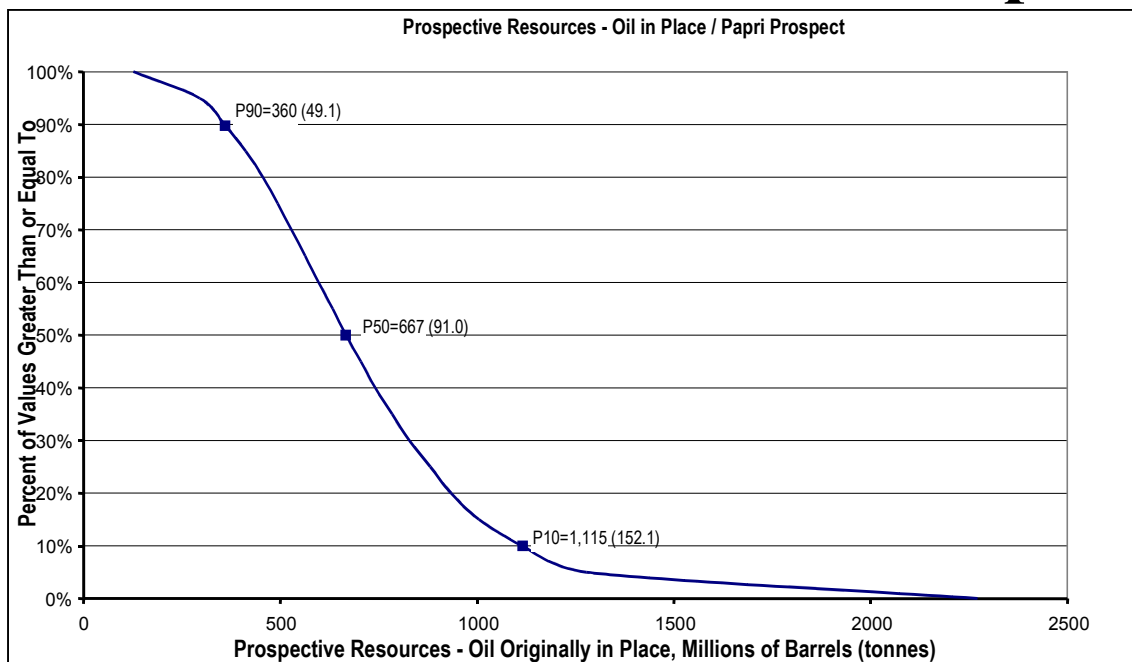
Prospective Oil Resources / Jubani Prospect

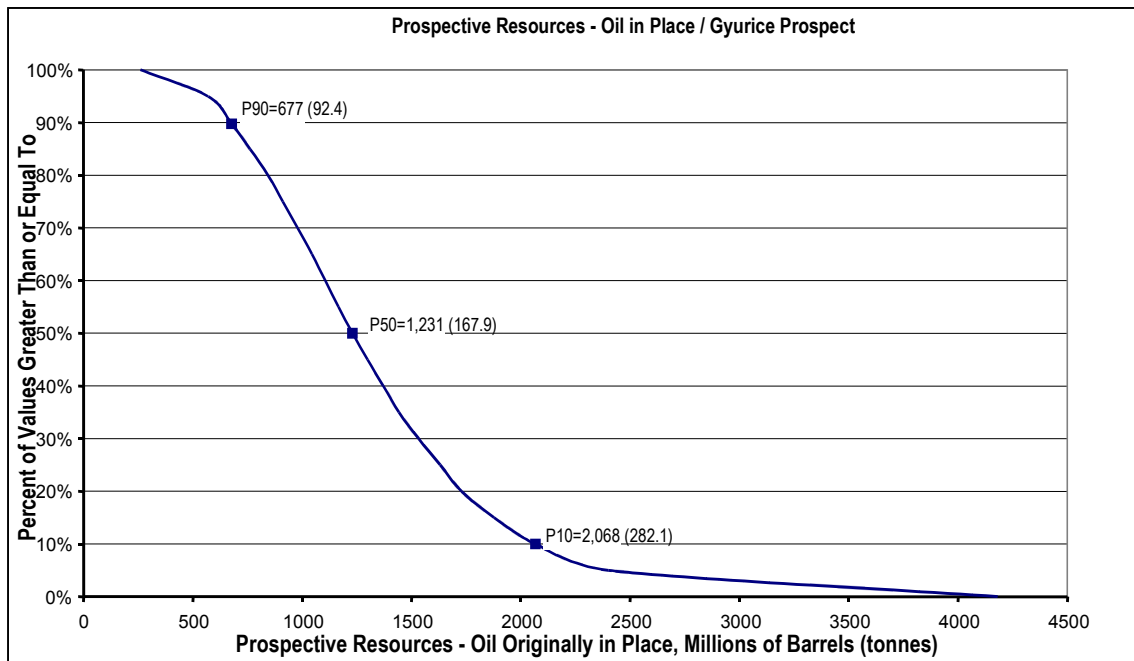
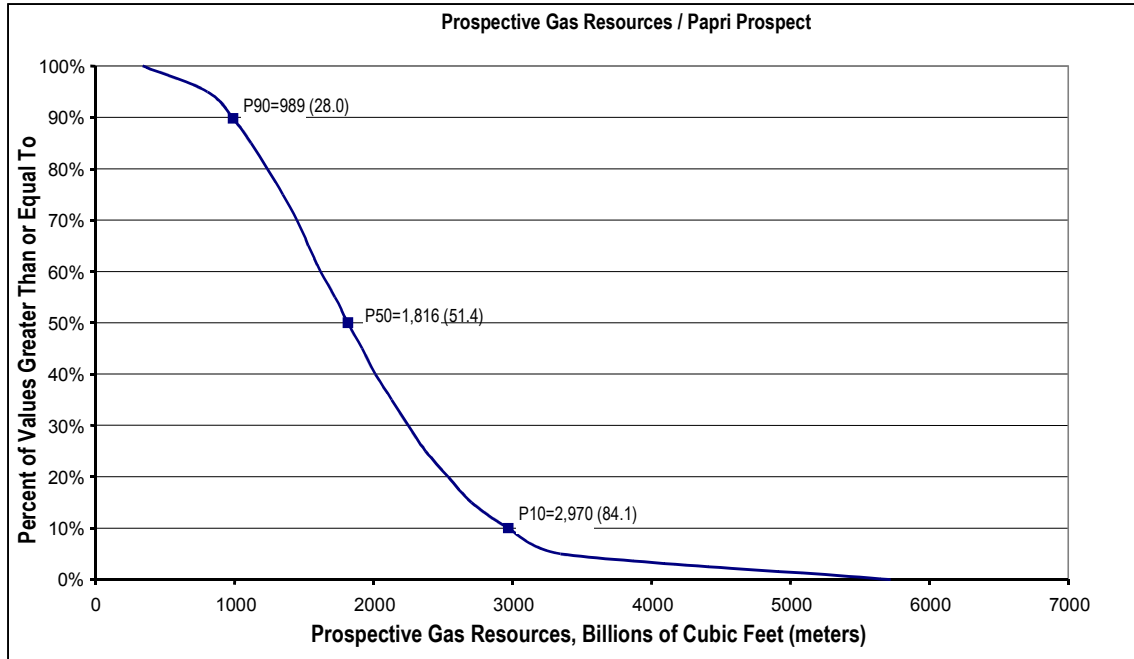


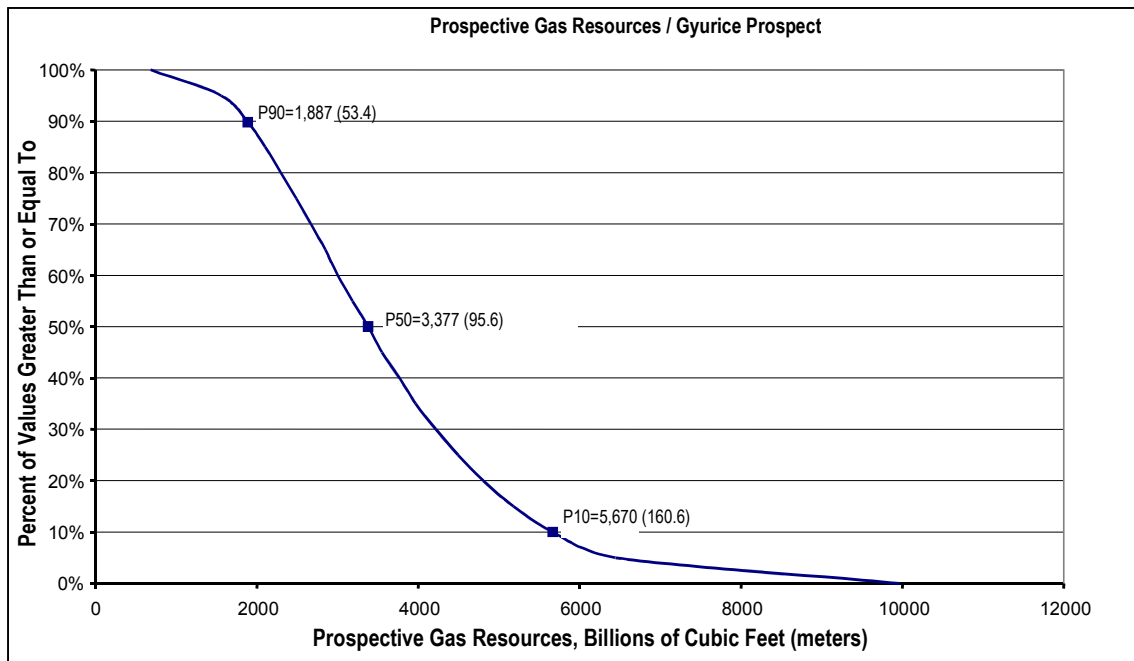
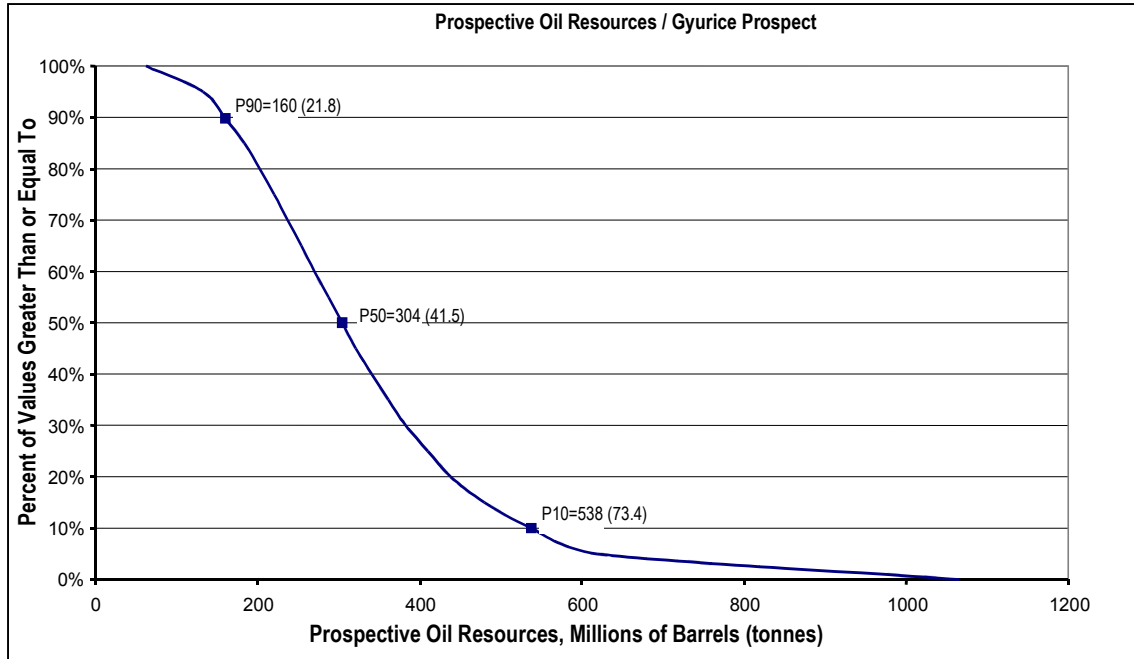
Prospective Sln Gas Resources / Jubani Prospect

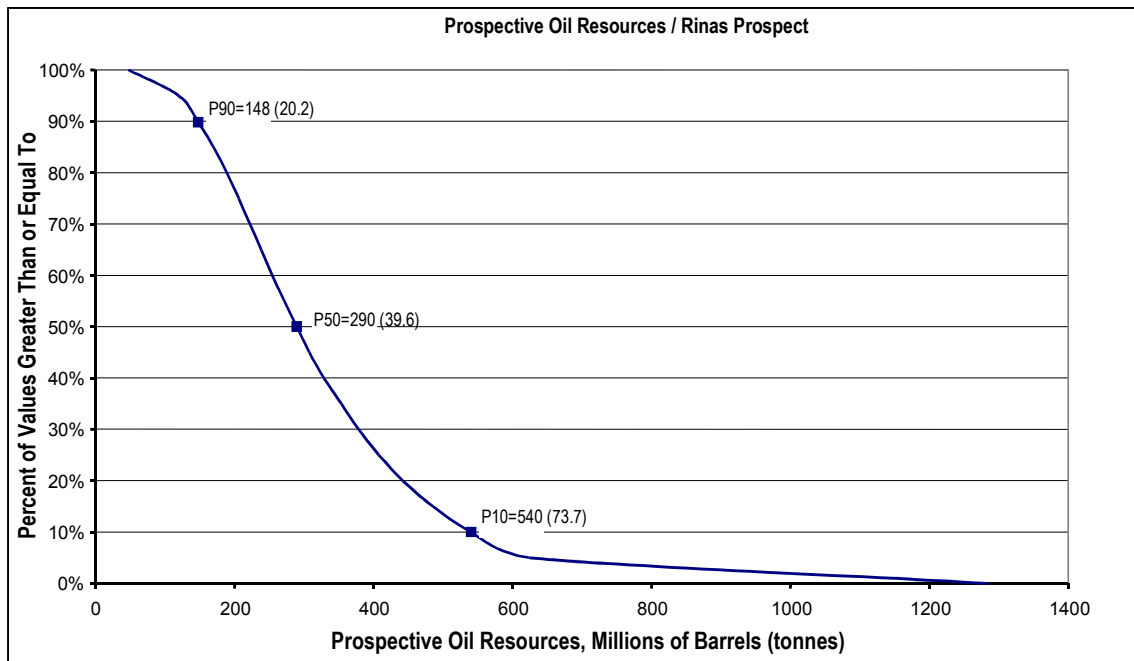
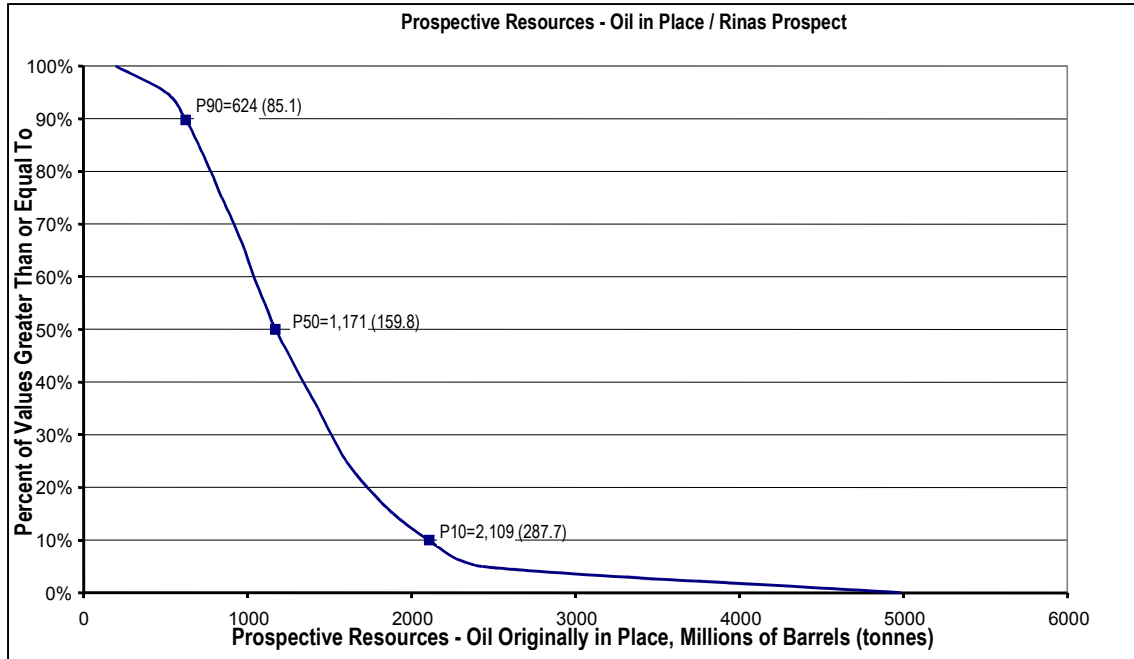


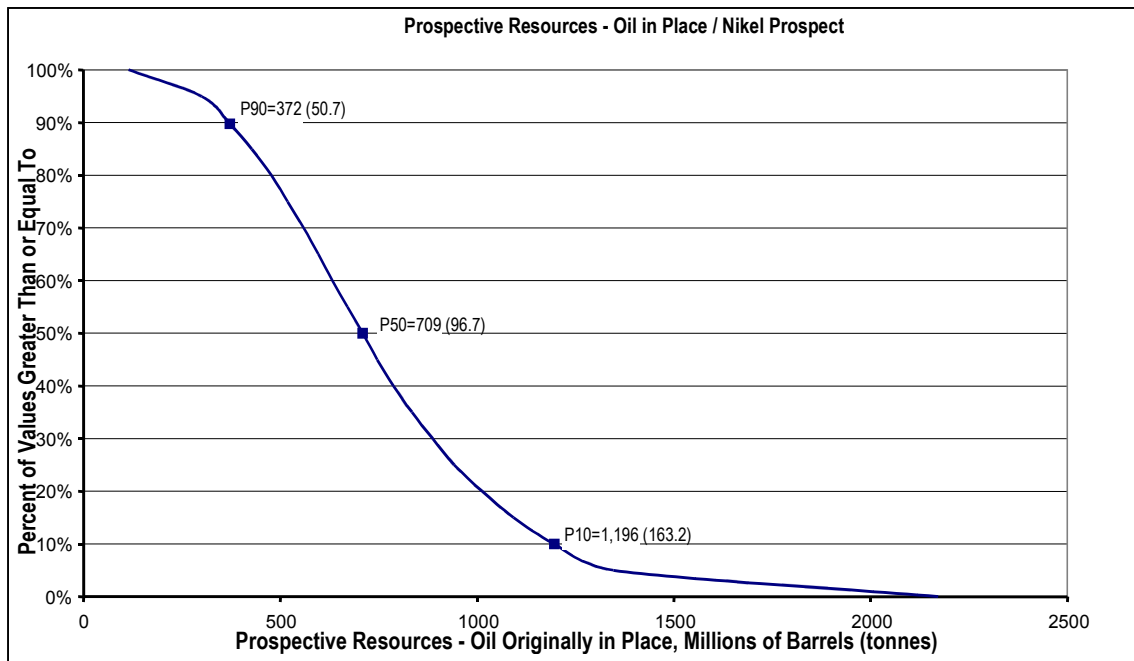
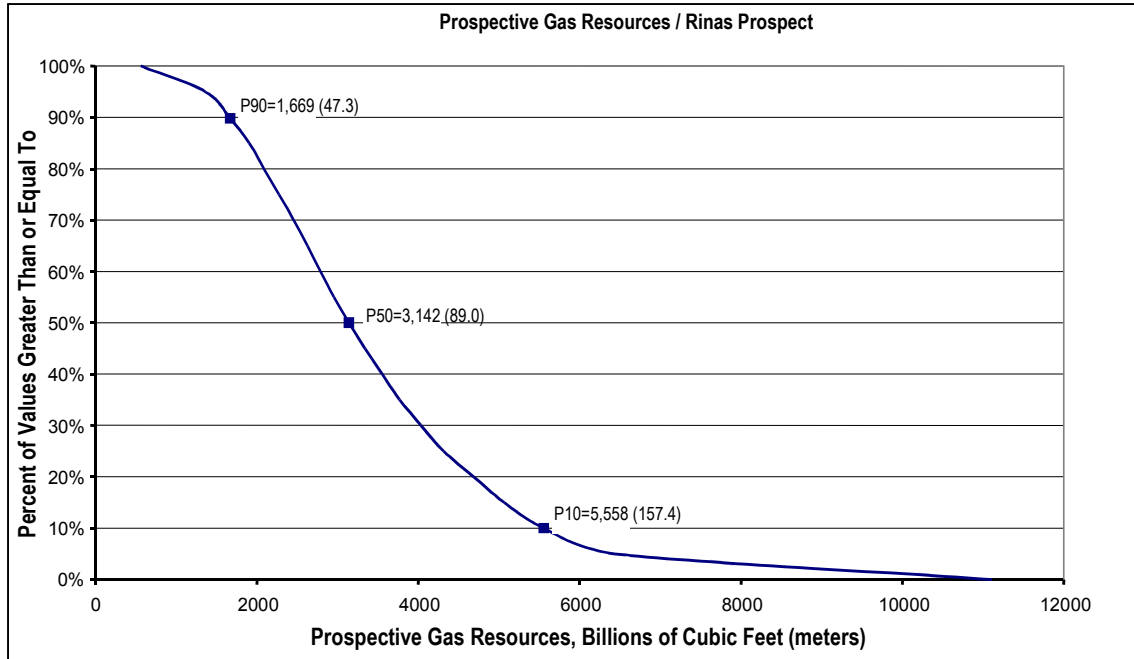
Case 2 – Oil with Gas Cap

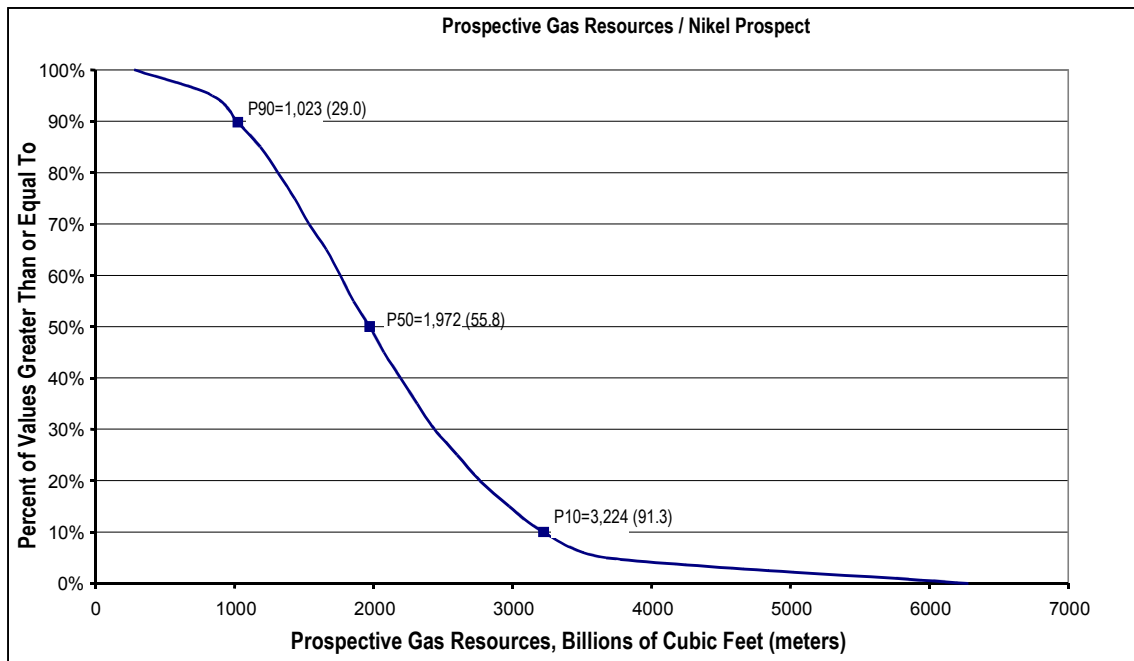
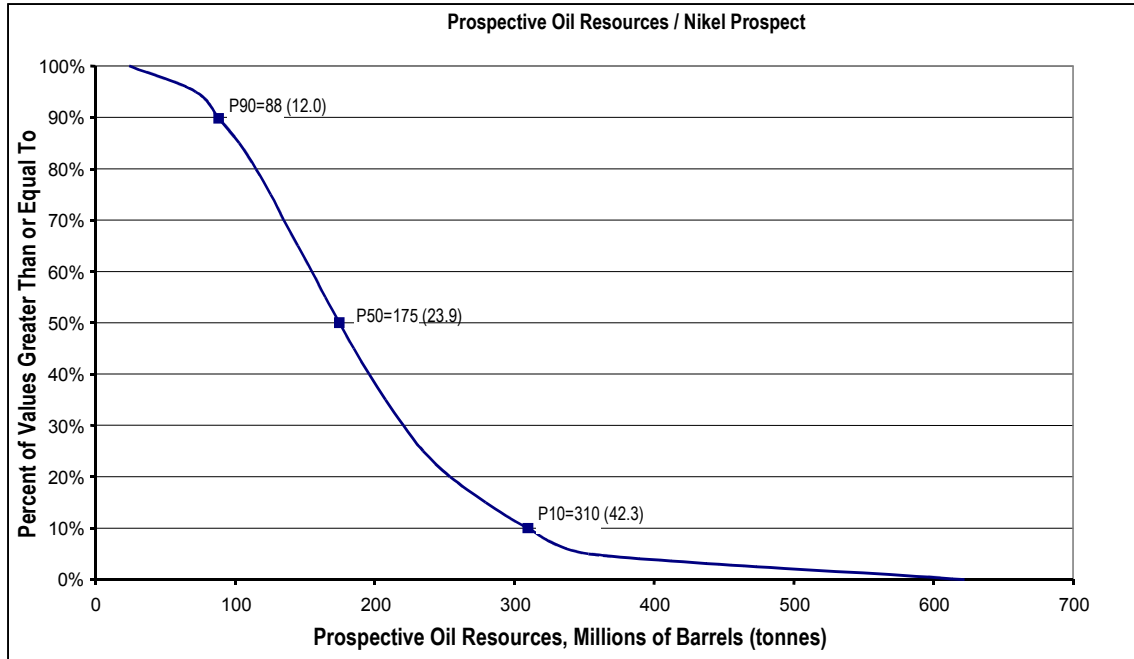


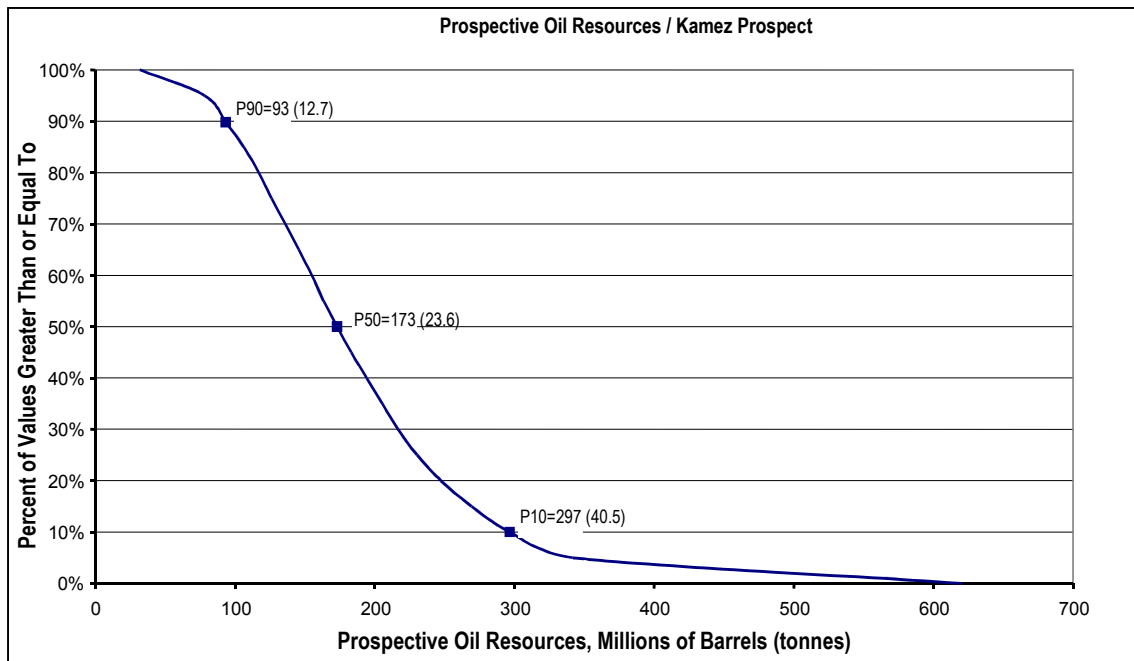
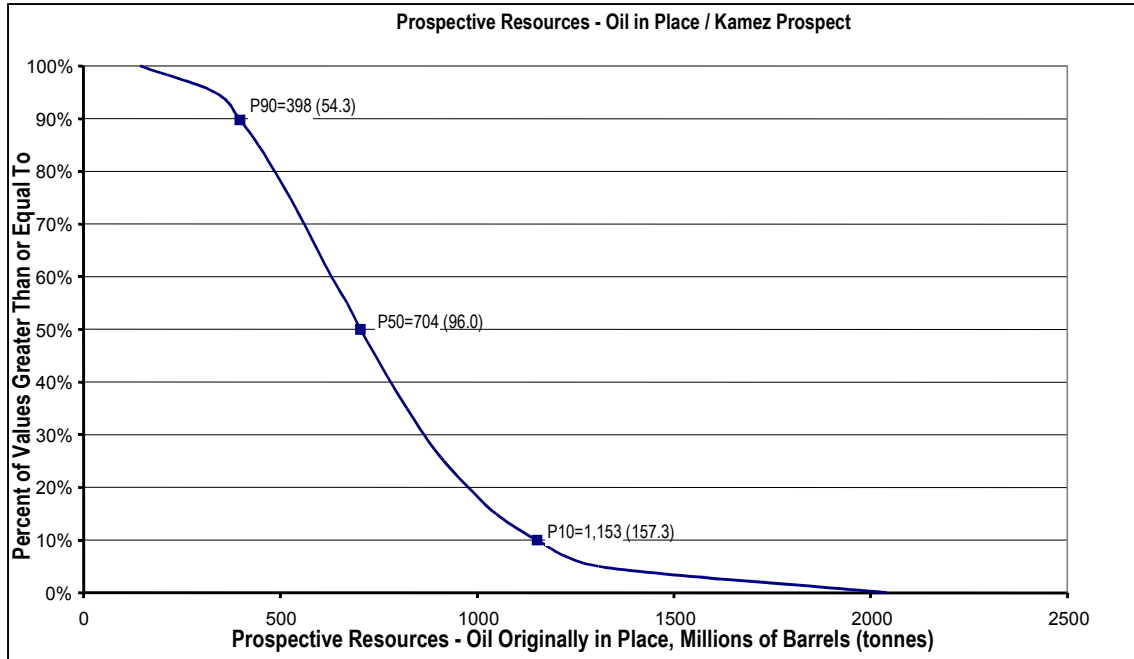


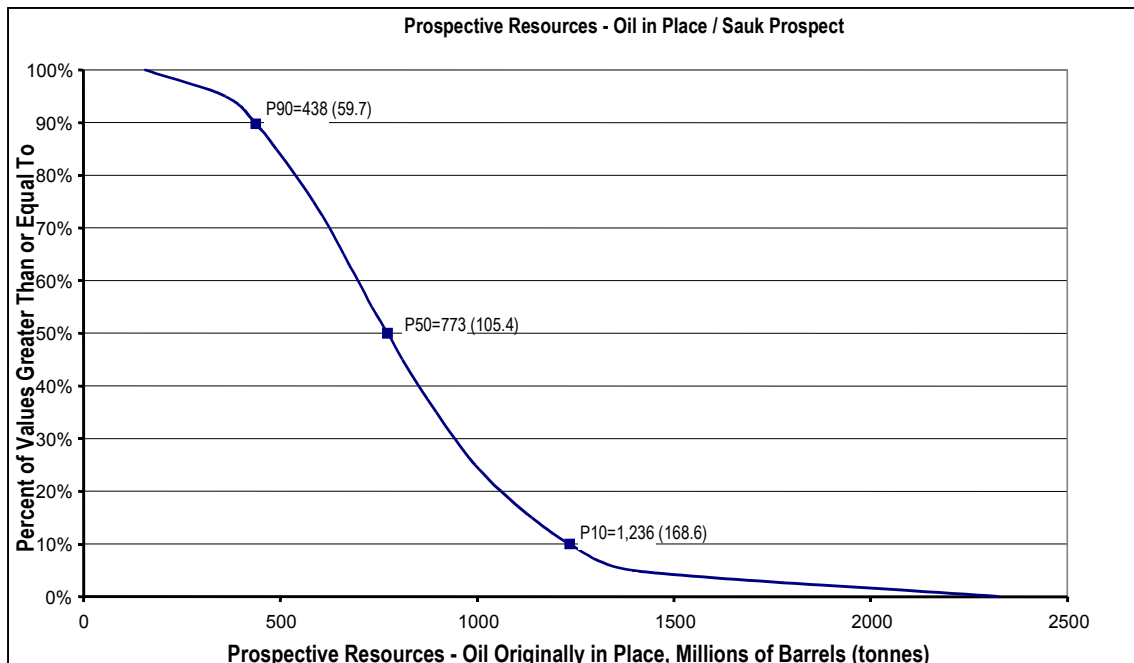
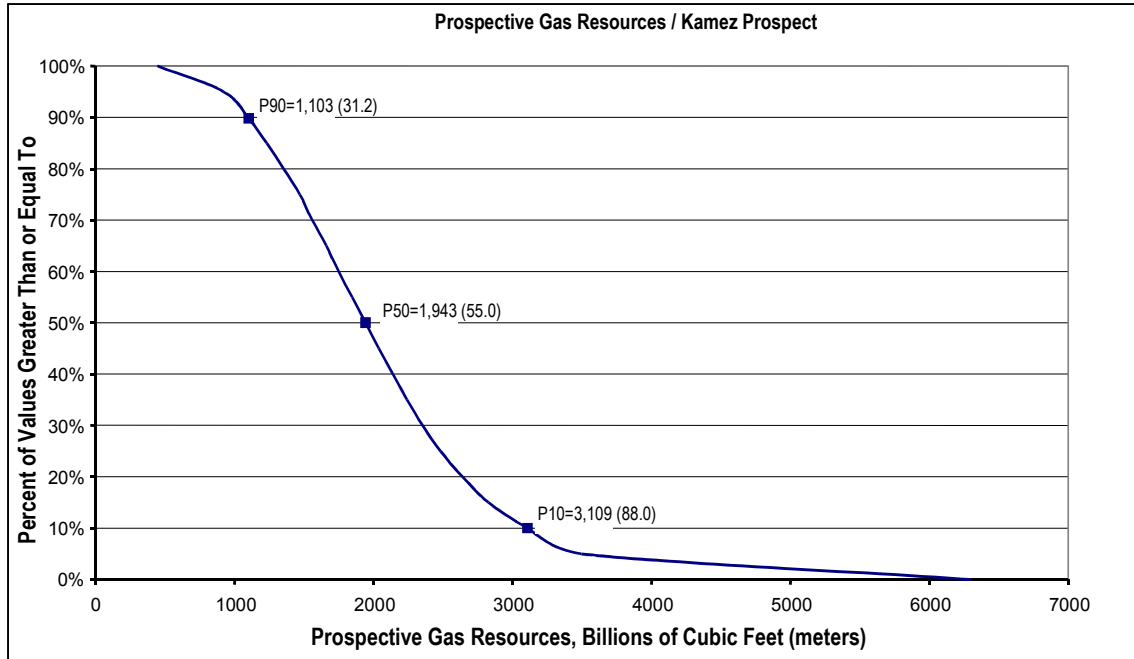


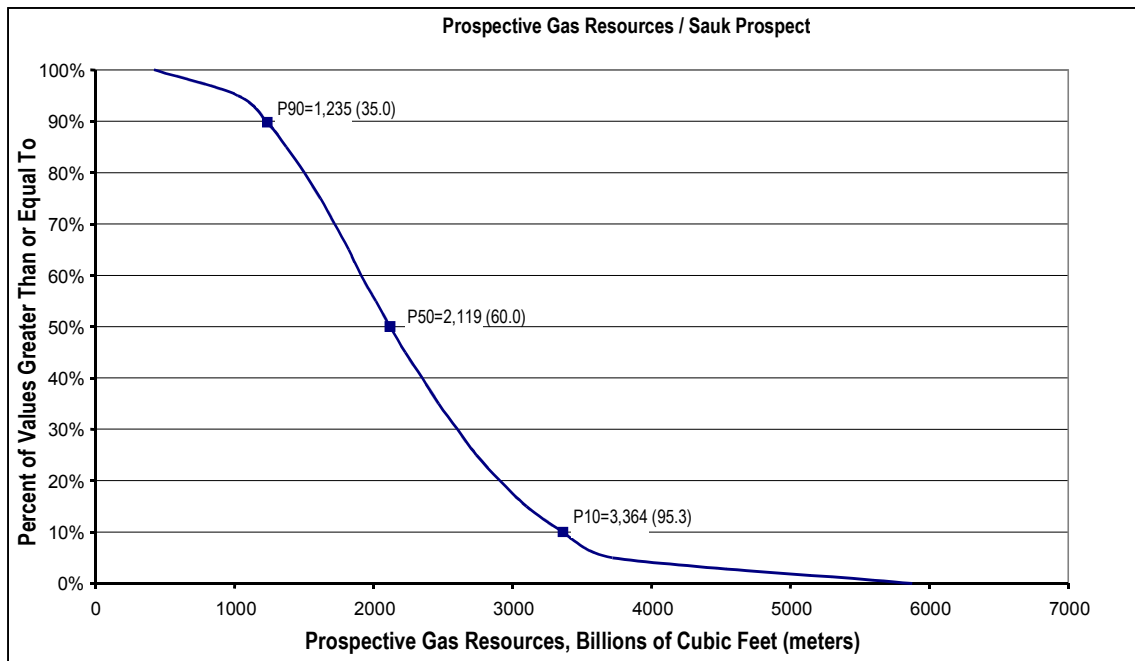
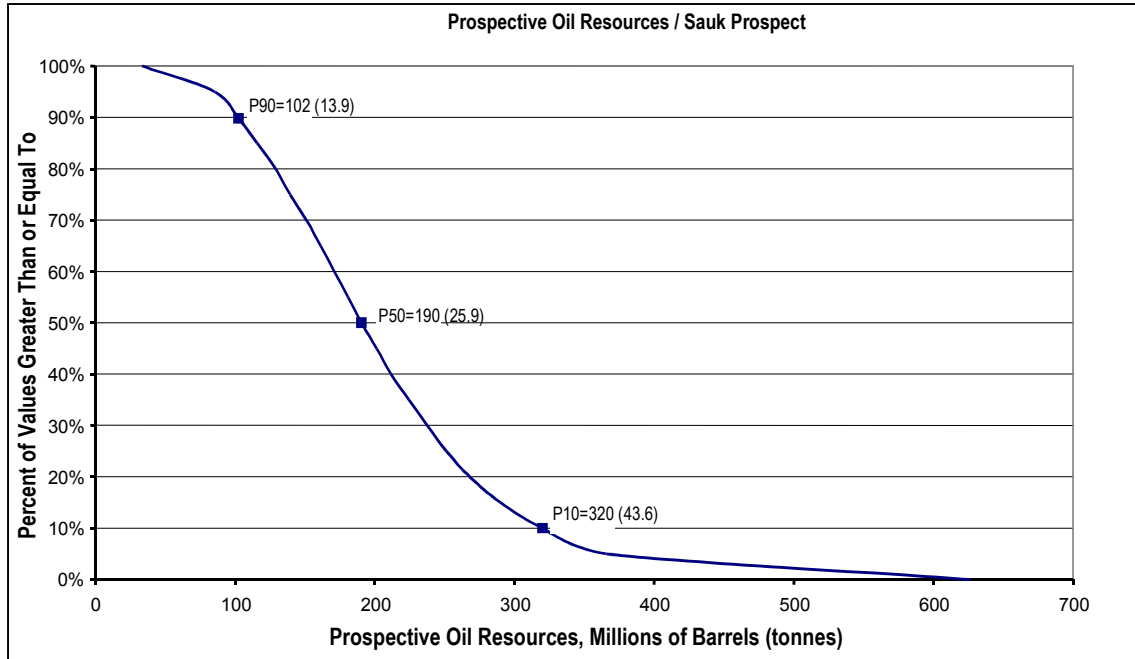


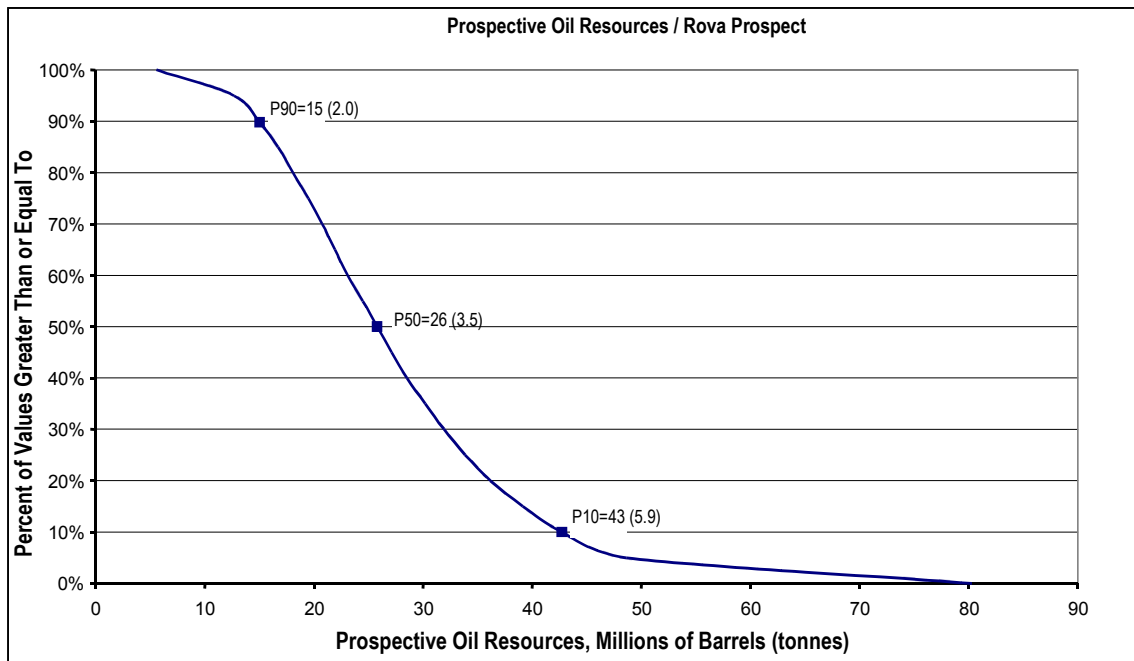
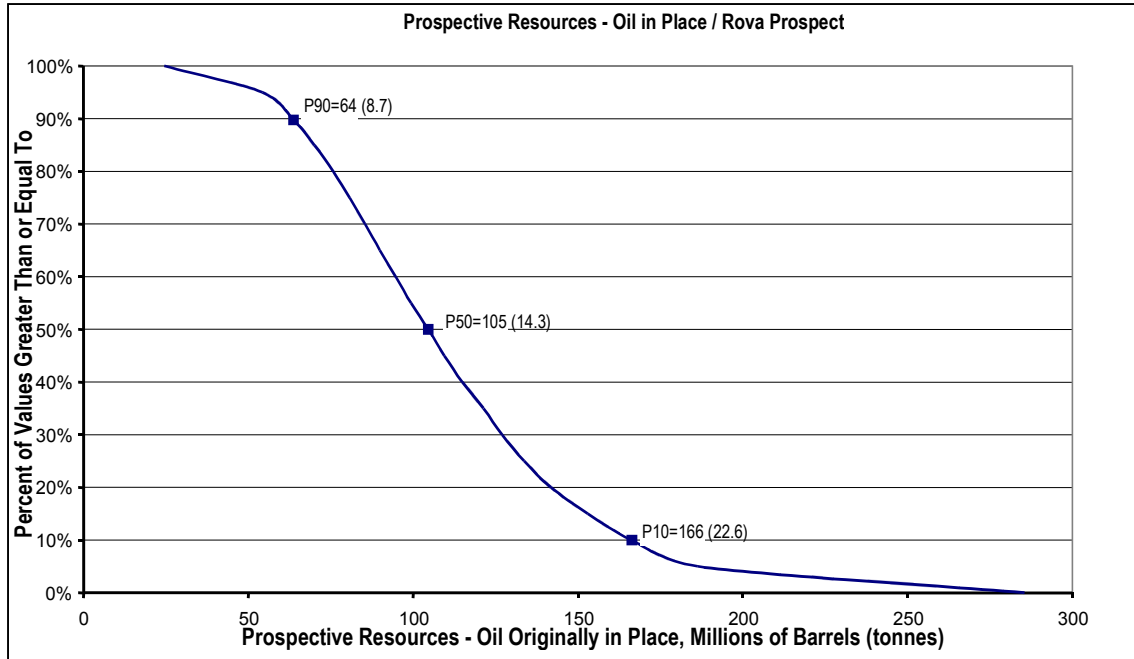


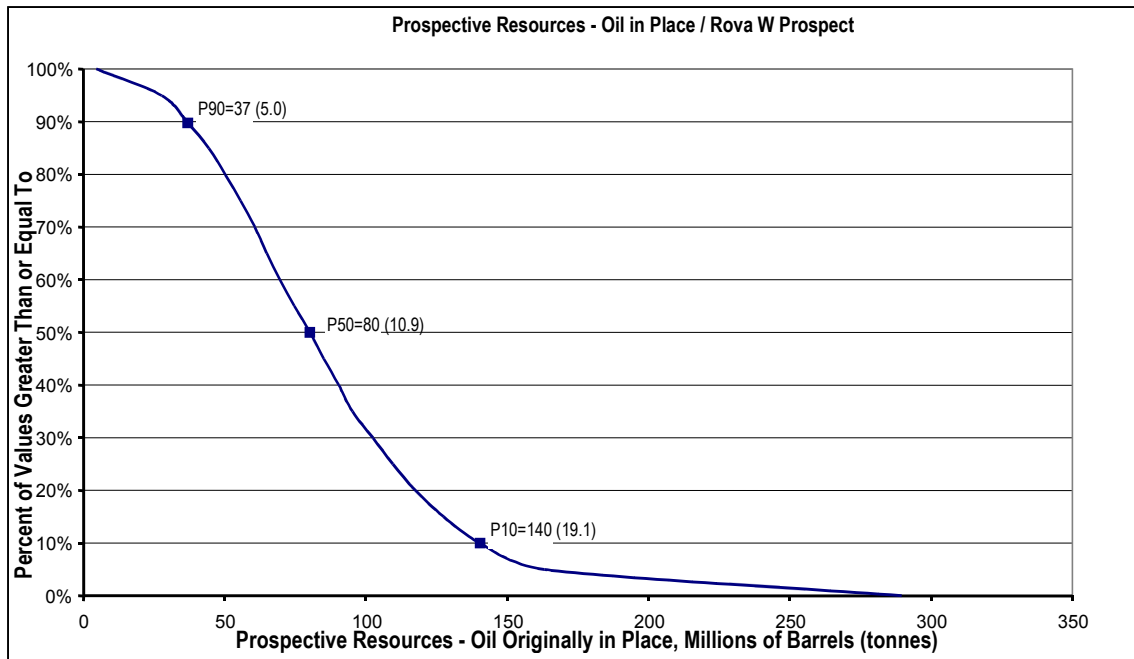
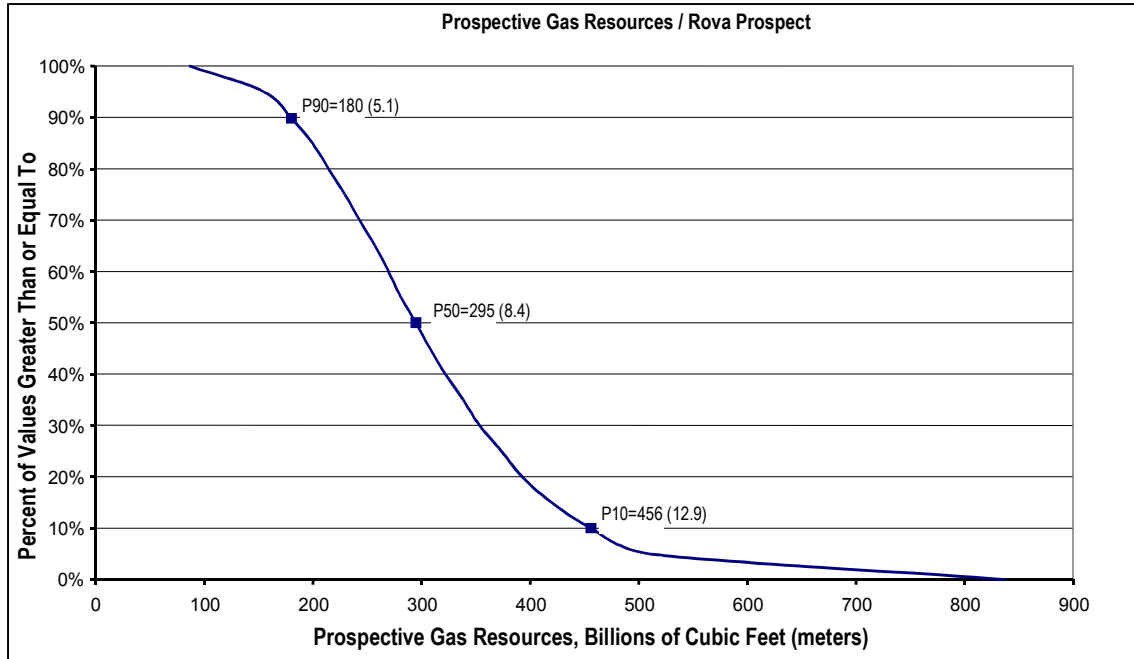


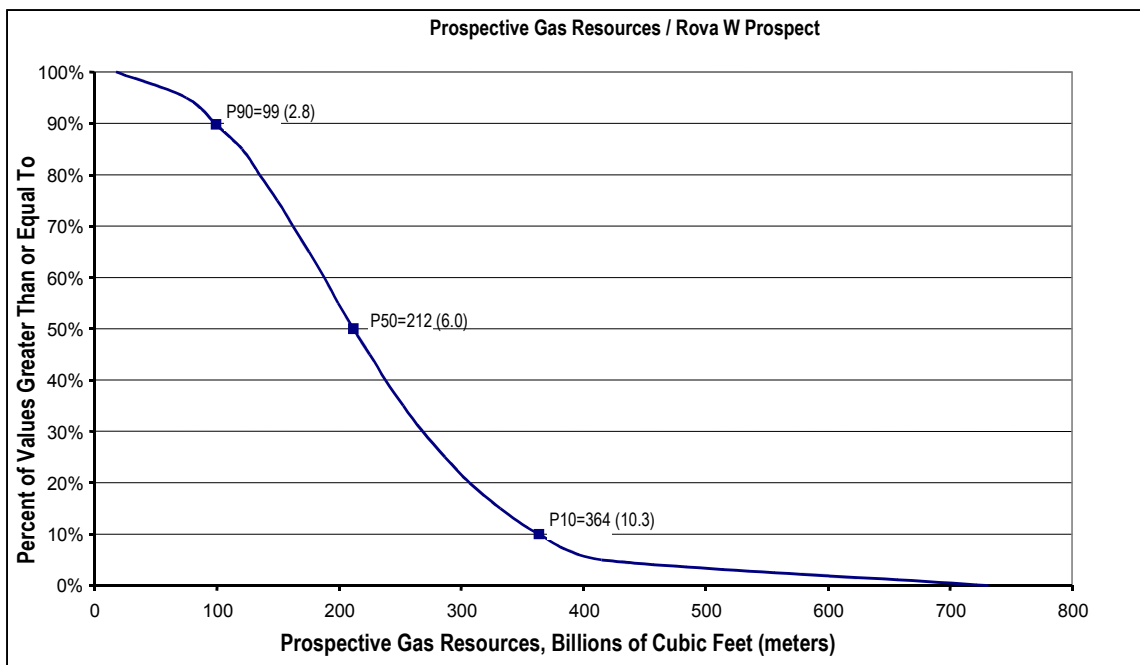
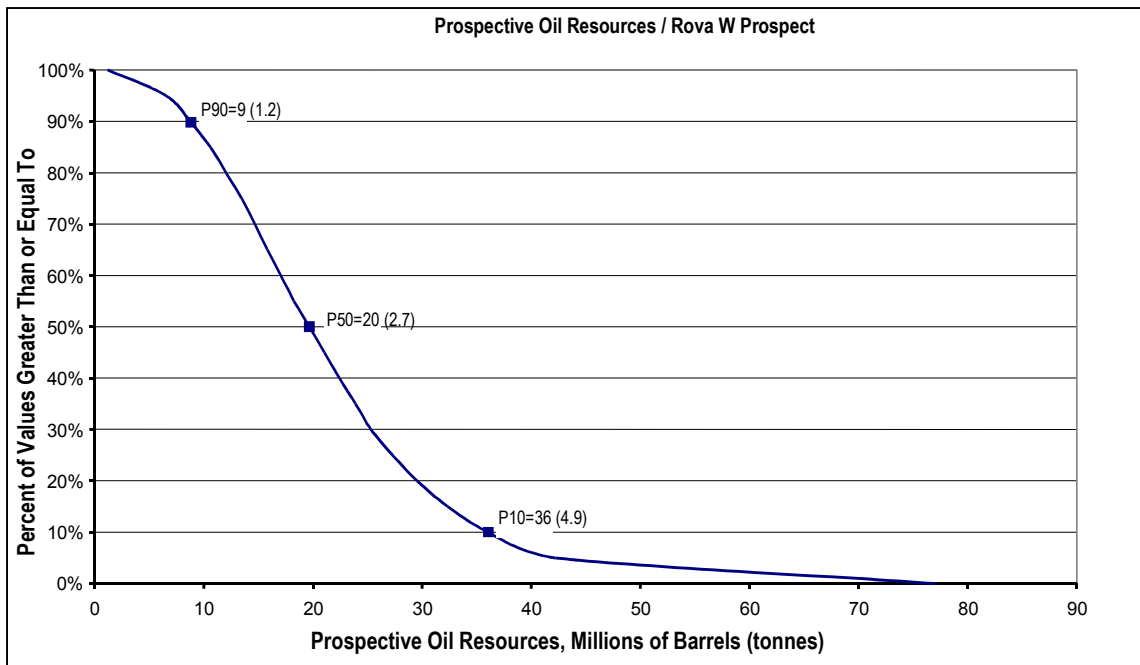


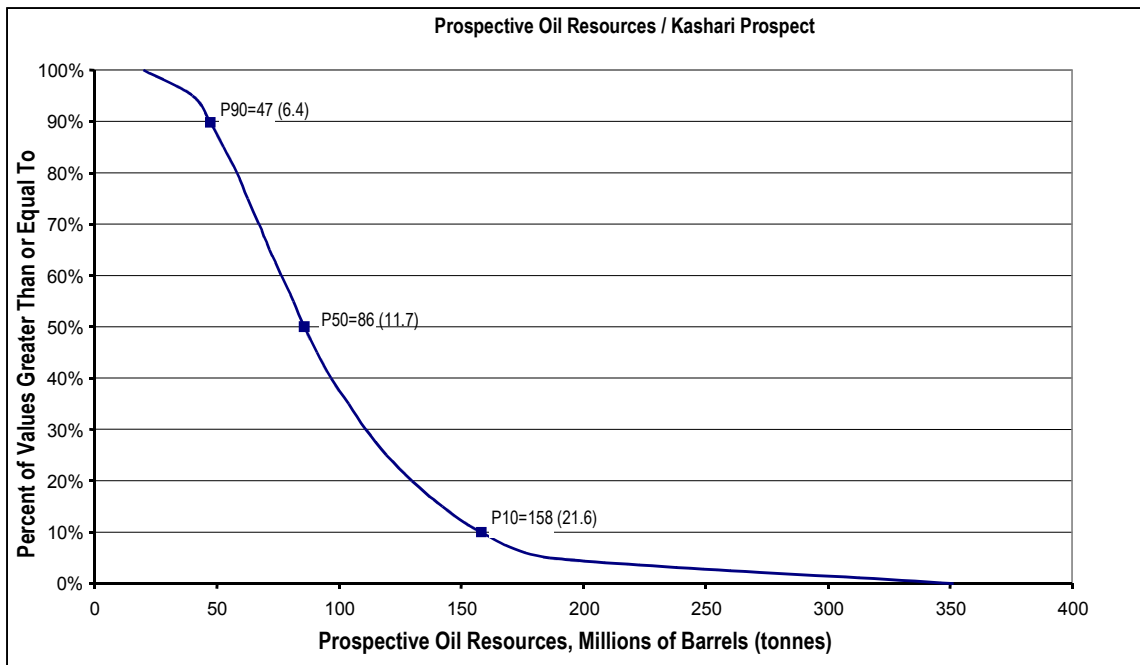
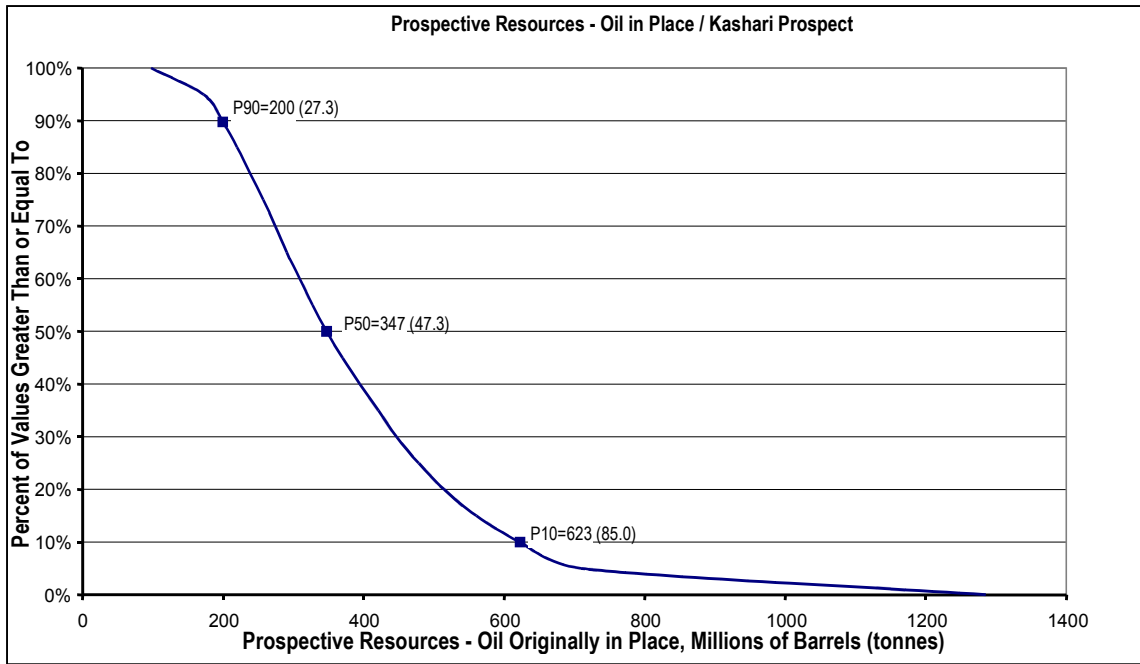


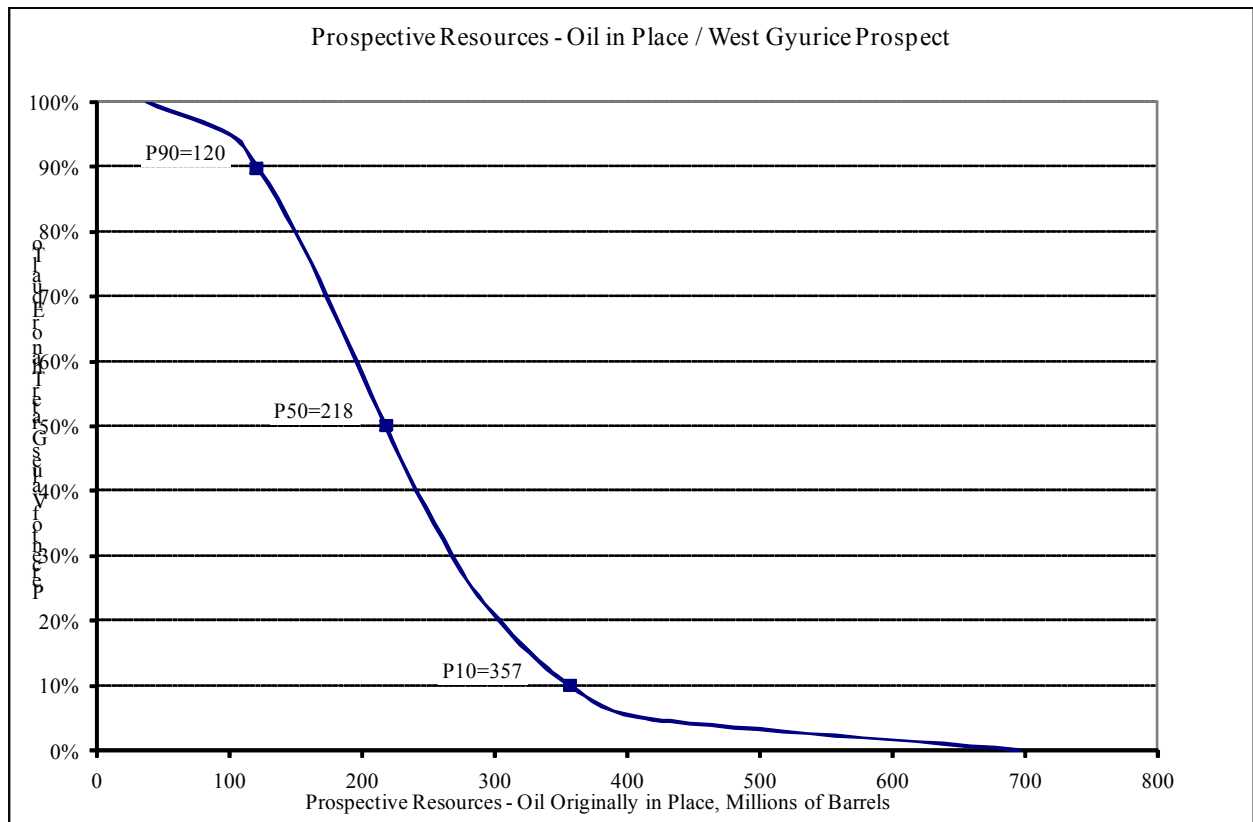
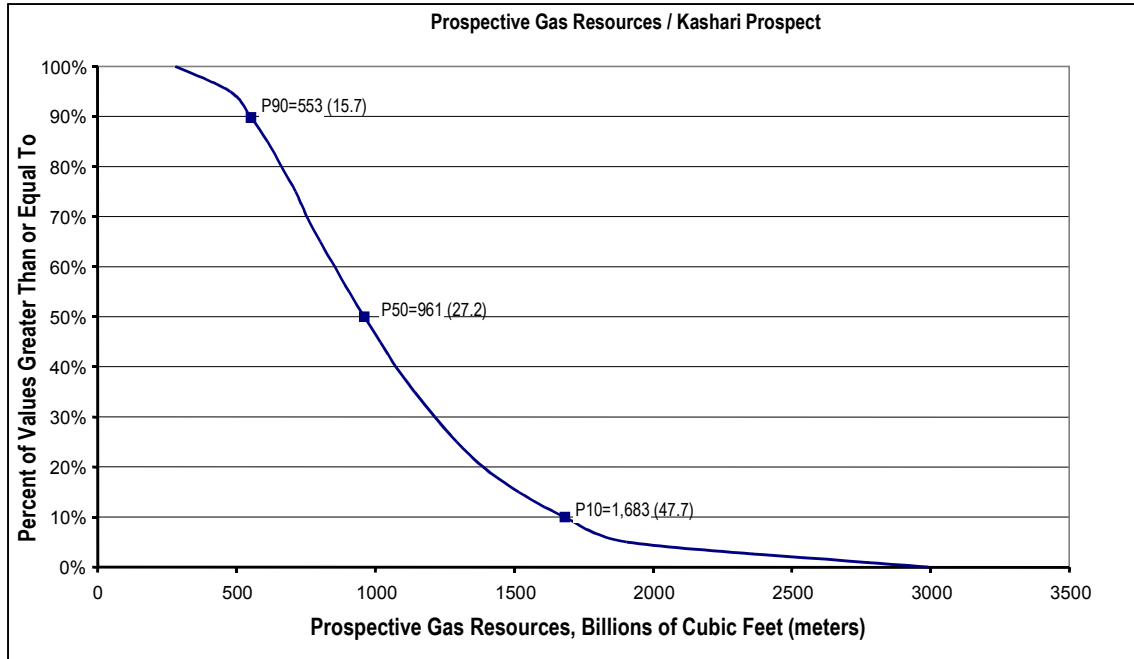




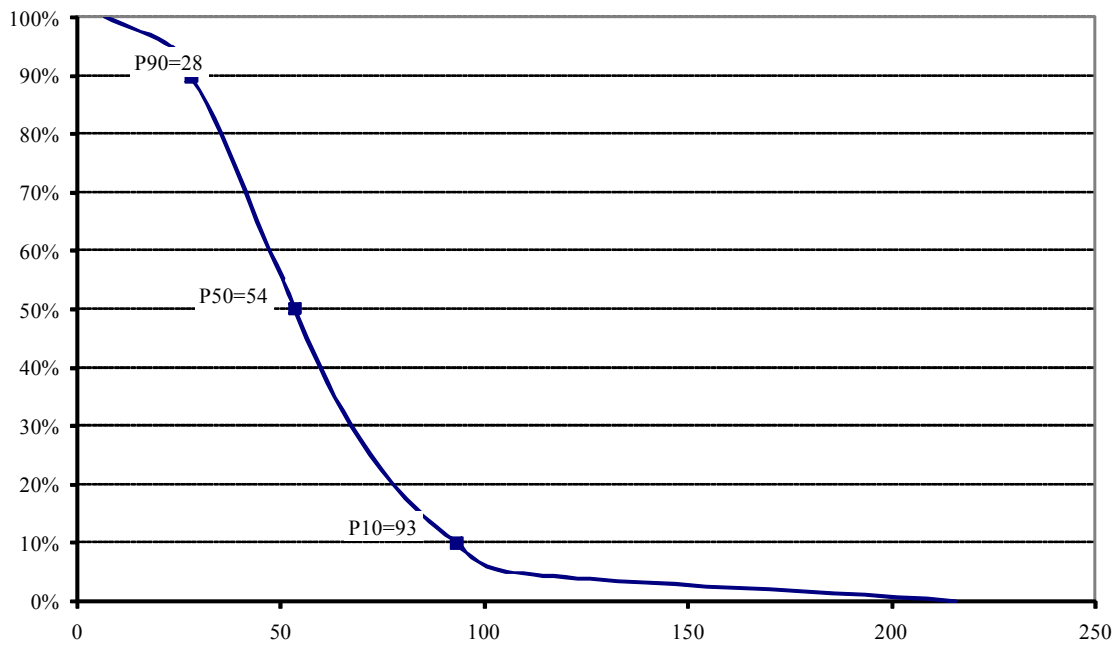




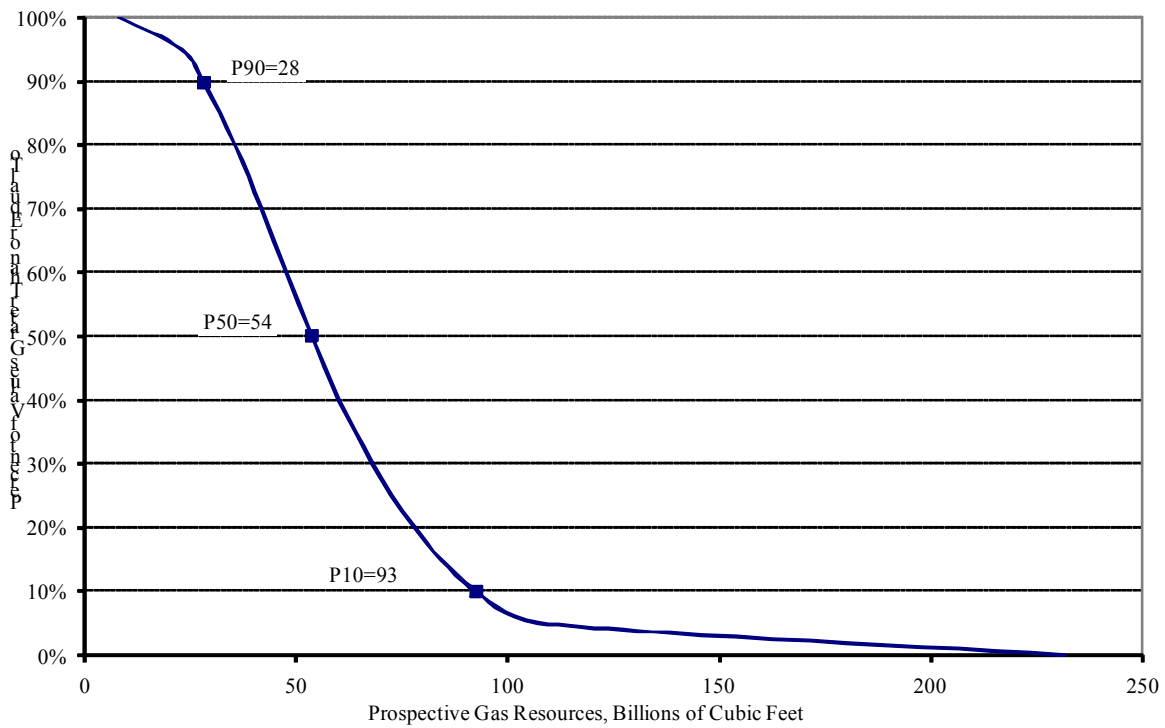




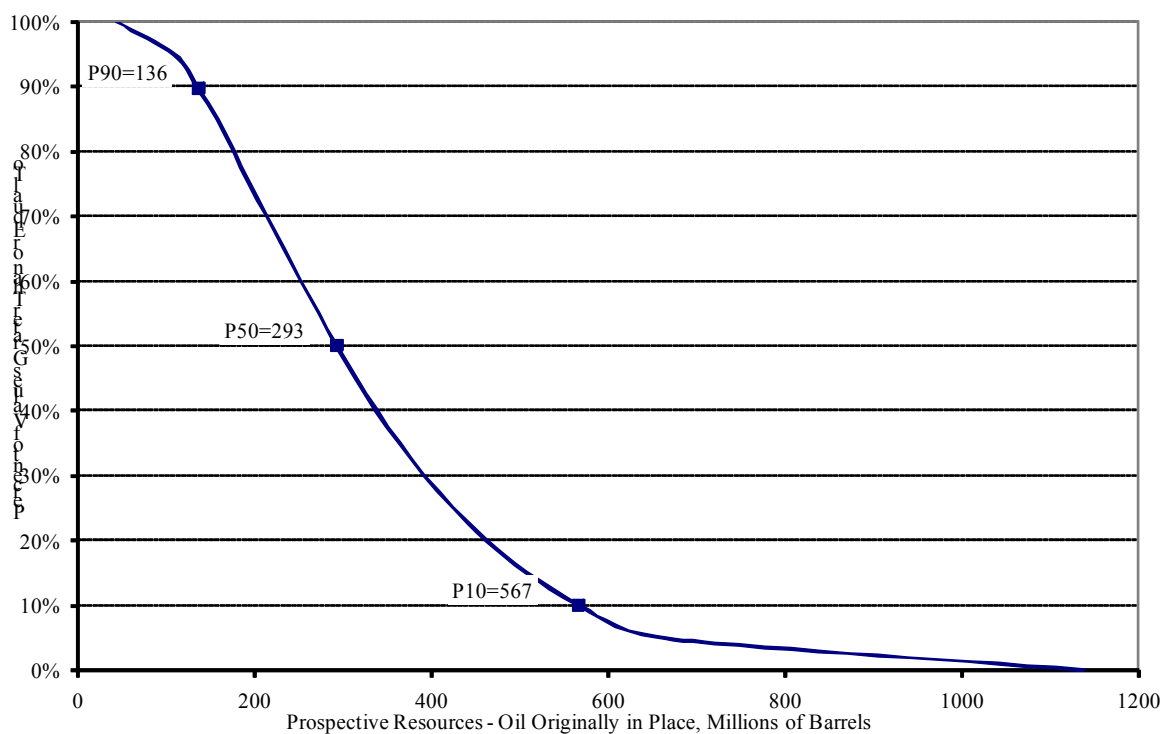
Prospective Oil Resources / West Gyurice Prospect



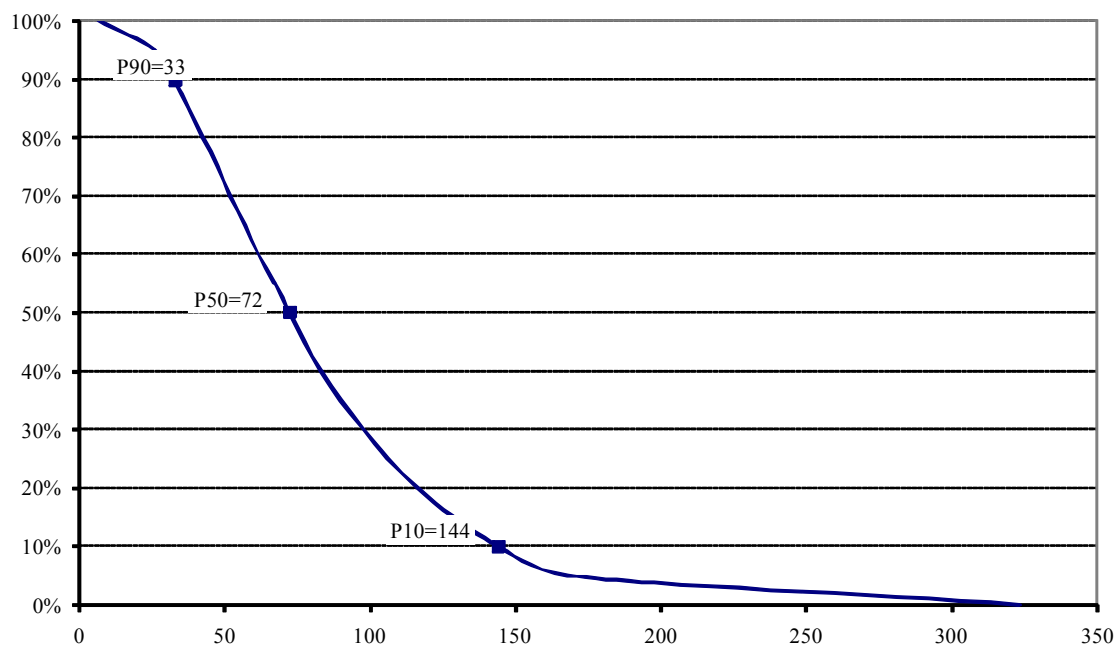
Prospective Sln Gas Resources / West Gyurice Prospect



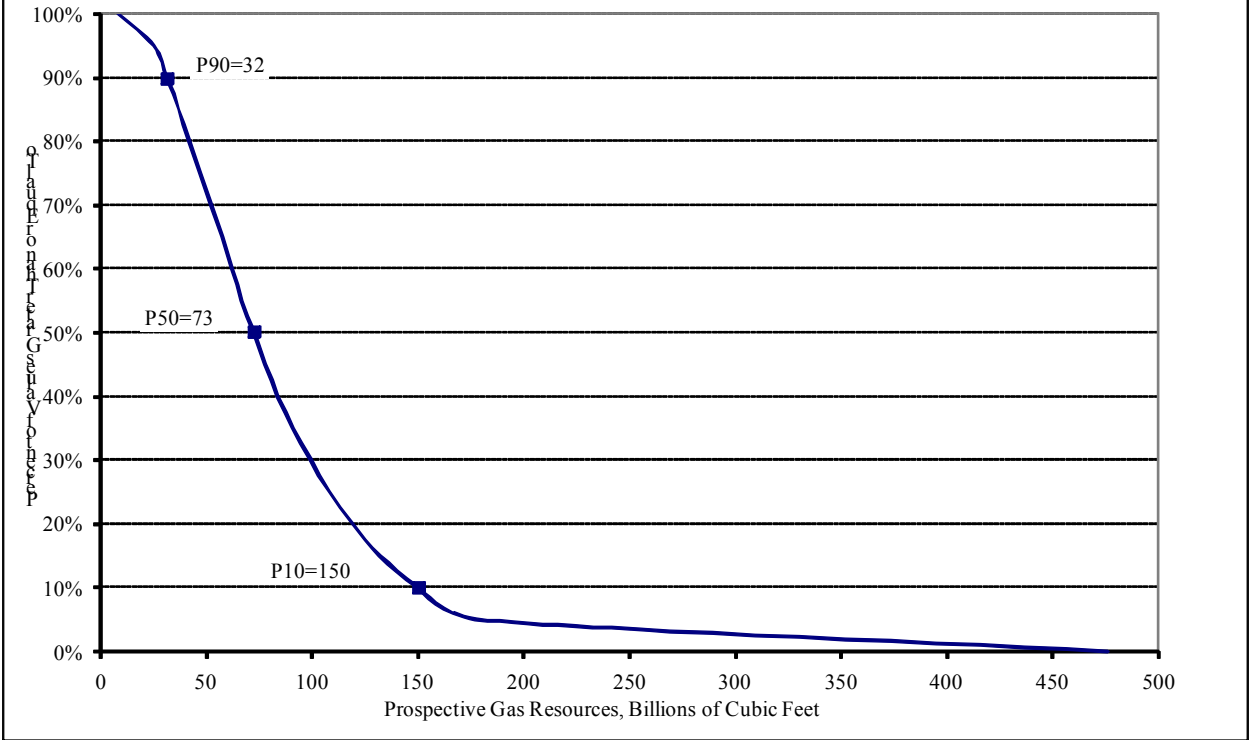
Prospective Resources - Oil in Place / Jubani Prospect



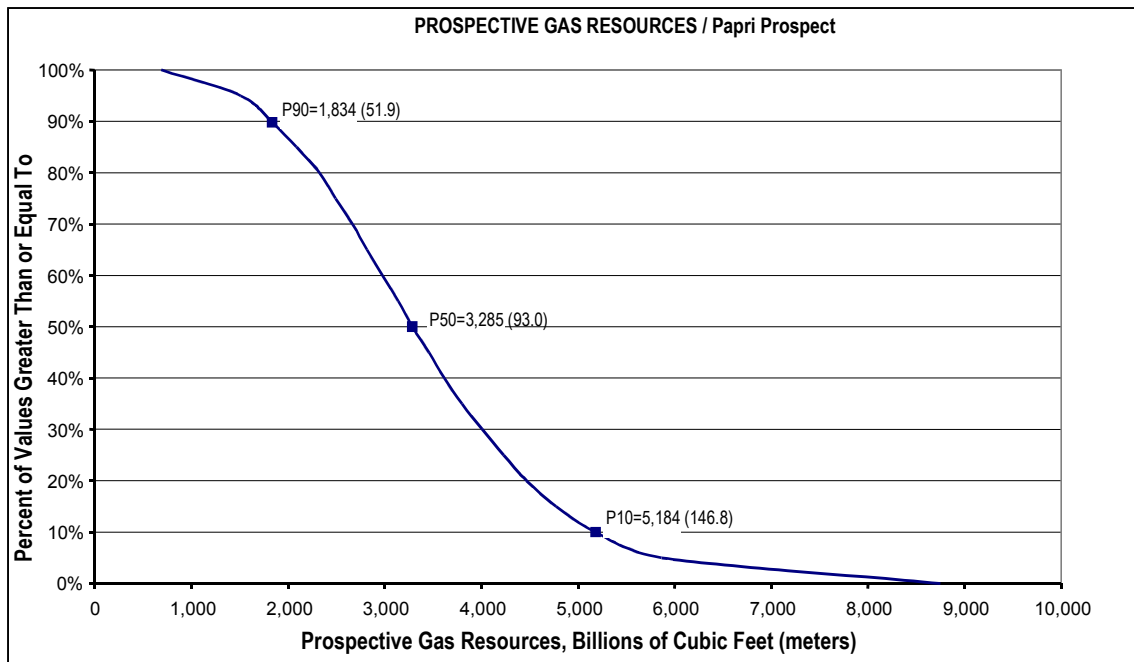
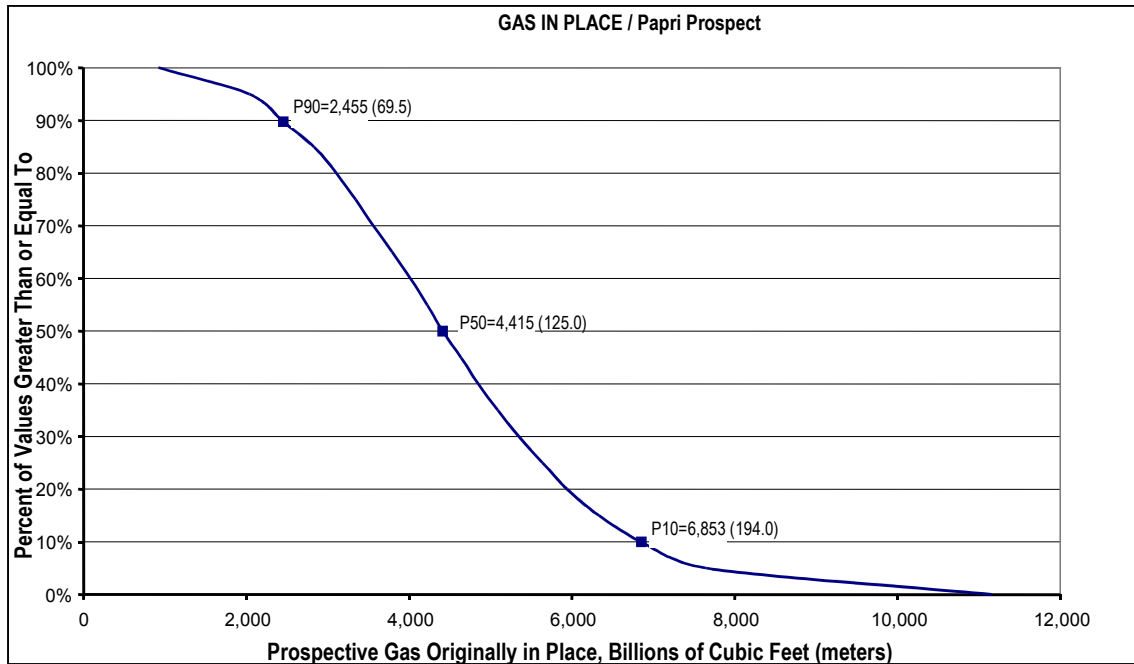
Prospective Oil Resources / Jubani Prospect

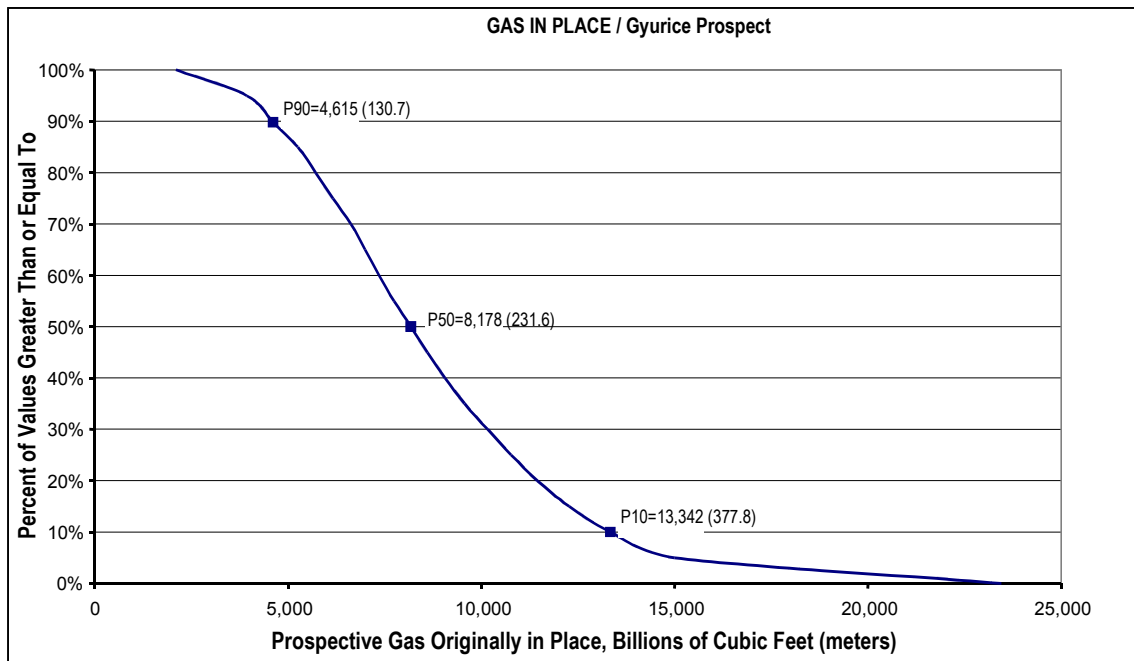
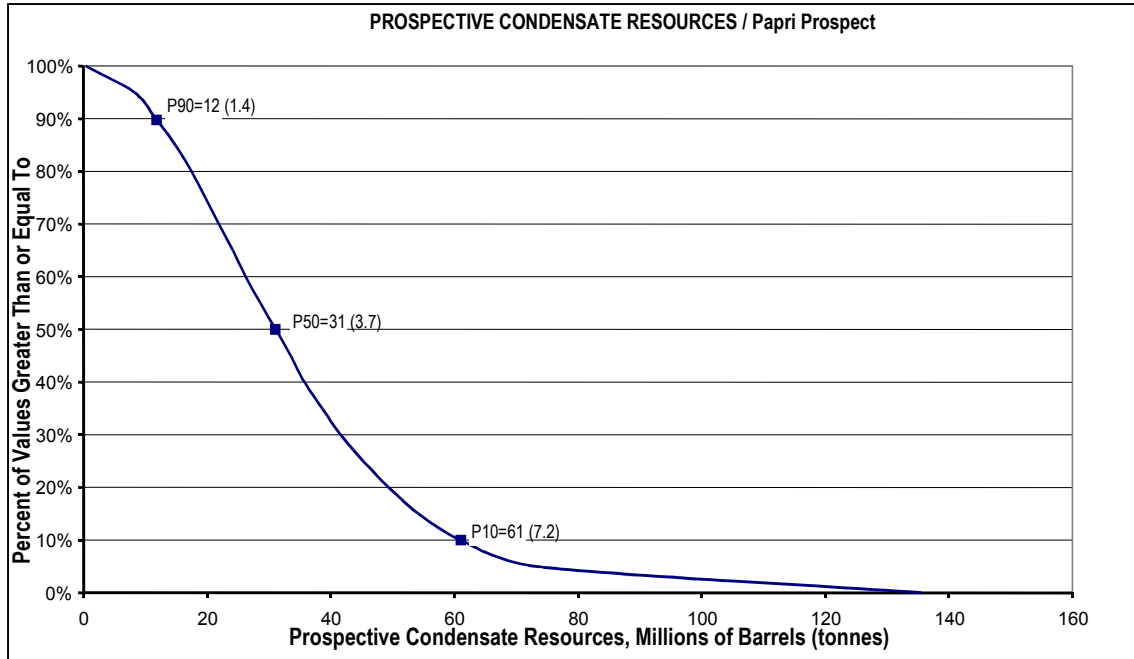


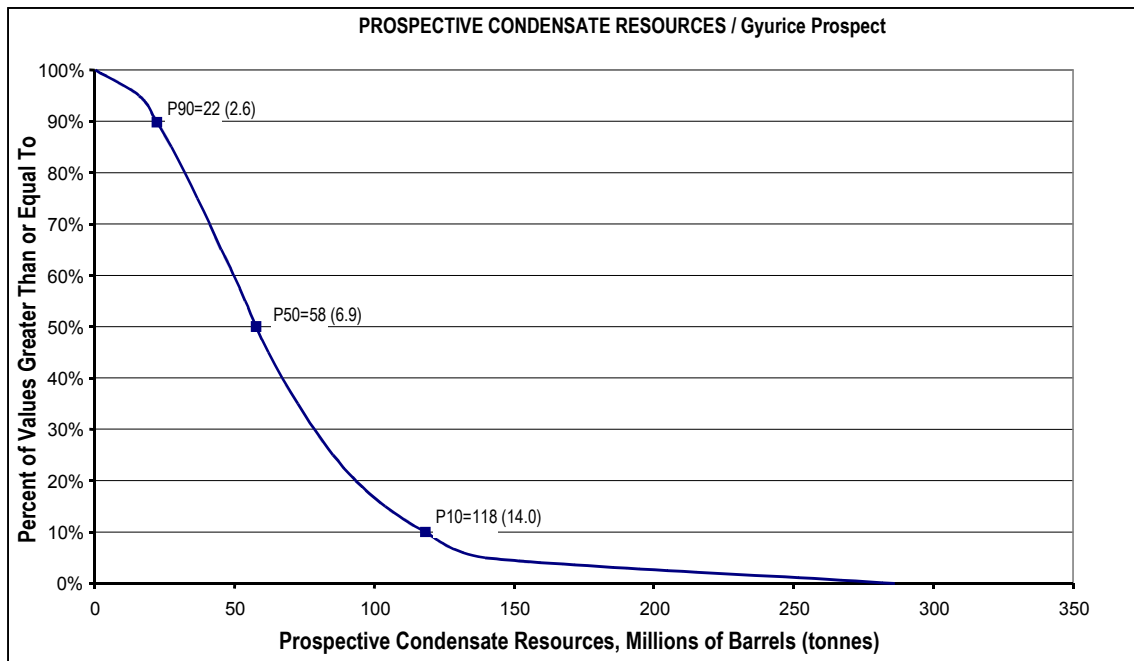
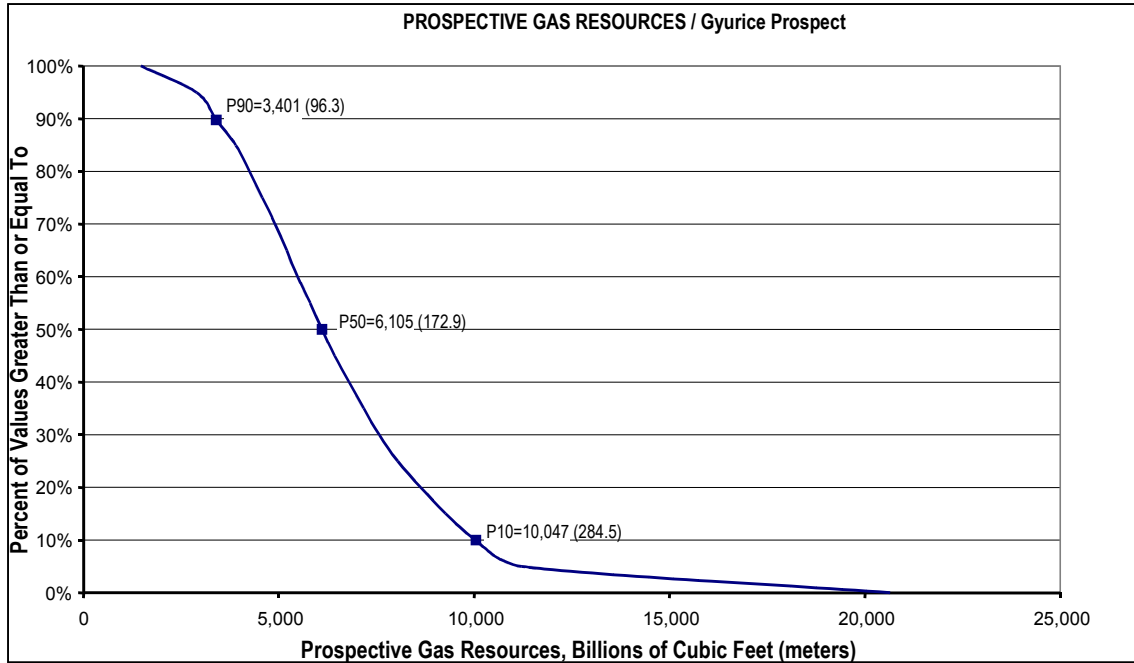
Prospective Sln Gas Resources / Jubani Prospect

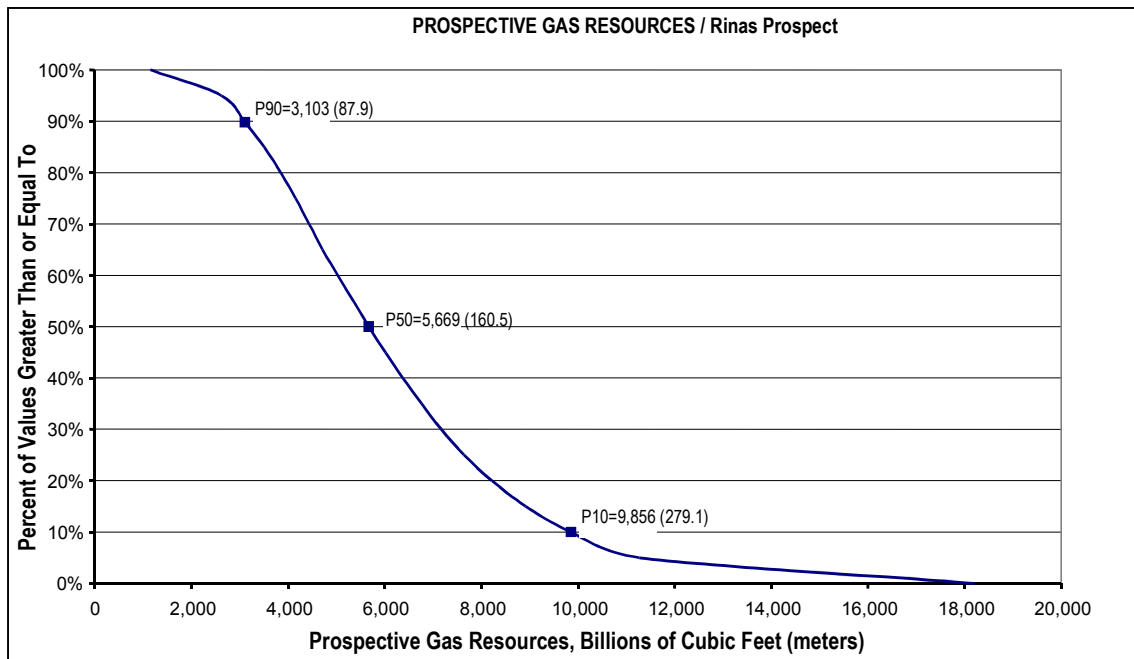
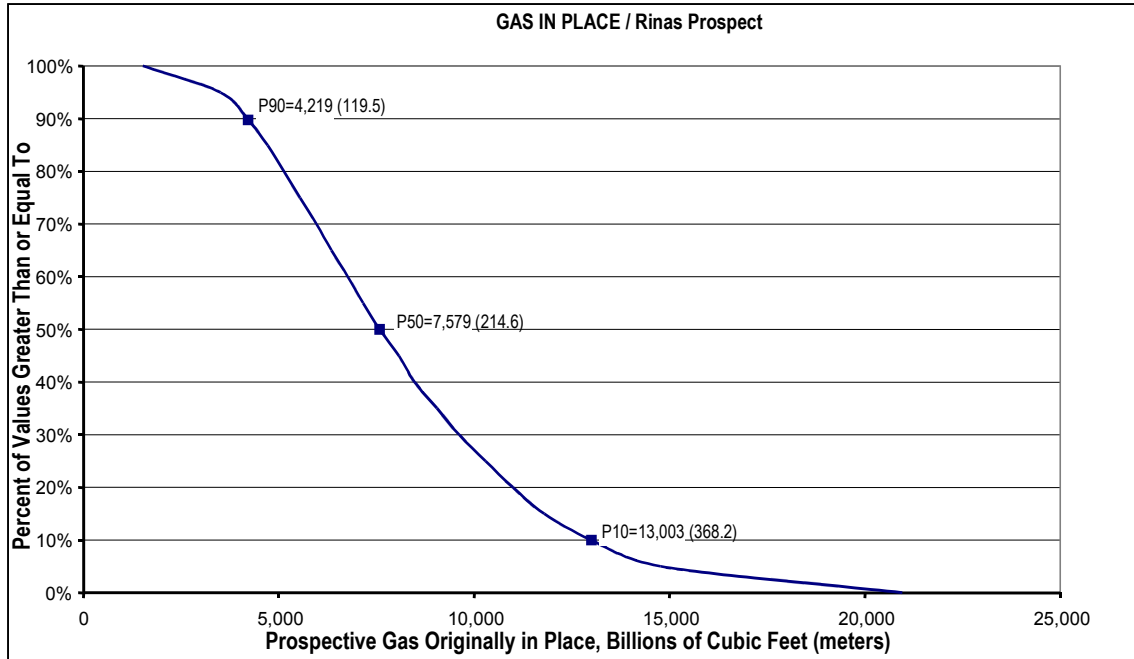


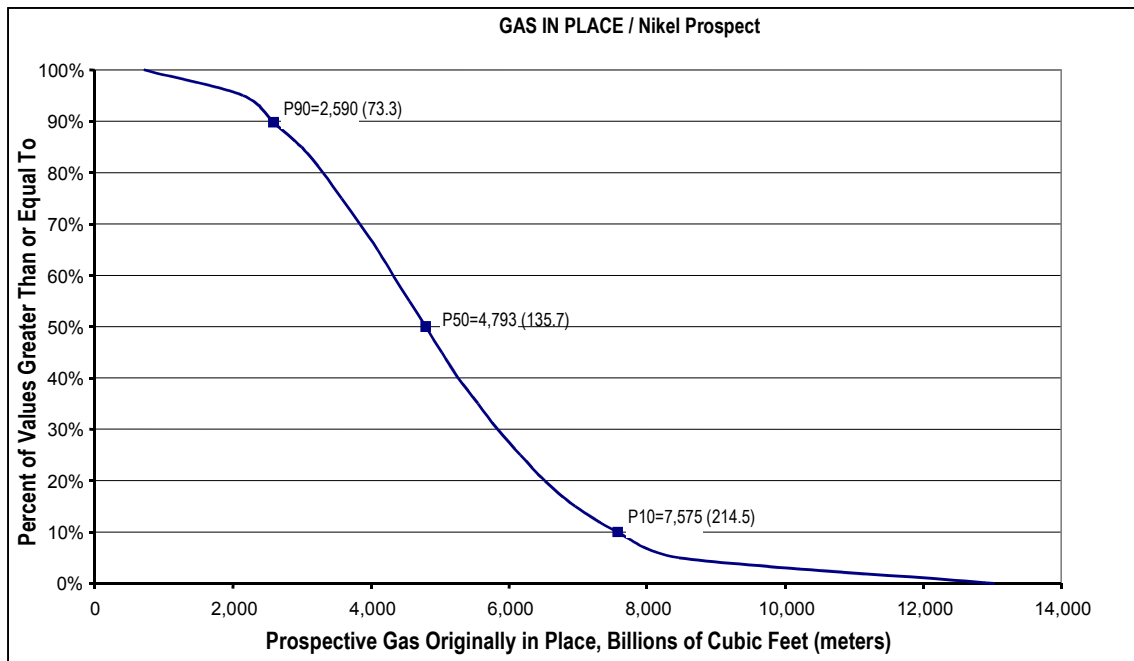
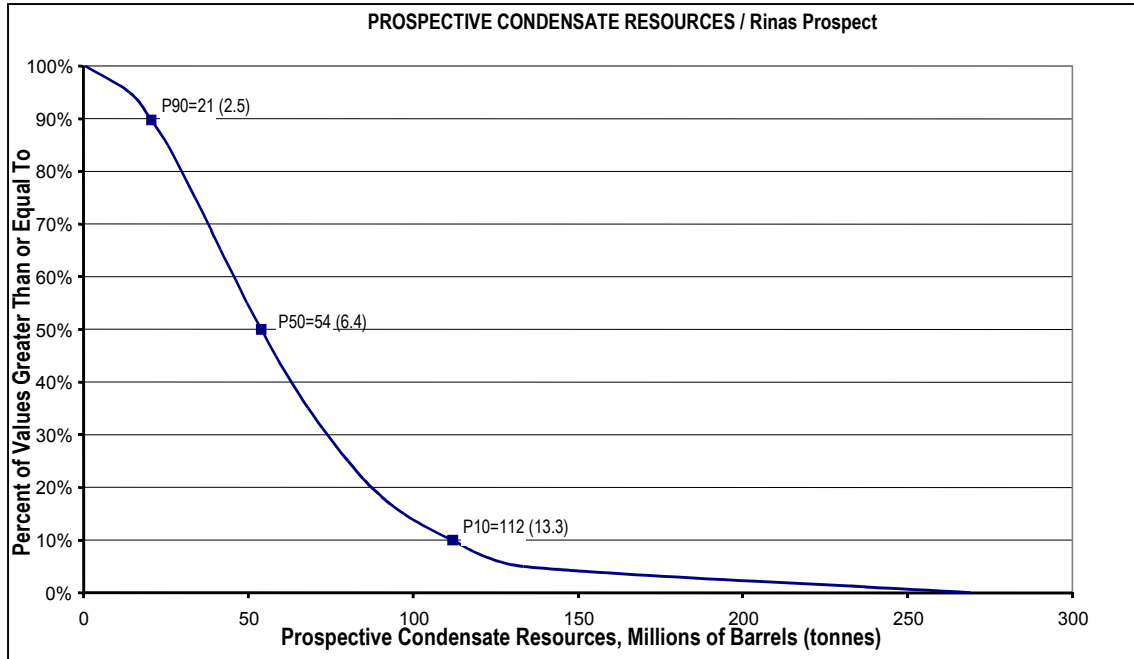
Case 3 –Gas-Filled

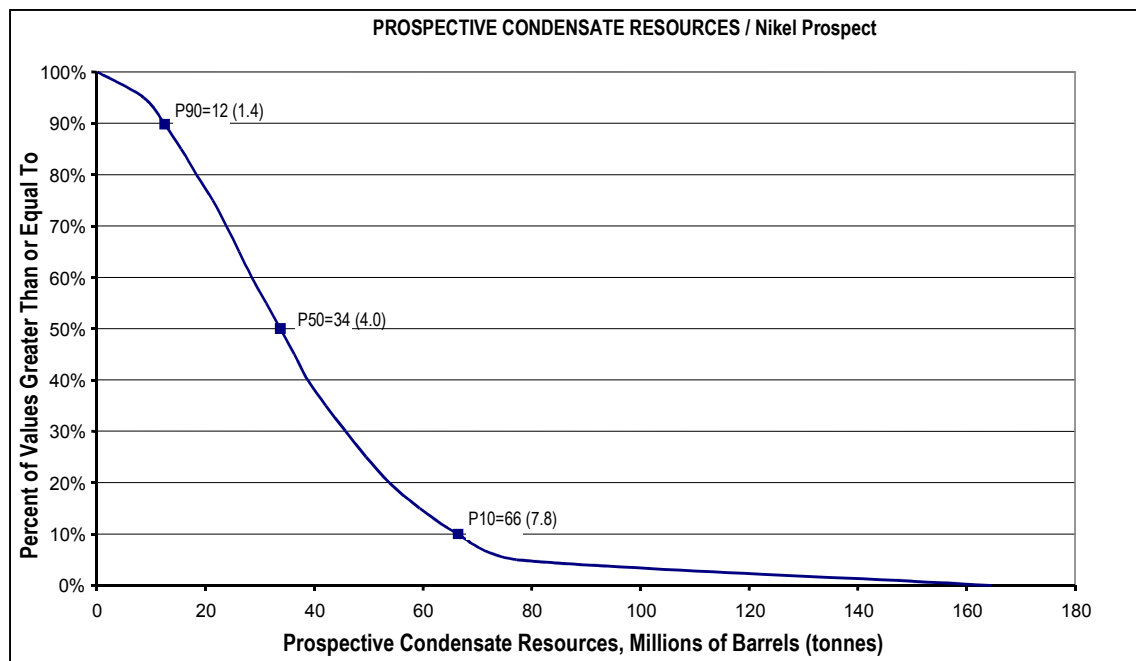
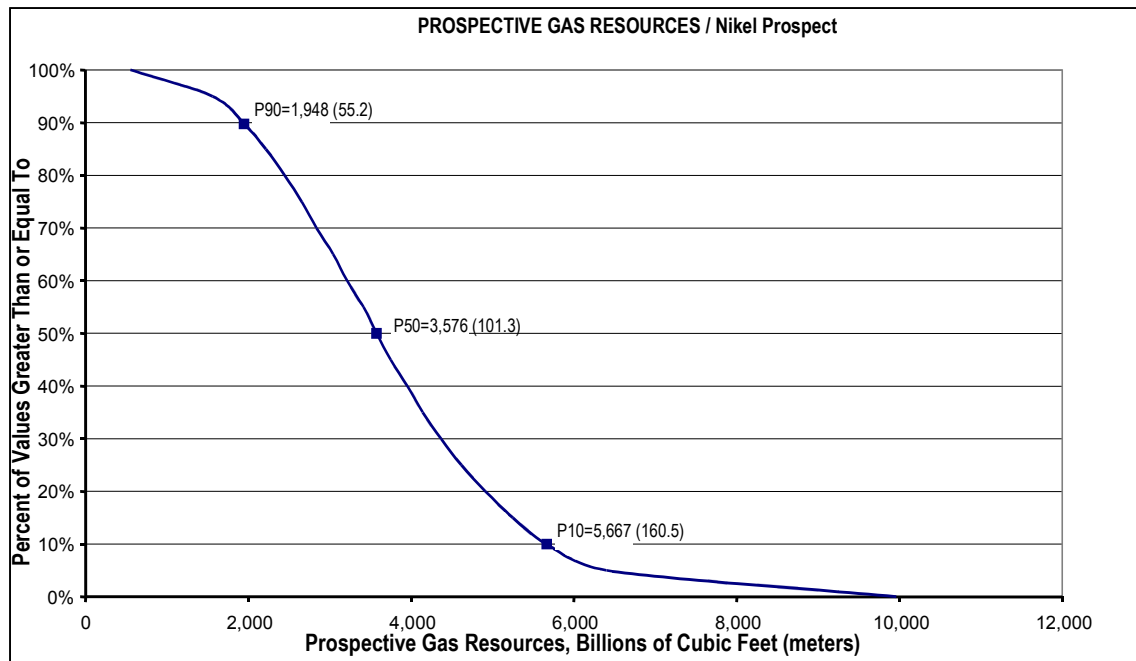


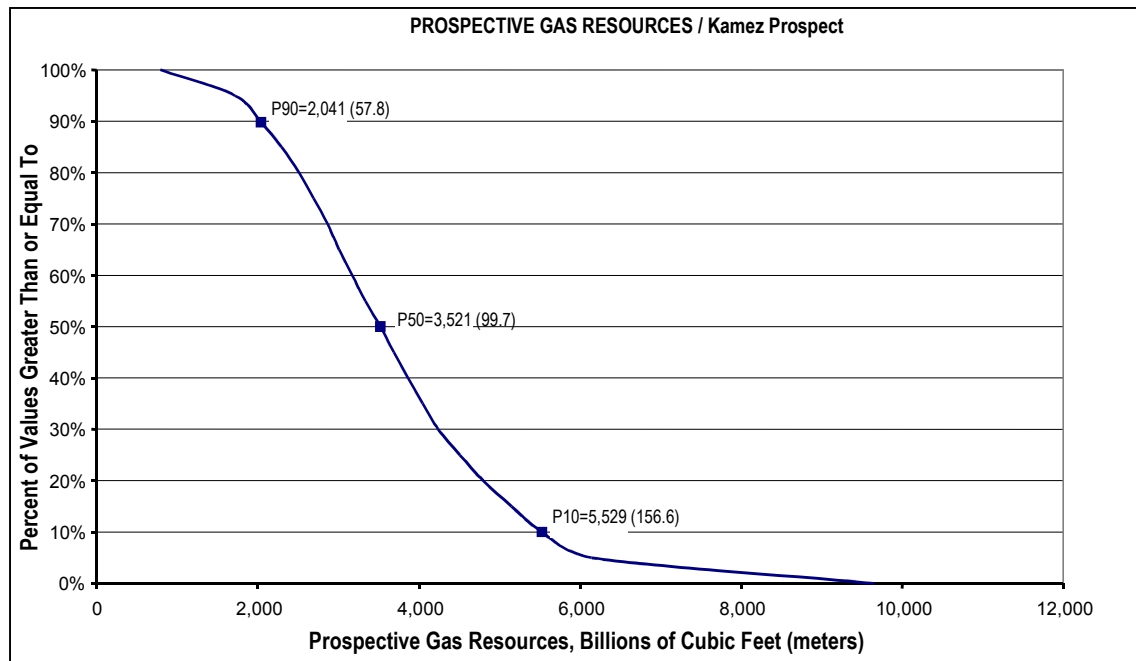
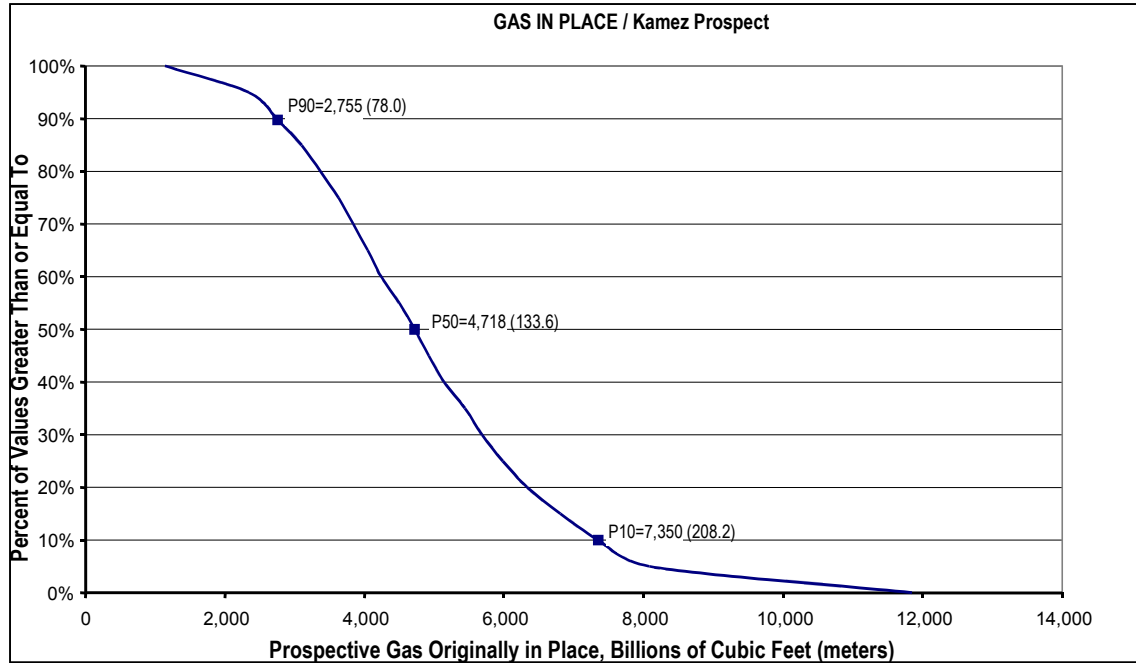


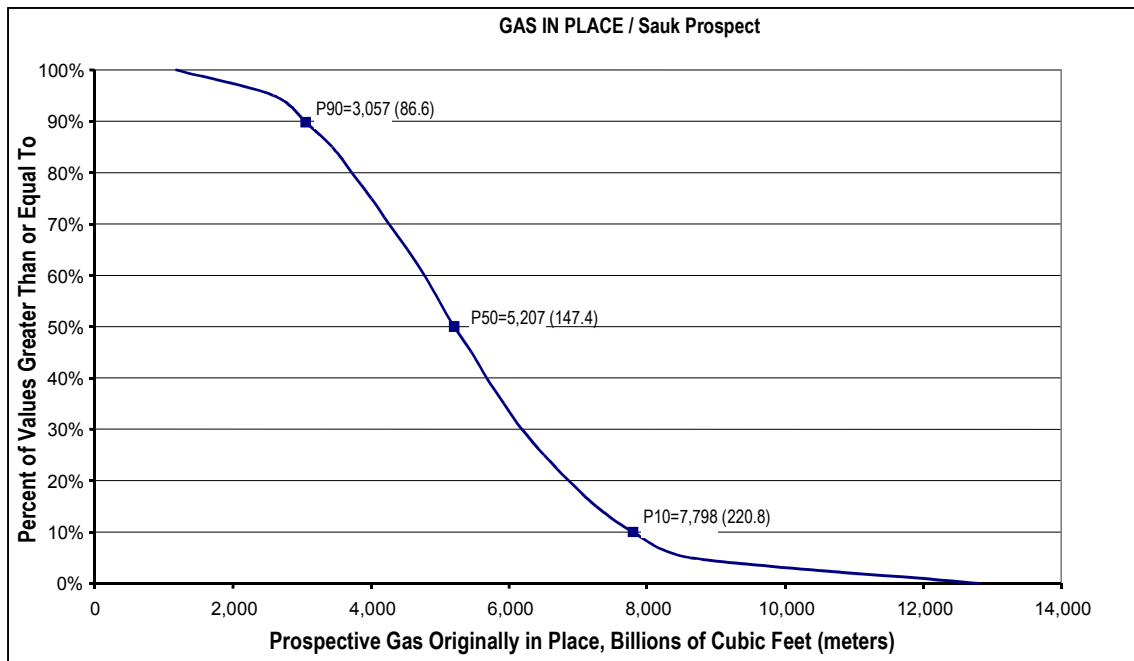
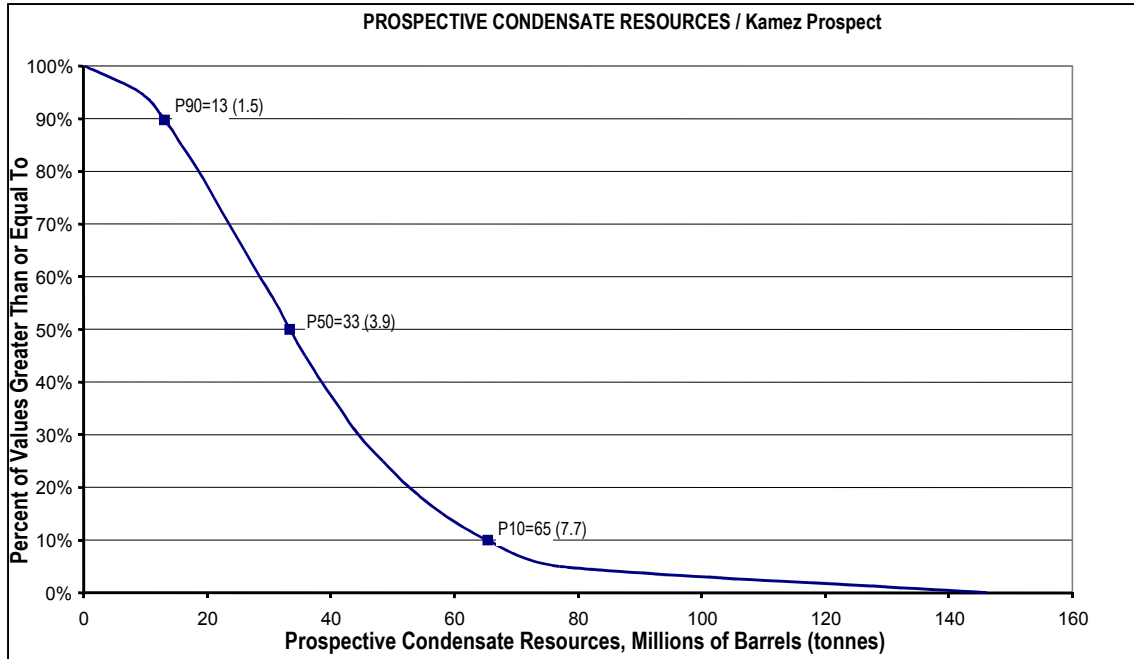


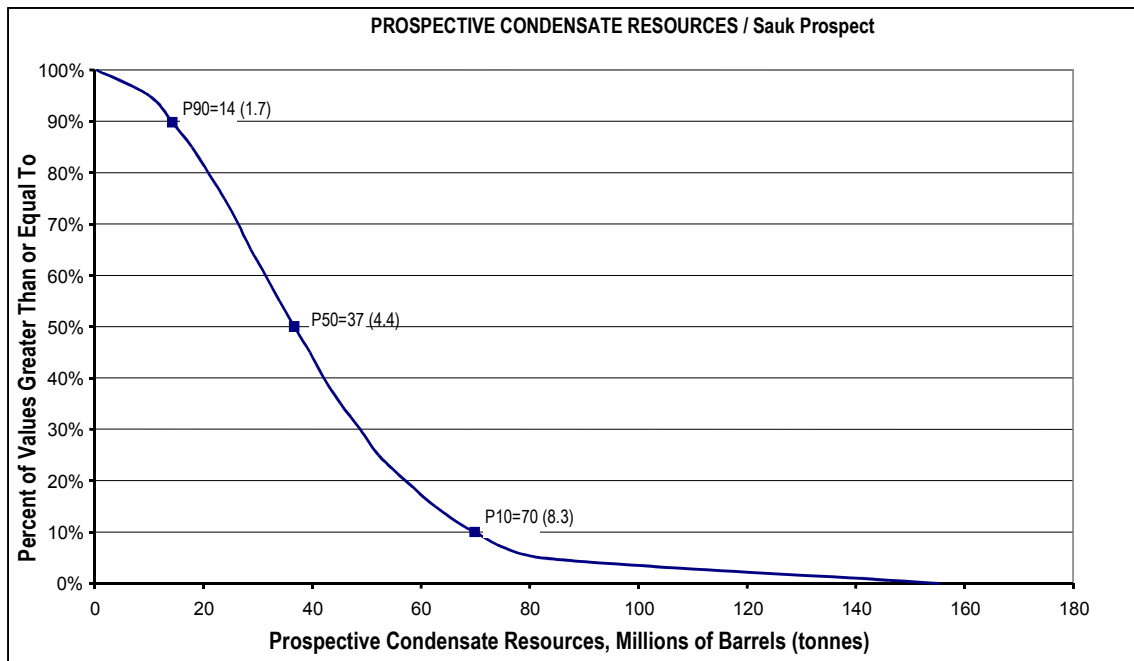
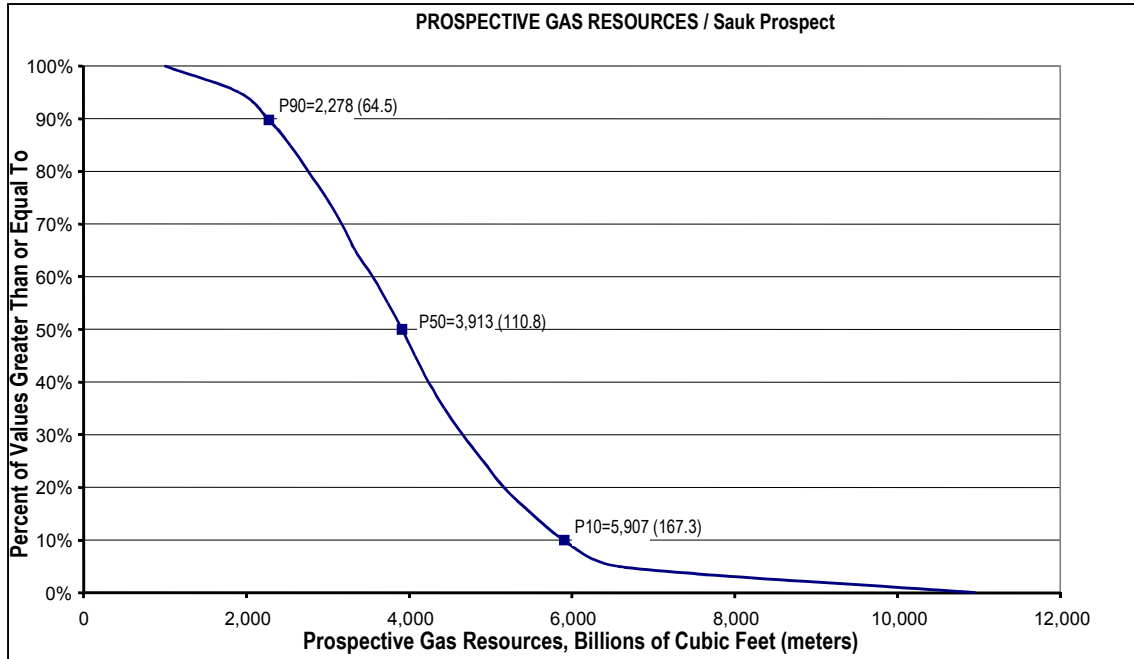


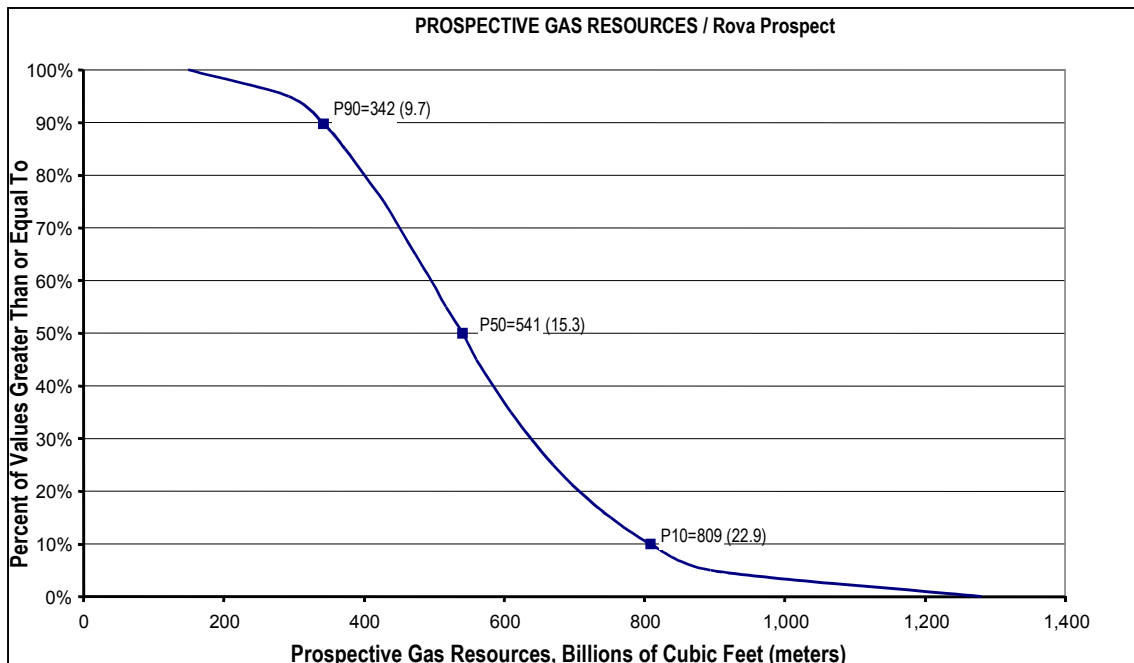
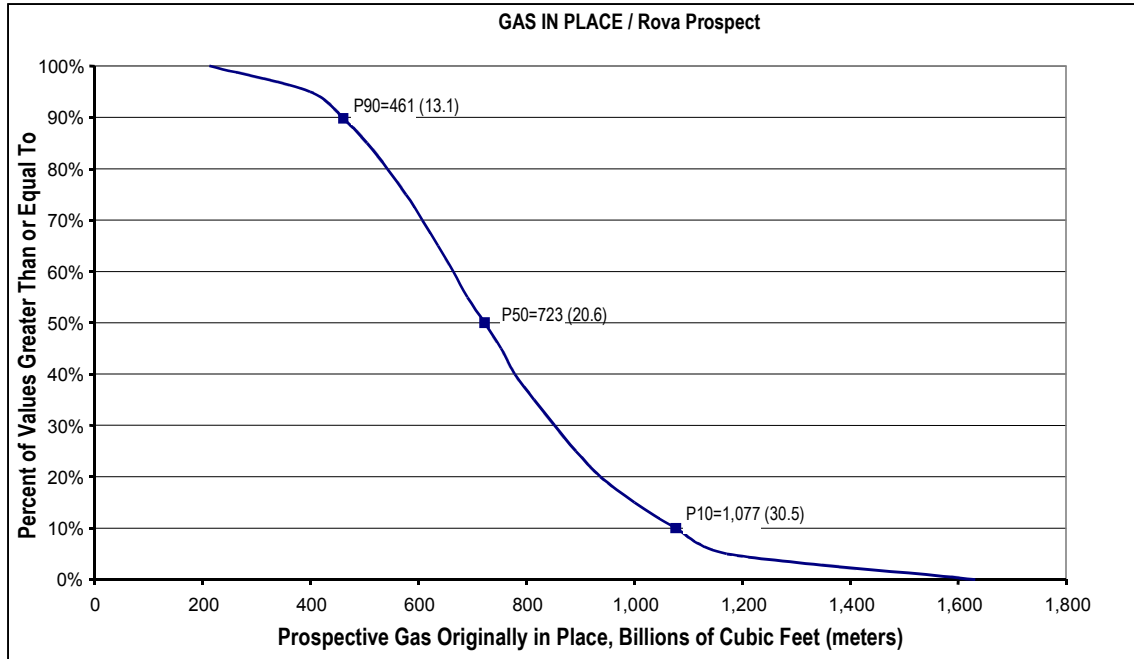


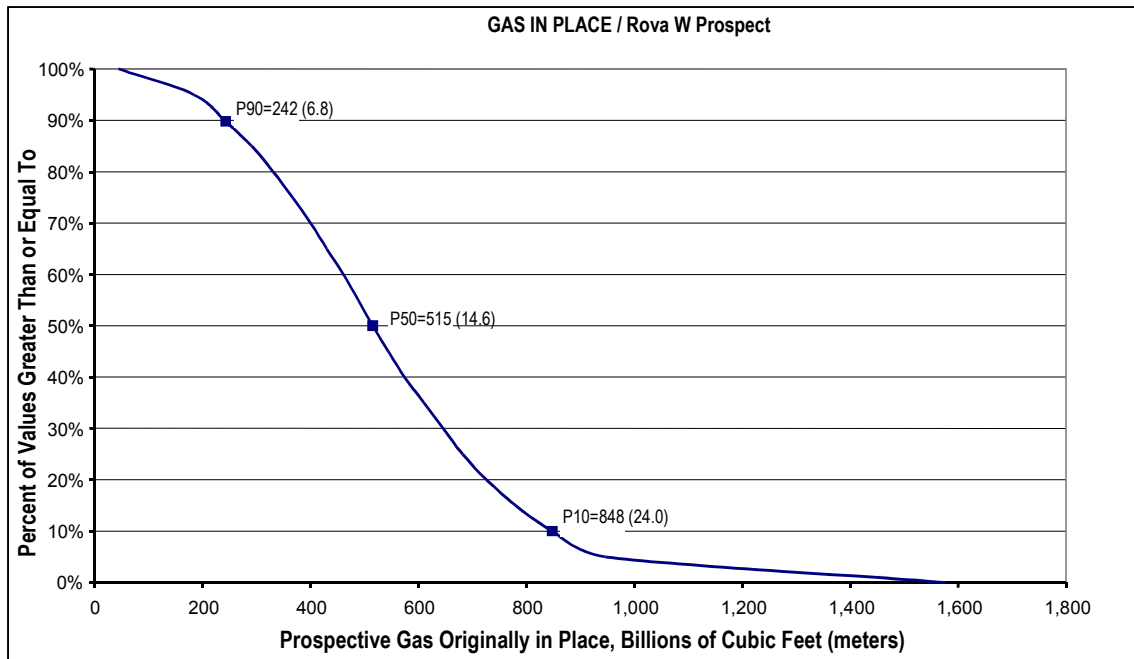
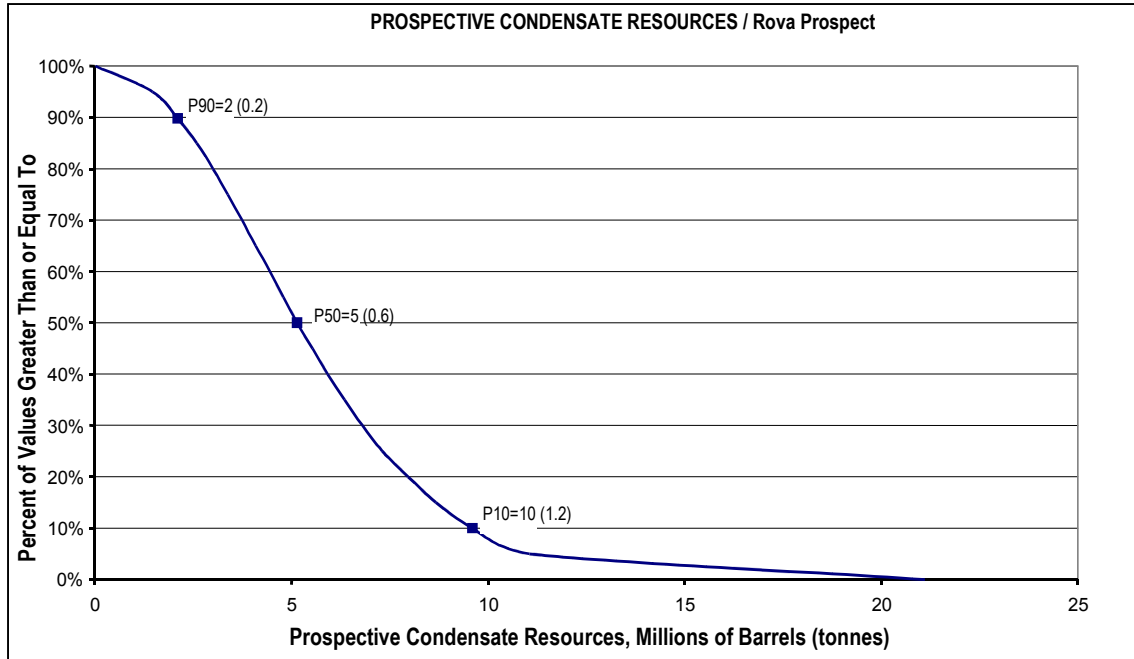


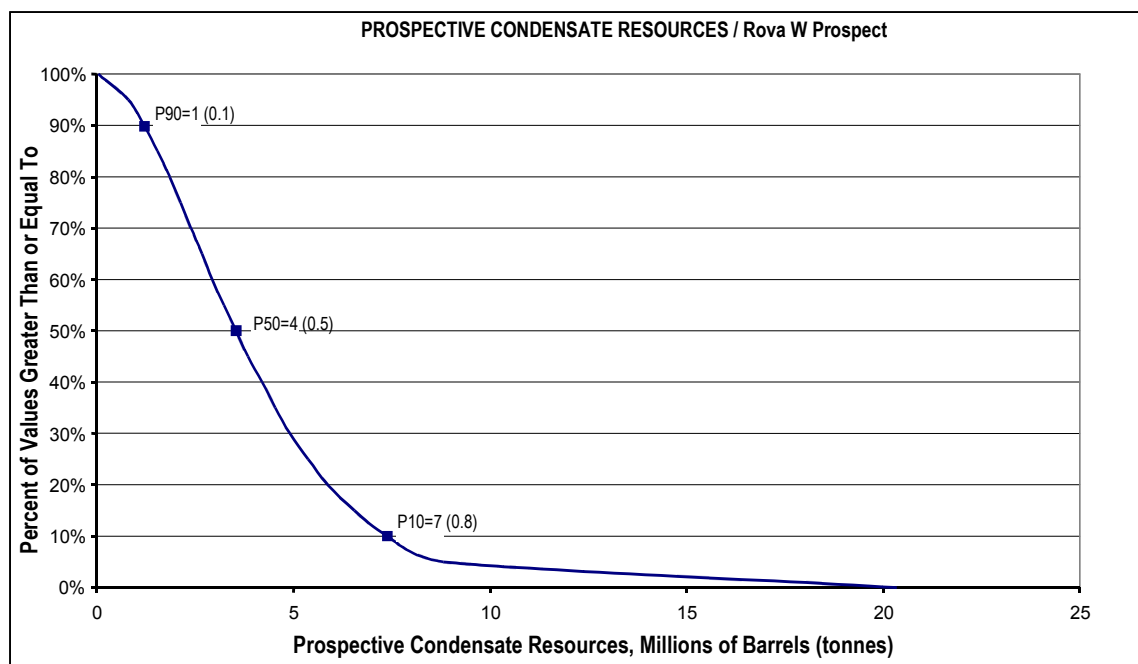
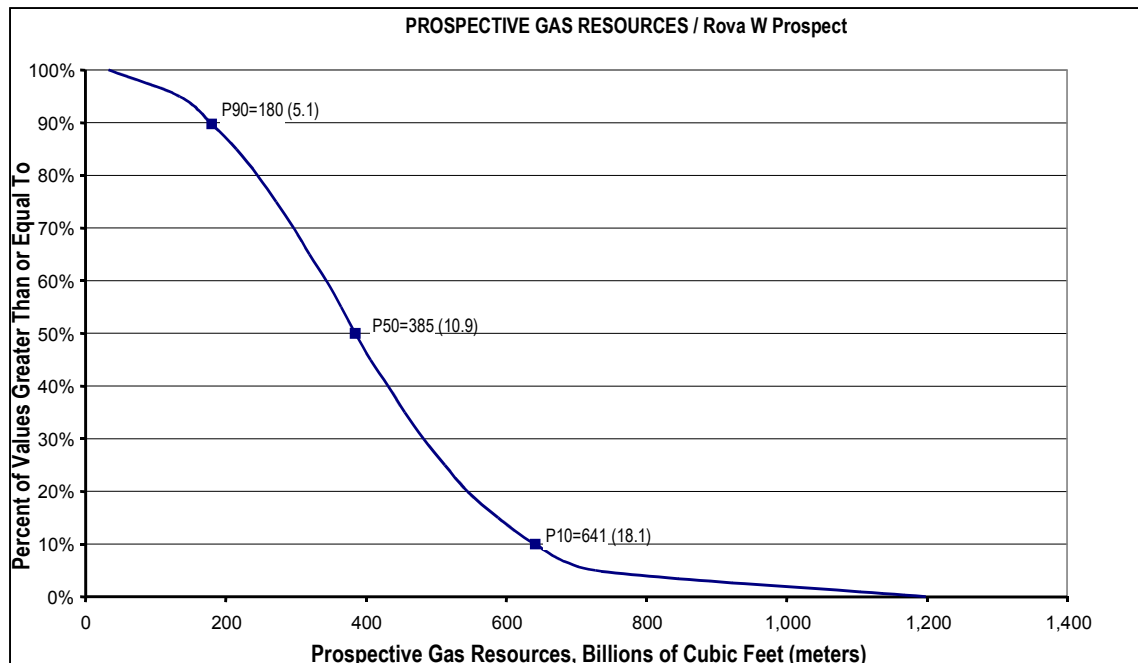


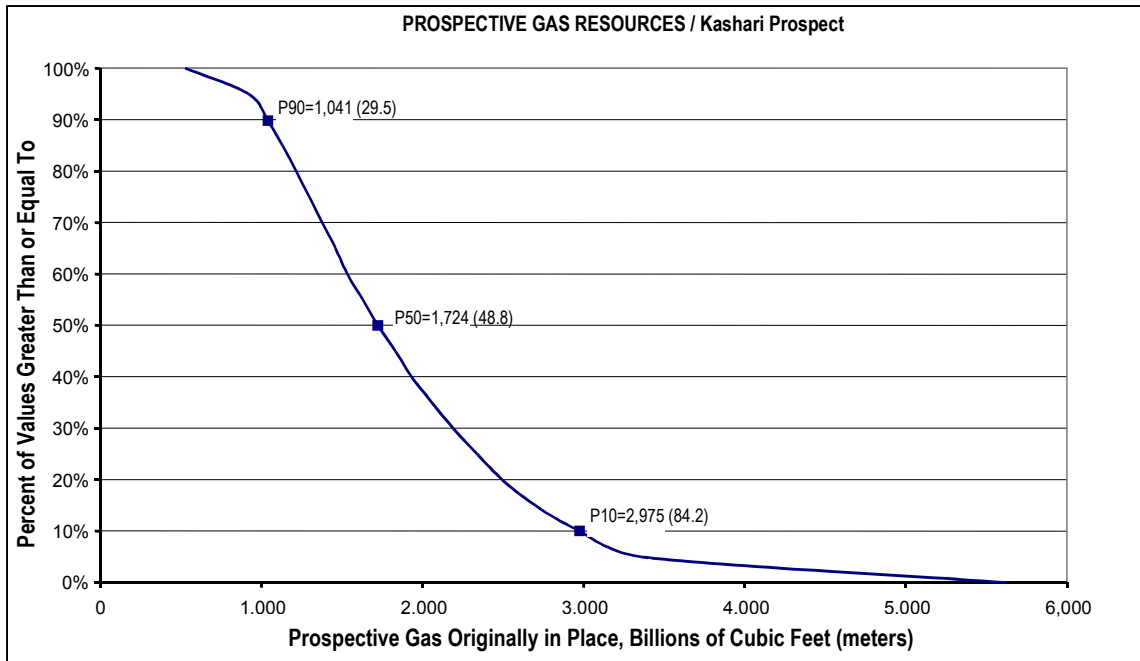
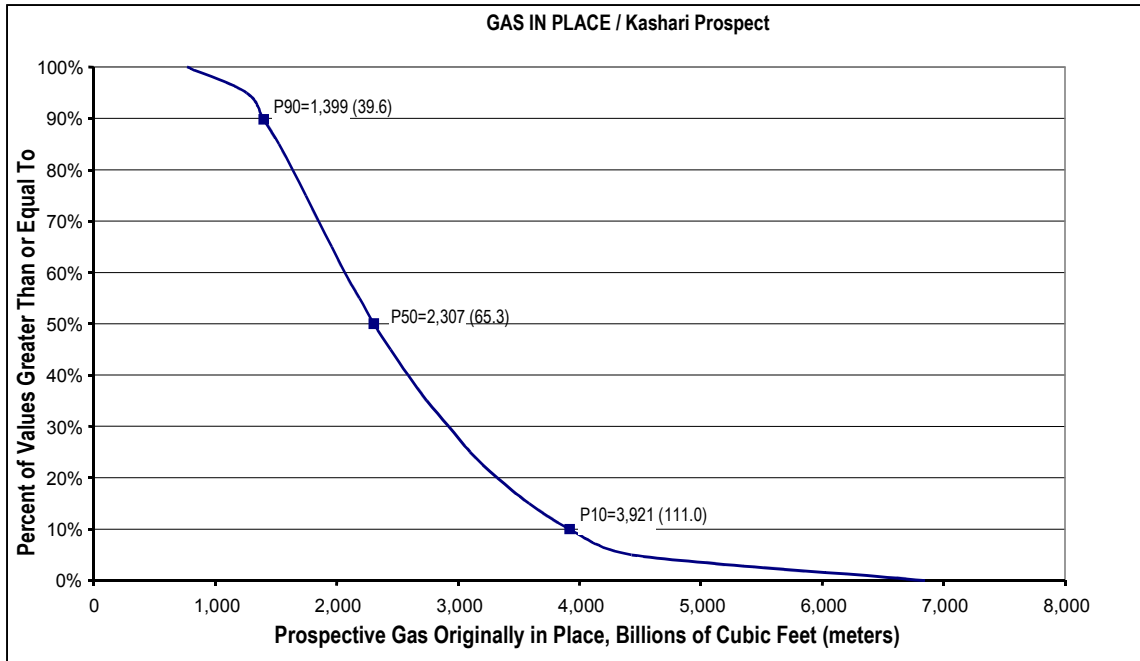




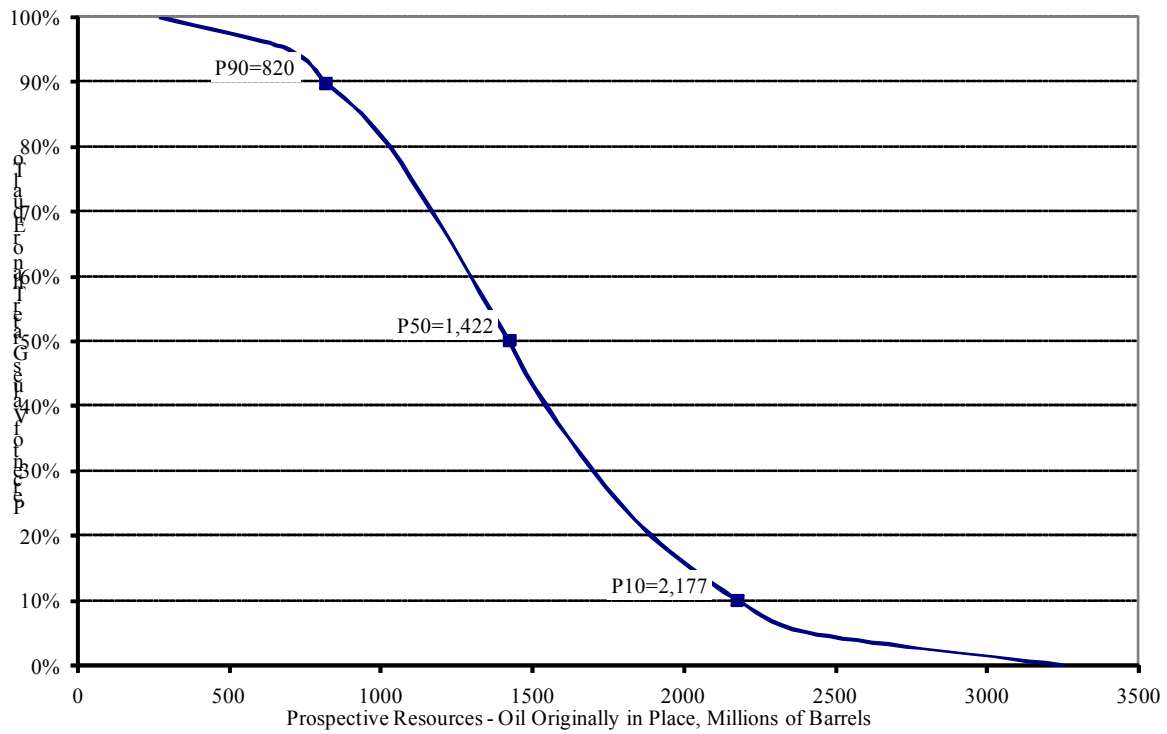




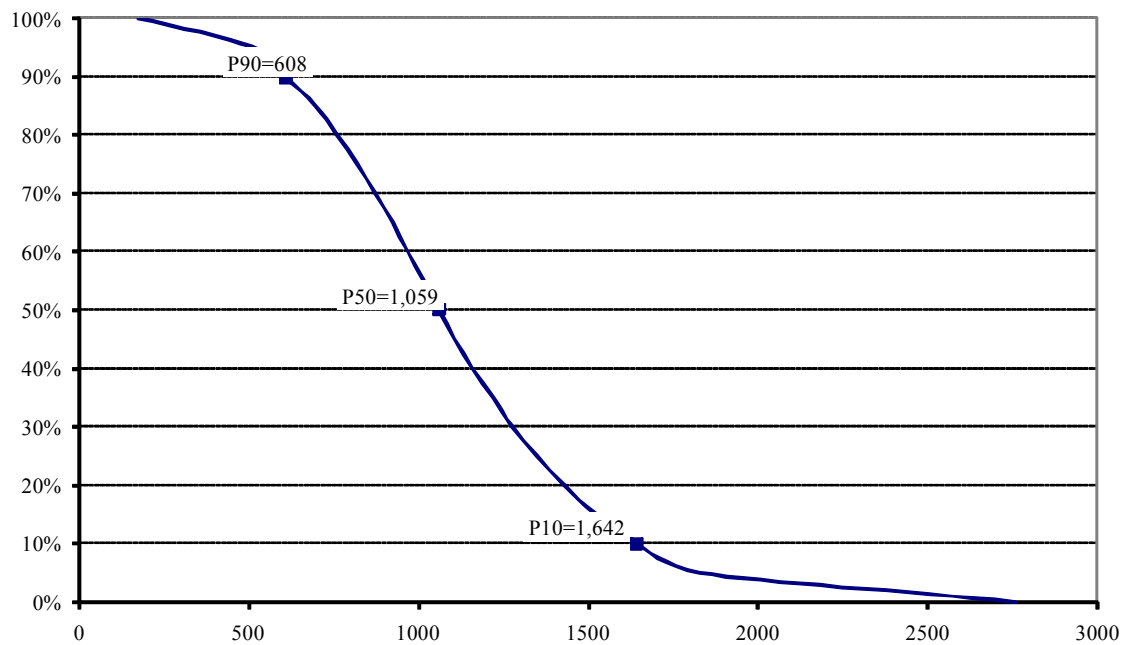




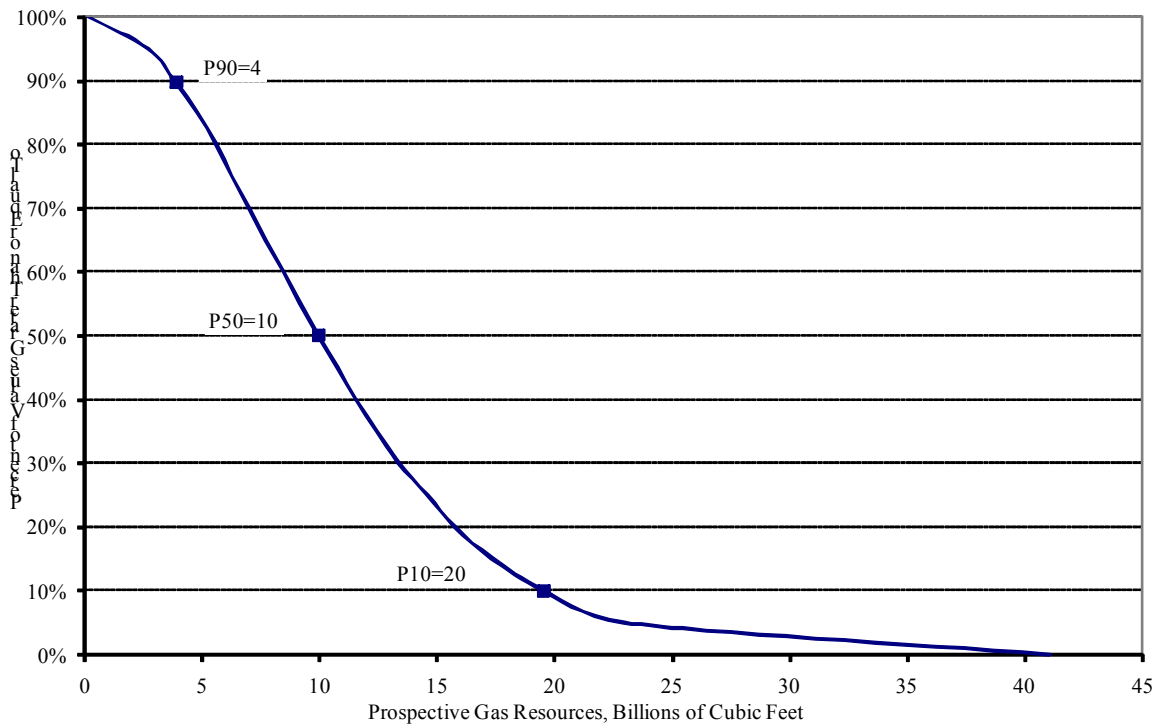
GAS IN PLACE / West Gyurice Prospect



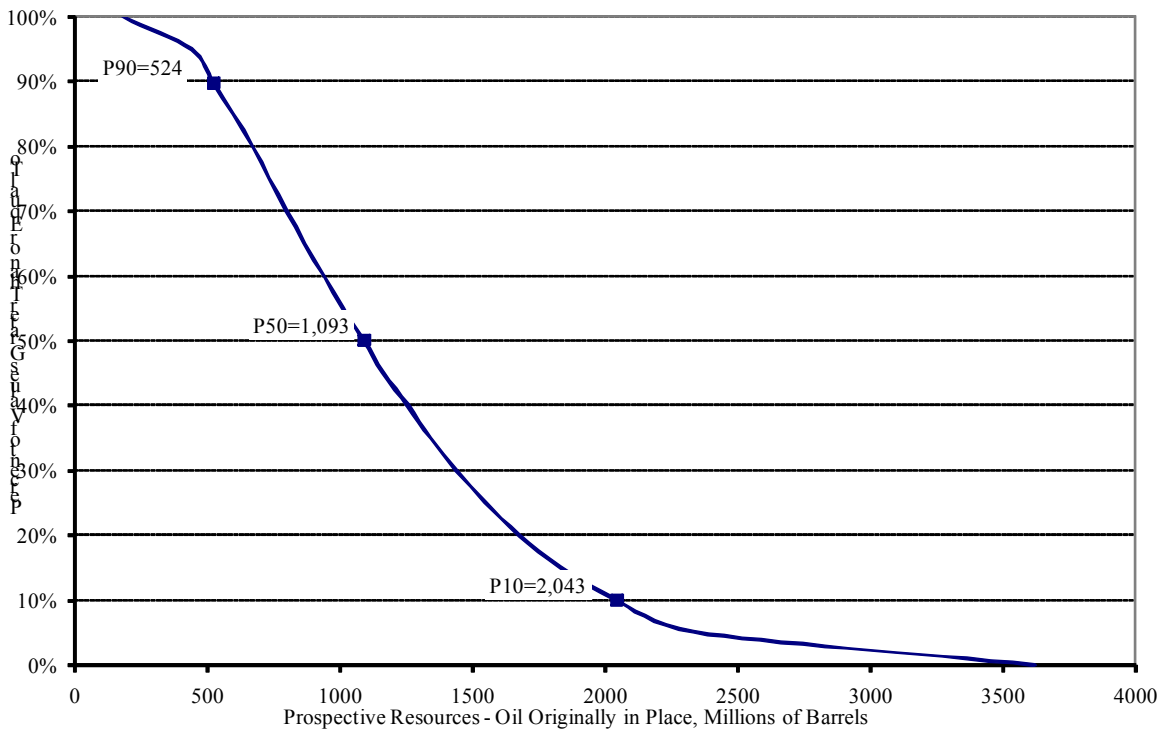
PROSPECTIVE GAS RESOURCES / West Gyurice Prospect



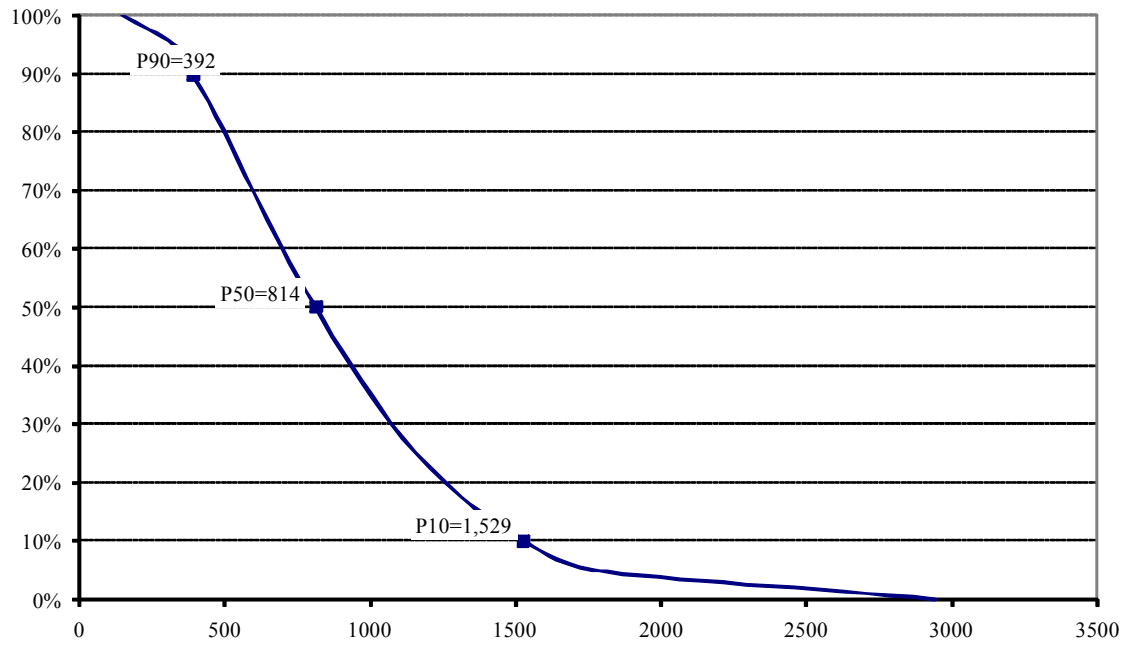
PROSPECTIVE CONDENSATE RESOURCES / West Gyurice Prospect



GAS IN PLACE / Jubani Prospect



PROSPECTIVE GAS RESOURCES / Jubani Prospect



PROSPECTIVE CONDENSATE RESOURCES / Jubani Prospect

