OIL AND GAS RESOURCES
AND FIELD SIZE DISTRIBUTION
OF THE
DEH CHO TERRITORY

Prepared for

Deh Cho Land Use Planning Committee

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Oil and Gas Resources and Field Size Distribution for the Deh Cho Territory

Introduction

The study examines the existing estimates of ultimate oil and gas potential for the Deh Cho territory and assigns oil and gas volumes by play to derive an overall distribution of discovered and undiscovered oil and gas. The oil and gas volumes are displayed in a series of maps in Excel for each play and aggregated for all plays. Field size distributions are done for each play and aggregated for all plays for both oil and gas.

Methodology

The present study uses the results of the NEB 1996 report "A Natural Gas Resource Assessment of Southeast Yukon and Northwest Territories, Canada", and the plays outlined by L.P.Gal and A.L. Jones in "Evaluation of Oil and Gas Potential in the Deh Cho Territory", NWT Open File 2003-03. This study was a qualitative assessment of the oil and gas potential, and the present study assigns volumes to the plays of open file report 2003-03. The marketable gas values from the NEB study were used and the percentage of the gas resource in the Deh Cho Territory was adjusted to agree with the play areas as defined in NWT open file 2003-03 by Gal and Jones.

For this study the Palisade Corporation @Risk simulation add-in program for Excel was used to reproduce the distributions of results of the NEB report. The @ Risk simulations allows for both the mean and the median to be derived. In this manner a constant set of estimated values for both mean and median is achieved. Where possible the distributions given in the NEB assessment were duplicated as closely as possible in @ Risk, and estimated recovery factors added to the simulation to give distribution results for recoverable and in-place. New assessments using @Risk were done for the five new plays defined by Gal and Jones in Open File 2003-03.

Discovered Resources of the Deh Cho Territory

A list of all discovered oil and gas fields, with discovered oil and gas reserves and resources has been compiled in Excel, shown in tables 1 and 2. Field sizes are considered to be mean values of a probabilistic distribution, although some are deterministic or a simple estimate. A few of the producing fields are based on the production record. It should be noted there is both downside and upside potential associated with the field size estimates. The total discovered recoverable oil and gas resources for the Deh Cho Territory are 198.6 thousand cubic metres of oil and 30.9 billion cubic metres of natural gas. There are eighteen discovered gas fields and one field with oil and gas.

Estimated undiscovered Oil and Gas Potential for the Deh Cho Territory

The undiscovered potential for the Deh Cho Territory is estimated to be 8.6 million cubic metres of oil and 129.4 billion cubic metres of recoverable gas. The ultimate oil and gas potential for the Deh Cho Territory is summarized in tables 4 and 5. The aerial distribution of discovered, undiscovered and ultimate oil and gas resources is shown in the Excel maps of figures 7 to 14.

TABLE 1. OIL AND GAS DISCOVERIES - DEH CHO TERRITORY, NORTHWEST TERRITORIES

(OIL - THOUSAND CUBIC METRES ; GAS - MILLION CUBIC METRES) (CUM PROD TO AUG. 31, 2003)

FIELD/POOL	AREA	PLAY	OOIP	REC_OIL	CUMOIL	REMOIL	GIP	RRG	IMG	CUM_RRG	REM_RRG	YEAR	SOURCE
ARROWHEAD B-41	ST	7	0.00	0.00	0.00	0.00	354	248	228	0	248	1989	Recov Gas - NEB, 1996
ARROWHEAD G-69	ST	3	0.00	0.00	0.00	0.00	153	107	99	0	107	1985	Recov Gas - NEB, 1996
CAMERON F-51	ST	4	0.00	0.00	0.00	0.00	44	33	31	0	33	1969	Recov Gas - NEB, 1996
CAMERON HILLS	ST	4	794.55	198.64	62.20	136.44	817	578	549	290	287	1968	Est. by KJ Drummond
CAMERON M-31	ST	4	0.00	0.00	0.00	0.00	80	60	56	0	60	1979	Recov Gas - NEB, 1996
CELIBETA H-78	ST	4	0.00	0.00	0.00	0.00	175	140	132	0	140	1960	Recov Gas - NEB, 1996
GRUMBLER G-63	ST	4	0.00	0.00	0.00	0.00	43	34	32	0	34	1969	NEB 1993
NETLA C-07	ST	3	0.00	0.00	0.00	0.00	699	594	559	0	594	1961	Recov Gas - NEB, 1996
RABBIT LAKE O-16	ST	4	0.00	0.00	0.00	0.00	468	318	299	0	318	1955	Recov Gas - NEB, 1996
S. ISLAND RIVER M-41	ST	3	0.00	0.00	0.00	0.00	68	48	45	0	48	1964	Recov Gas - NEB, 1996
TATHLINA N-18	ST	4	0.00	0.00	0.00	0.00	100	70	66	0	70	1973	Recov Gas - NEB, 1996
TRAINOR LAKE C-39	ST	3	0.00	0.00	0.00	0.00	39	27	25	0	27	1965	Recov Gas - NEB, 1996
BOVIE LAKE J-72	LP	17	0.00	0.00	0.00	0.00	237	177	158	0	177	1967	Recov Gas - NEB, 1996
CHEVRON FT. LIARD K-29	LP	1	0.00	0.00	0.00	0.00	19,299	16,200	14,281	3,548	12,652	1999	GLJ Audit as reported by Purcell
LA BICHE F-08 (NWT)	LP	1	0.00	0.00	0.00	0.00	2,226	1,682	1,480	0	1,682	1971	YT Gov't Liard Assessment
PARAMOUNT FT. LIARD F-36	LP	2	0.00	0.00	0.00	0.00	1,409	986	917	201	785	1987	Paramount press releases
PARAMOUNT SE FT. LIARD N-01	LP	2	0.00	0.00	0.00	0.00	805	563	524	179	384	1987	Paramount press releases
POINTED MOUNTAIN	LP	1	0.00	0.00	0.00	0.00	15,000	8,903	7,873	8,895	8	1967	Estimated Remaining, Field shut-in, last 60 mcf/d Sept, 2001
RANGER FT. LIARD P-66A	LP	1	0.00	0.00	0.00	0.00	282	141	125	62	79	1998	Field shut-in, Feb 2001 after 10 months prod. Last 1.5 mmcf/d
TOTAL			794.55	198.64	62.20	136.44	42,297	30,910	27,480	13,176	17,734		

EXPLANATION

ST	Southern Territories
LP	Liard Plateau
OOIP	Original Oil in Place
REC_OIL	Initial Recoverable Oil
CUMOIL	Cumulative Oil Production
REMOIL	Remaining Recoverable Oil
GIP	Initial Gas in Place
RRG	Initial Raw Recoverable Gas
IMG	Initial Marketable Gas
CUM_RRG	Cumulative Raw Gas Production
REM_RRG	Remaining Recoverable Gas

TABLE 2. OIL AND GAS DISCOVERIES BY QUARTER GRID - DEH CHO TERRITORY, NORTHWEST TERRITORIEST

(OIL - THOUSAND CUBIC METRES ; GAS - MILLION CUBIC METRES) (CUM PROD TO AUG. 31, 2004)

FIELD/POOL	PLAY	QTR_GRID	OOIP	REC_OIL	CUMOIL	REMOIL	GIP	RRG	IMG	CUM_RRG	REM_RRG	YEAR	SOURCE
CHEVRON FT. LIARD K-29	1	603012330NE	0.00	0.00	0.00	0.00	16,782	14,087	12,419	2,152	11,935		
CHEVRON FT. LIARD K-29	1	603012330SE	0.00	0.00	0.00	0.00	2,517	2,113	1,863	1,397	716	1999	GLJ Audit as reported by Purcell
POINTED MOUNTAIN	1	603012345NE	0.00	0.00	0.00	0.00	381	226	200	226	0	1967	Estimated Remaining, Field shut-in, last 60 mcf/d Sept, 2001
POINTED MOUNTAIN	1	603012345NW	0.00	0.00	0.00	0.00	1,270	754	667	754	0	1967	
POINTED MOUNTAIN	1	603012345SW	0.00	0.00	0.00	0.00	13,349	7,923	7,007	7,916	8	1967	
RANGER FT. LIARD P-66A	1	604012330NW	0.00	0.00	0.00	0.00	282	141	125	62	79	1998	Field shut-in, Feb 2001 after 10 months prod. Last 1.5 mmcf/d
LA BICHE F-08 (NWT)	1	604012430NE	0.00	0.00	0.00	0.00	2,226	1,682	1,480	0	1,682	1971	YT Gov't Liard Assessment
PARAMOUNT FT. LIARD F-36	2	601012315NE	0.00	0.00	0.00	0.00	1,409	986	917	201	785	1987	Paramount press releases
PARAMOUNT SE FT. LIARD N-01	2	601012315SE	0.00	0.00	0.00	0.00	805	563	524	179	384	1987	Paramount press releases
S. ISLAND RIVER M-41	3	601012100SW	0.00	0.00	0.00	0.00	68	48	45	0	48	1964	Recov Gas - NEB, 1996
TRAINOR LAKE C-39	3	602012030NE	0.00	0.00	0.00	0.00	39	27	25	0	27	1965	Recov Gas - NEB, 1996
ARROWHEAD G-69	3	604012245NW	0.00	0.00	0.00	0.00	153	107	99	0	107	1985	Recov Gas - NEB, 1996
NETLA C-07	3	605012245NE	0.00	0.00	0.00	0.00	699	594	559	0	594	1961	Recov Gas - NEB, 1996
CAMERON M-31	4	601011700SE	0.00	0.00	0.00	0.00	80	60	56	0	60	1979	Recov Gas - NEB, 1996
CAMERON F-51	4	601011715SW	0.00	0.00	0.00	0.00	44	33	31	0	33	1969	Recov Gas - NEB, 1996
CAMERON HILLS	4	601011715SW	686.49	171.62	53.70	117.93	56	35	34	18	18	1968	Est. by KJ Drummond
CAMERON HILLS	4	601011730NE	0.00	0.00	0.00	0.00	254	184	175	93	92	1968	
CAMERON HILLS	4	601011730NW	0.00	0.00	0.00	0.00	169	127	121	64	63	1968	
CAMERON HILLS	4	601011730SE	108.06	27.01	8.50	18.51	28	23	22	12	11	1968	
CELIBETA H-78	4	601012200NW	0.00	0.00	0.00	0.00	175	140	132	0	140	1960	Recov Gas - NEB, 1996
GRUMBLER G-63	4	602011545SW	0.00	0.00	0.00	0.00	43	34	32	0	34	1969	NEB 1993
CAMERON HILLS	4	602011730SW	0.00	0.00	0.00	0.00	310	208	197	104	103	1968	
TATHLINA N-18	4	602011800NE	0.00	0.00	0.00	0.00	100	70	66	0	70	1973	Recov Gas - NEB, 1996
RABBIT LAKE O-16	4	610011845NE	0.00	0.00	0.00	0.00	468	318	299	0	318	1955	Recov Gas - NEB, 1996
ARROWHEAD B-41	7	604012245SW	0.00	0.00	0.00	0.00	354	248	228	0	248	1989	Recov Gas - NEB, 1996
BOVIE LAKE J-72	17	602012245SW	0.00	0.00	0.00	0.00	237	177	158	0	177	1967	Recov Gas - NEB, 1996
TOTAL			794.55	198.64	62.20	136.44	42,297	30,910	27,480	13,176	17,734		

EXPLANATION

ST	Southern Territories	GIP	Initial Gas in Place
LP	Liard Plateau	RRG	Initial Raw Recoverable Gas
OOIP	Original Oil in Place	IMG	Initial Marketable Gas
REC_OIL	Initial Recoverable Oil	CUM_RRG	Cumulative Raw Gas Production
CUMOIL	Cumulative Oil Production	REM_RRG	Remaining Recoverable Gas
REMOIL	Remaining Recoverable Oil		

Table 3. Undiscovered Oil and Gas Resources of the Deh Cho Territory

DEH CHO TERRITORY - UNDISCOVERED OIL / GAS RESOURCES					
	GAS (MILLION CUBIC METRES)			OIL (THOUSAND CUBIC METRES)	
PLAY	GAS-IN-PLACE	RECOVERABLE	MARKETABLE	OIL-IN-PLACE	RECOVERABLE
1	31,558	20,197	16,865	-	-
2	21,443	13,227	11,534	-	-
3	11,260	8,107	7,621	-	-
4	13,777	10,592	9,094	25,054	4,170
5	5,234	3,796	3,377	8,035	1,042
6	11,275	8,458	7,130	-	-
7	6,969	5,594	4,964	4,337	939
8	11,941	7,763	7,041	-	-
9	846	592	556	-	-
10	9,285	6,191	4,934	-	-
11	3,247	2,257	1,632	6,680	866
12	15,856	10,572	9,039	-	-
13	18,186	13,035	10,493	-	-
14	3,070	1,996	1,663	-	-
15	1,034	715	608	7,378	1,597
16	163	114	106	-	-
17	10,608	6,897	5,683	-	-
18	6,071	3,826	3,558	-	-
19	5,884	4,708	3,484	-	-
20	1,150	748	616	-	-
TOTAL	188,859	129,384	109,998	51,485	8,614

Table 4. Ultimate Gas Resources of the Deh Cho Territory

DEH CHO TERRITORY - ULTIMATE GAS RESOURCE (DISCOVERED + ESTIMATED UNDISCOVERED)									
	DISCOVERED (MILLION CUBIC METRES)			UNDISCOVERED (MILLION CUBIC METRES)			ULTIMATE (MILLION CUBIC METRES)		
PLAY	GAS-IN-PLACE	RECOVERABLE	MARKETABLE	GAS-IN-PLACE	RECOVERABLE	MARKETABLE	GAS-IN-PLACE	RECOVERABLE	MARKETABLE
1	36,806	26,926	23,760	31,558	20,197	16,865	68,365	47,123	40,625
2	2,214	1,550	1,441	21,443	13,227	11,534	23,657	14,776	12,975
3	959	776	728	11,260	8,107	7,621	12,220	8,884	8,349
4	1,726	1,233	1,165	13,777	10,592	9,094	15,503	11,825	10,259
5				5,234	3,796	3,377	5,234	3,796	3,377
6				11,275	8,458	7,130	11,275	8,458	7,130
7	354	248	228	6,969	5,594	4,964	7,324	5,842	5,192
8				11,941	7,763	7,041	11,941	7,763	7,041
9				846	592	556	846	592	556
10				9,285	6,191	4,934	9,285	6,191	4,934
11				3,247	2,257	1,632	3,247	2,257	1,632
12				15,856	10,572	9,039	15,856	10,572	9,039
13				18,186	13,035	10,493	18,186	13,035	10,493
14				3,070	1,996	1,663	3,070	1,996	1,663
15				1,034	715	608	1,034	715	608
16				163	114	106	163	114	106
17	237	177	158	10,608	6,897	5,683	10,845	7,075	5,841
18				6,071	3,826	3,558	6,071	3,826	3,558
19				5,884	4,708	3,484	5,884	4,708	3,484
20				1,150	748	616	1,150	748	616
TOTAL	42,297	30,910	27,480	188,859	129,384	109,998	231,156	160,294	137,478

Table 5. Ultimate Oil Resources of the Deh Cho Territory

DEH CHO TERRITORY - ULTIMATE OIL RESOURCE (THOUSAND CUBIC METRES)						
	DISCOVERED		UNDISCOVERED		ULTIMATE	
PLAY	OIL-IN-PLACE	RECOVERABLE	OIL-IN-PLACE	RECOVERABLE	OIL-IN-PLACE	RECOVERABLE
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	794.6	198.6	25,054.4	4,169.9	25,848.9	4,368.5
5	-	-	8,035.4	1,041.7	8,035.4	1,041.7
6	-	-	-	-	-	-
7	-	-	4,337.1	938.9	4,337.1	938.9
8	-	-	-	-	-	-
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	6,680.2	866.5	6,680.2	866.5
12	-	-	-	-	-	-
13	-	-	-	-	-	-
14	-	-	-	-	-	-
15	-	-	7,377.7	1,596.8	7,377.7	1,596.8
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	-	-	-	-	-	-
19	-	-	-	-	-	-
20	-	-	-	-	-	-
TOTAL	794.6	198.6	51,484.7	8,613.8	52,279.2	8,812.4

Natural Gas Resources of the Deh Cho Territory

Initial discovered natural gas resources in the Deh Cho Territory, as of August 31, 2004 are:

	Billion cubic metres
Initial discovered gas-in-place	42,297
Initial recoverable gas	30,910
Initial marketable gas	27,480
Cumulative production, recoverable	13,176
Remaining recoverable gas resources	17,734

The undiscovered natural gas potential for the Deh Cho Territory is estimated to be 189.0 billion cubic metres gas-in-place, 129.4 billion cubic metres recoverable, and 110.0 billion cubic metres of marketable gas. The cumulative frequency distribution for undiscovered gas is shown in figure 2. There is an 80% probability the undiscovered recoverable gas is in the range of 71.0 to 203.2 billion cubic metres, with a mean of 129.4 billion cubic metres at a probability of 39.9%.

The ultimate natural gas resource for the Deh Cho Territory is estimated to be 160.3 billion cubic metres. The distribution of the ultimate recoverable gas potential for the Deh Cho Territory is shown in figure 1. Eight percent (13.2 billion cubic metres) of the initial recoverable gas resource has been produced, with remaining resources accounting for 11% (17.7 billion cubic metres) and 81% (129.4 billion cubic metres) of recoverable gas still to be discovered. The remaining recoverable resource (remaining discovered plus undiscovered) is 147.1 billion cubic metres.

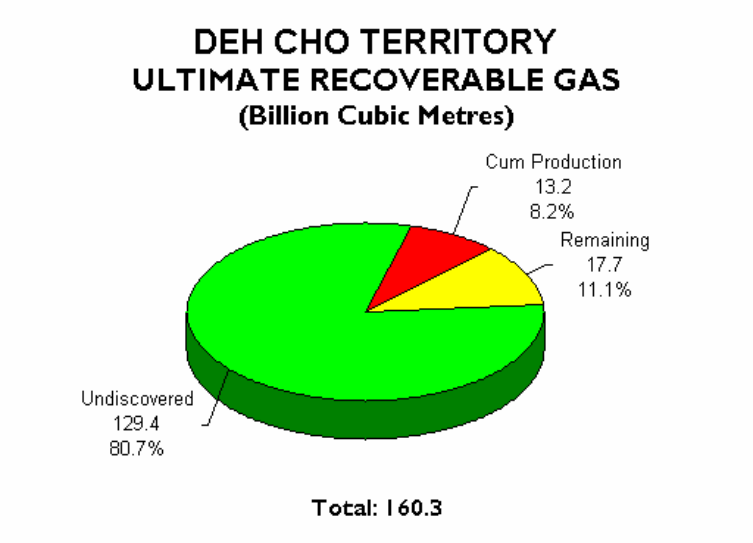
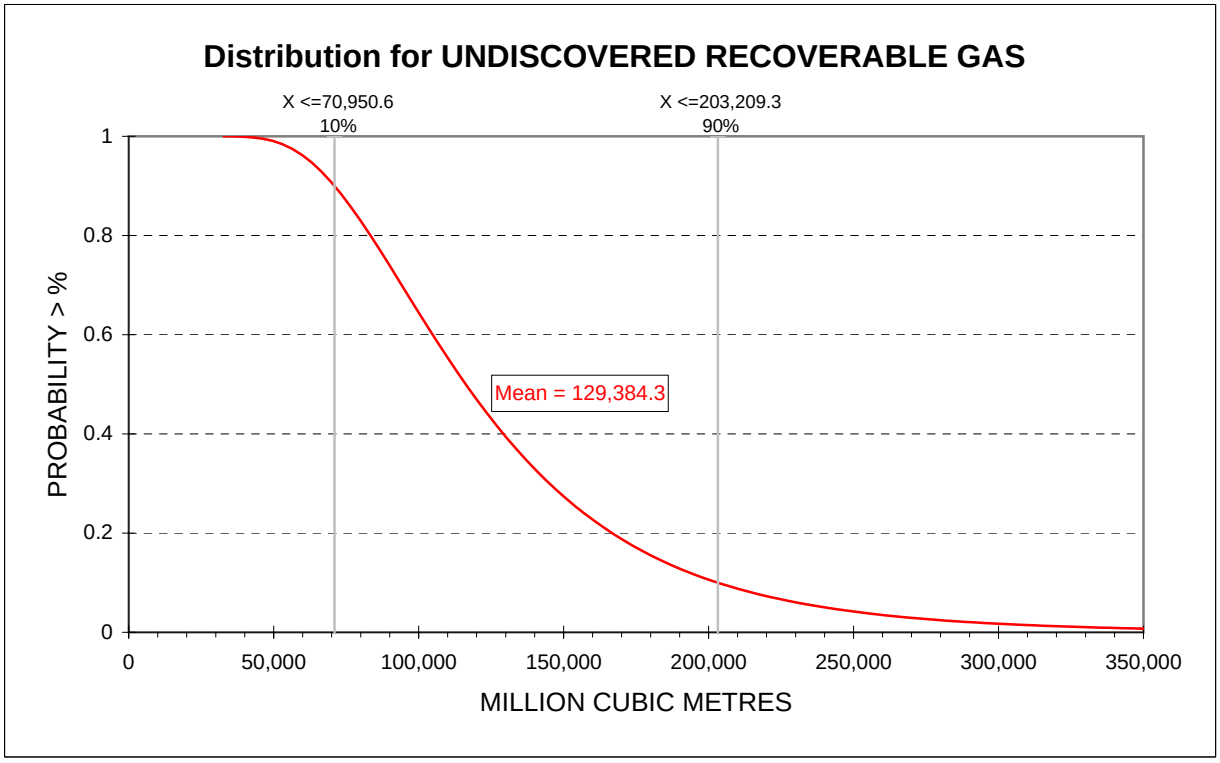


Figure 1 Deh Cho Territory Ultimate Recoverable Gas

The distribution of recoverable gas resources by million cubic metres per quarter grid for the Deh Cho Territory is shown in Excel map format of figures 7 to 11. The largest volume of discovered gas is in the Liard Plateau and this area is the most prospective for undiscovered natural gas.

The ranking of the ultimate gas potential for the various plays is shown in figure 3. The number one ranked play with the largest volume (47.1 billion cubic metres) of discovered and undiscovered recoverable gas is the Laramide / Manetoe facies (play 1) of the Liard Plateau. This is followed by play number 2, the Laramide/Windflower, with 14.8 billion cubic metres and play 13, the Lonely Bay/Nahanni platform, with 13.0 billion cubic metres. These three plays represent 46.7% of the total estimated ultimate gas potential, with the top two having 38.6 percent.

DEH CHO TERRITORY
TOTAL UNDISCOVERED GAS RESOURCE ALL PLAYS



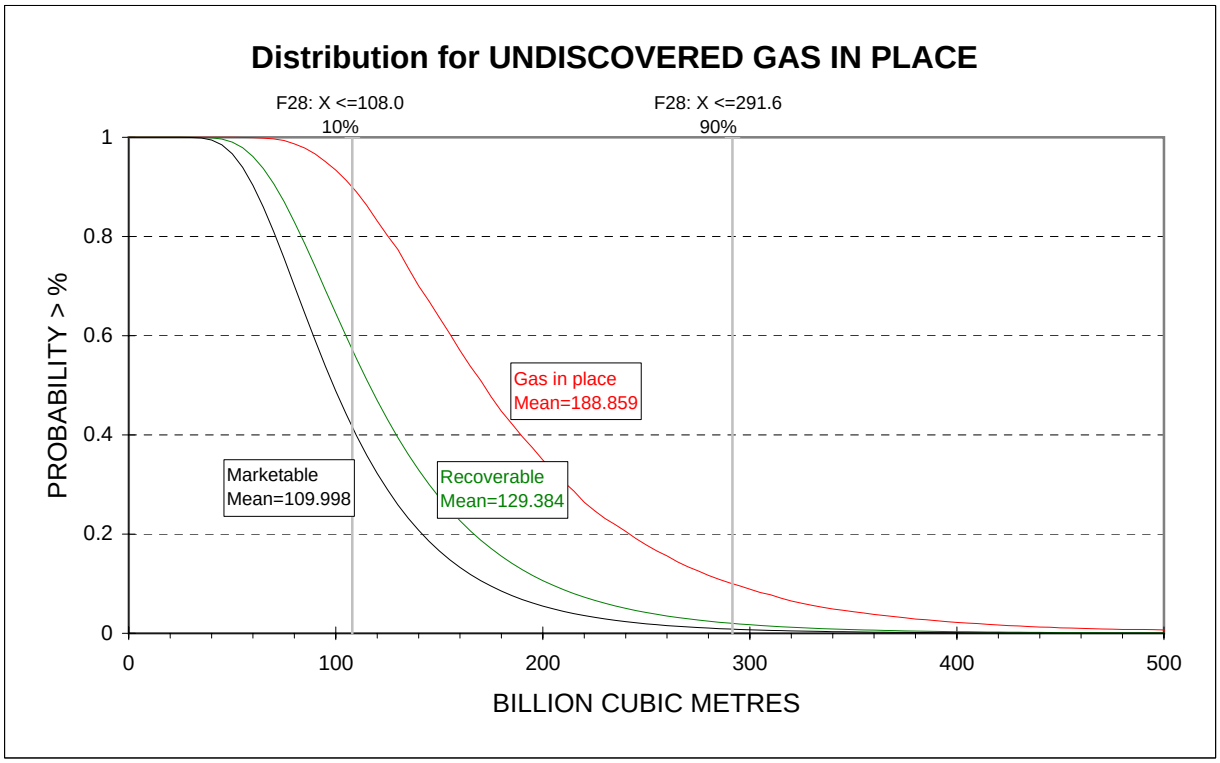


Figure 2. Cumulative Frequency Distribution for Undiscovered Natural Gas.

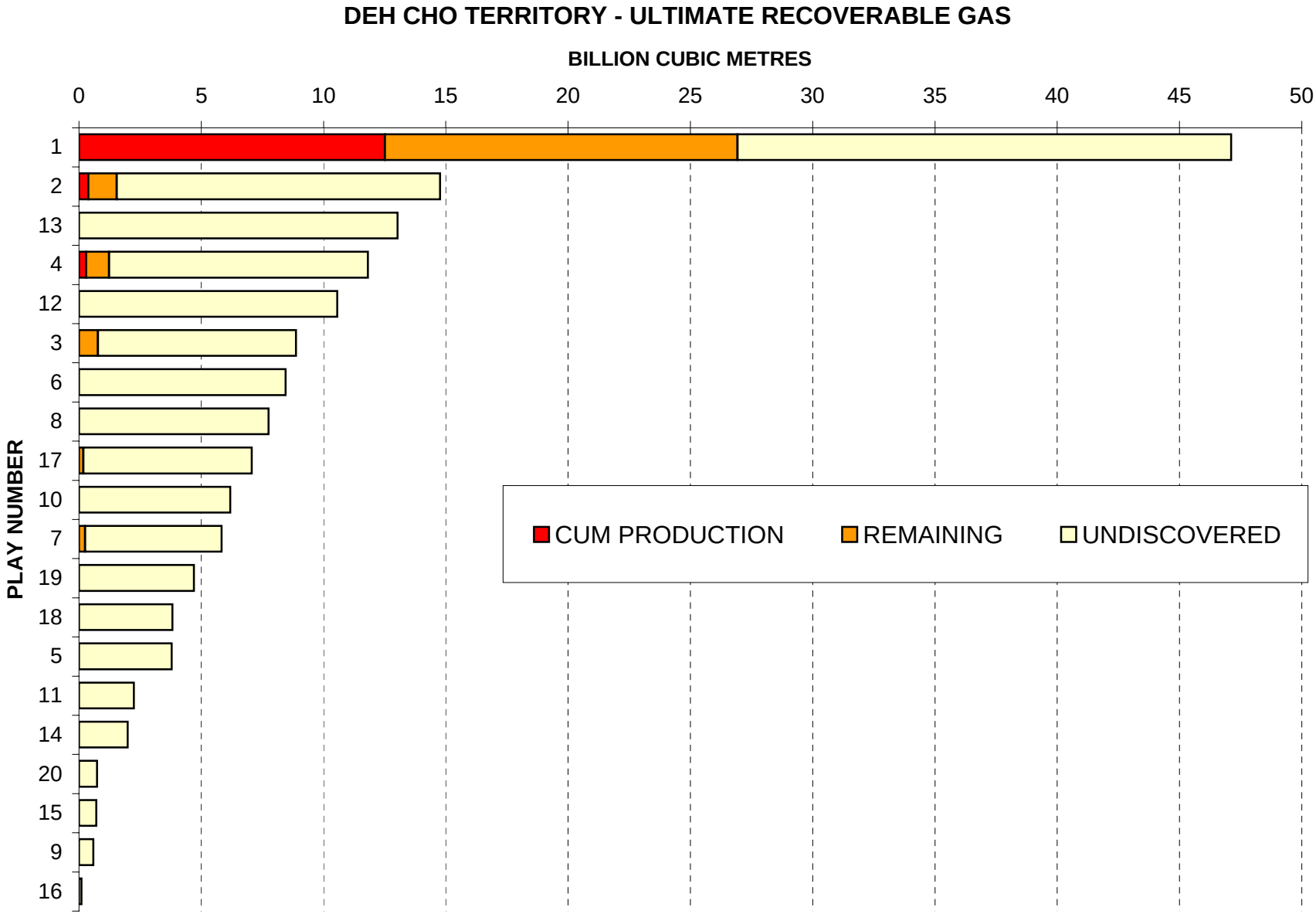


Figure 3. Ranking of Plays by Ultimate Recoverable Gas for the Deh Cho Territory

Oil Resources of the Deh Cho Territory

Initial discovered oil resources in the Deh Cho Territory, as of August 31, 2004 are, as follows:

	Thousand cubic metres
Initial discovered oil-in-place	795
Initial recoverable oil	198
Cumulative production, recoverable	62
Remaining recoverable oil resources	136

The undiscovered oil potential for the Deh Cho Territory is estimated to be 51.5 million cubic metres oil-in-place, and 8.6 million cubic metres of recoverable oil. The cumulative frequency distribution for undiscovered oil is shown in figure 5. There is an 80% probability the undiscovered recoverable oil is in the range of 5.4 to 12.4 million cubic metres, with a mean of 8.6 million cubic metres at a probability of 42.2%.

The ultimate oil resource for the Deh Cho Territory is estimated to be 8.8 million cubic metres. The distribution of the ultimate oil potential for the Deh Cho Territory is shown in figure 4. Less than one percent (62 thousand cubic metres) of the initial recoverable oil resource has been produced, with remaining resources accounting for 1.5% (136 thousand cubic metres) and 97.7% (8.6 million cubic metres) of recoverable oil still to be discovered. The remaining recoverable resource (remaining discovered plus undiscovered) is 8.7 million cubic metres.

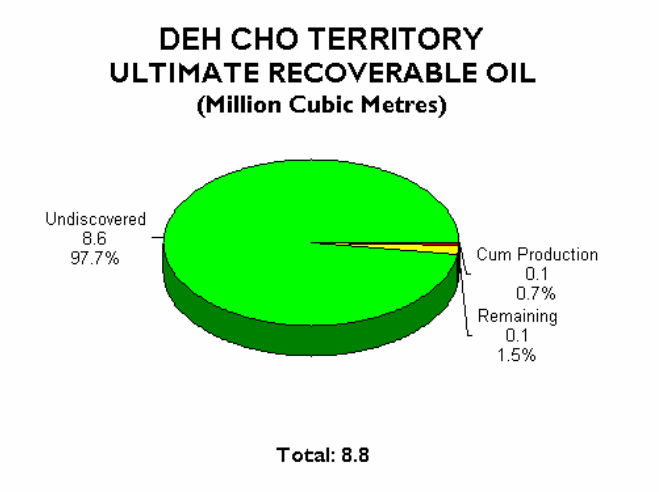
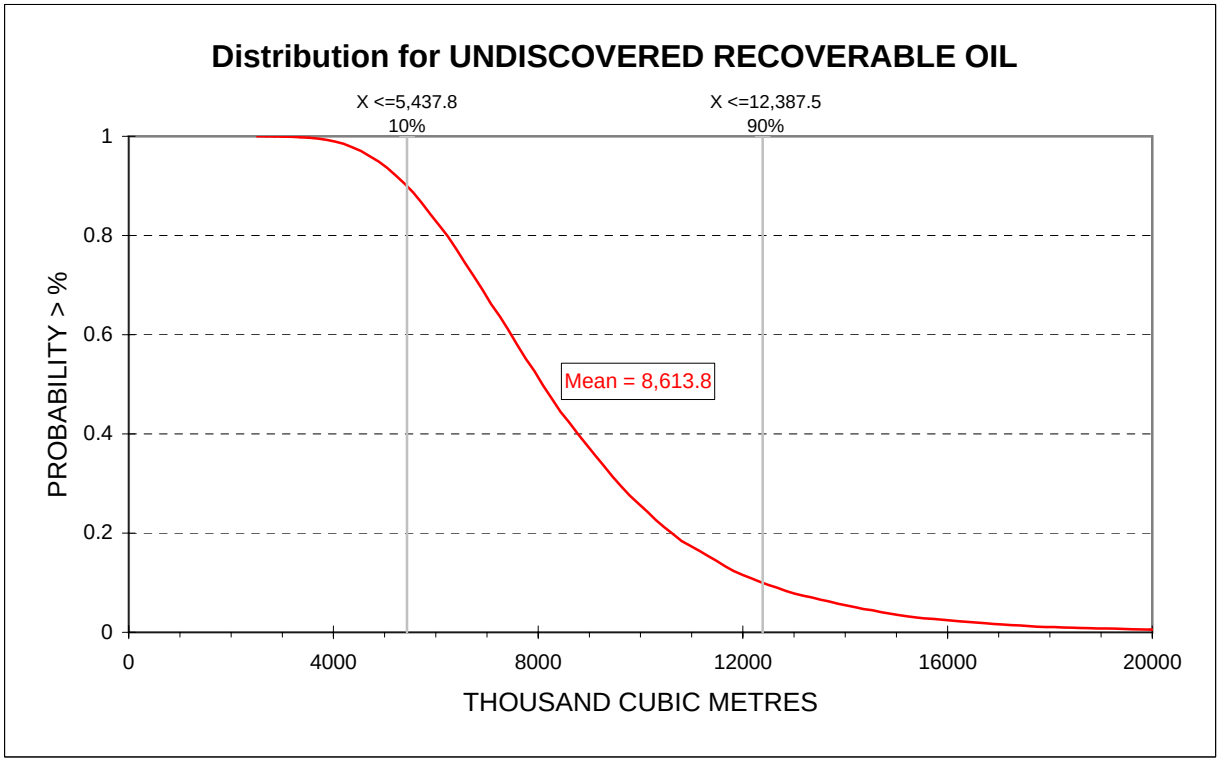


Figure 4 Deh Cho Territory Ultimate Recoverable Oil

The distribution of recoverable oil resources by million cubic metres per quarter grid for the Deh Cho Territory is shown in Excel map format in figures 12 to14. Discovered and undiscovered oil resources are expected to be located east of the Cordova embayment and generally close to the southern boundary of the Deh Cho Territory.

The ranking of the ultimate oil potential for the various plays is shown in figure 6. The number one ranked play for recoverable oil is the Slave Point back barrier (play 4), with 4.4 million cubic metres followed by play 15, the Upper Paleozoic subcrop, with 1.6 million cubic metres. These two plays represent 67.7% of the total estimated ultimate oil potential.

DEH CHO TERRITORY
TOTAL UNDISCOVERED OIL RESOURCE ALL PLAYS



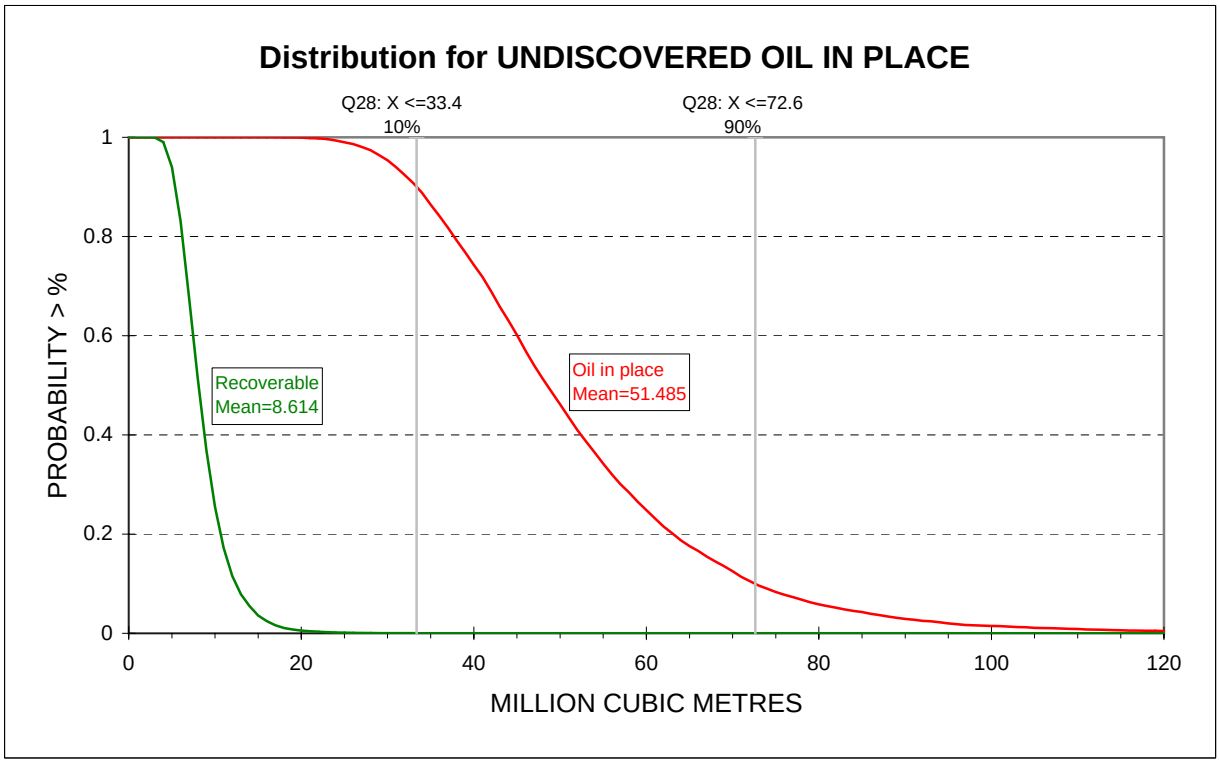


Figure 5. Cumulative Frequency Distribution for undiscovered Recoverable Oil

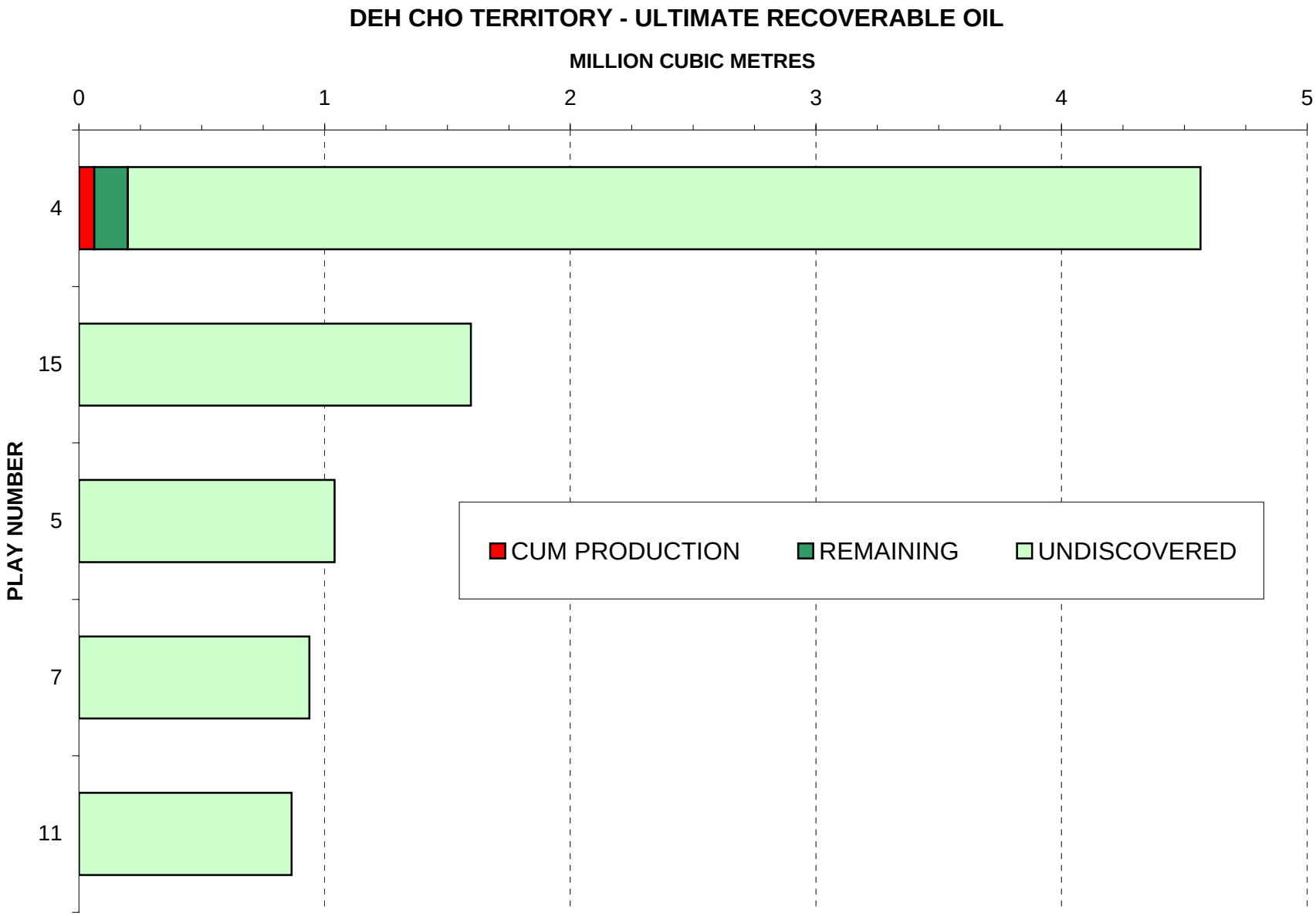


Figure 6. Ranking of Plays by Ultimate Recoverable Oil for the Deh Cho Territory

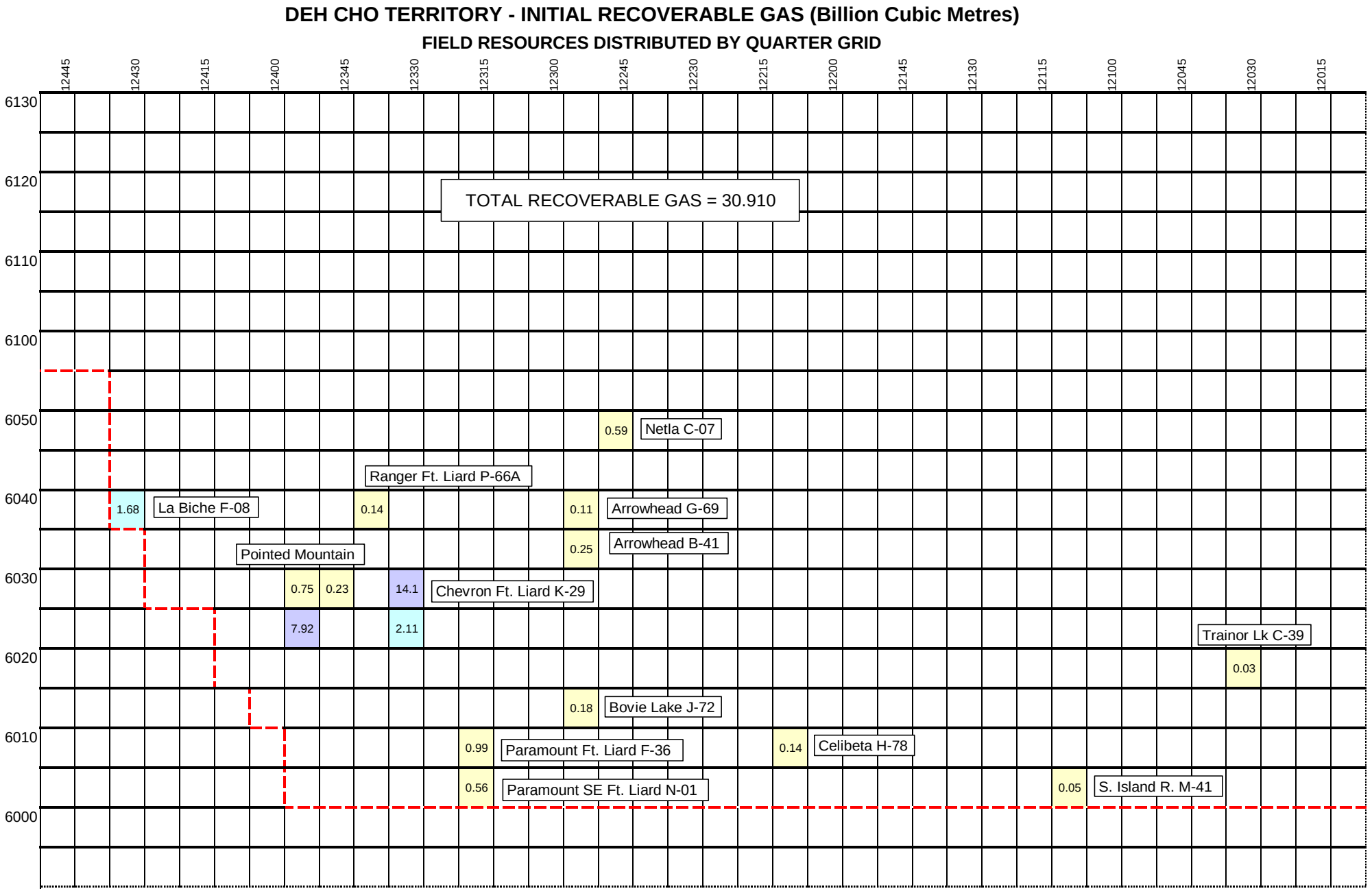


Figure 7. Map of Discovered Recoverable Gas Resources by Quarter Grid

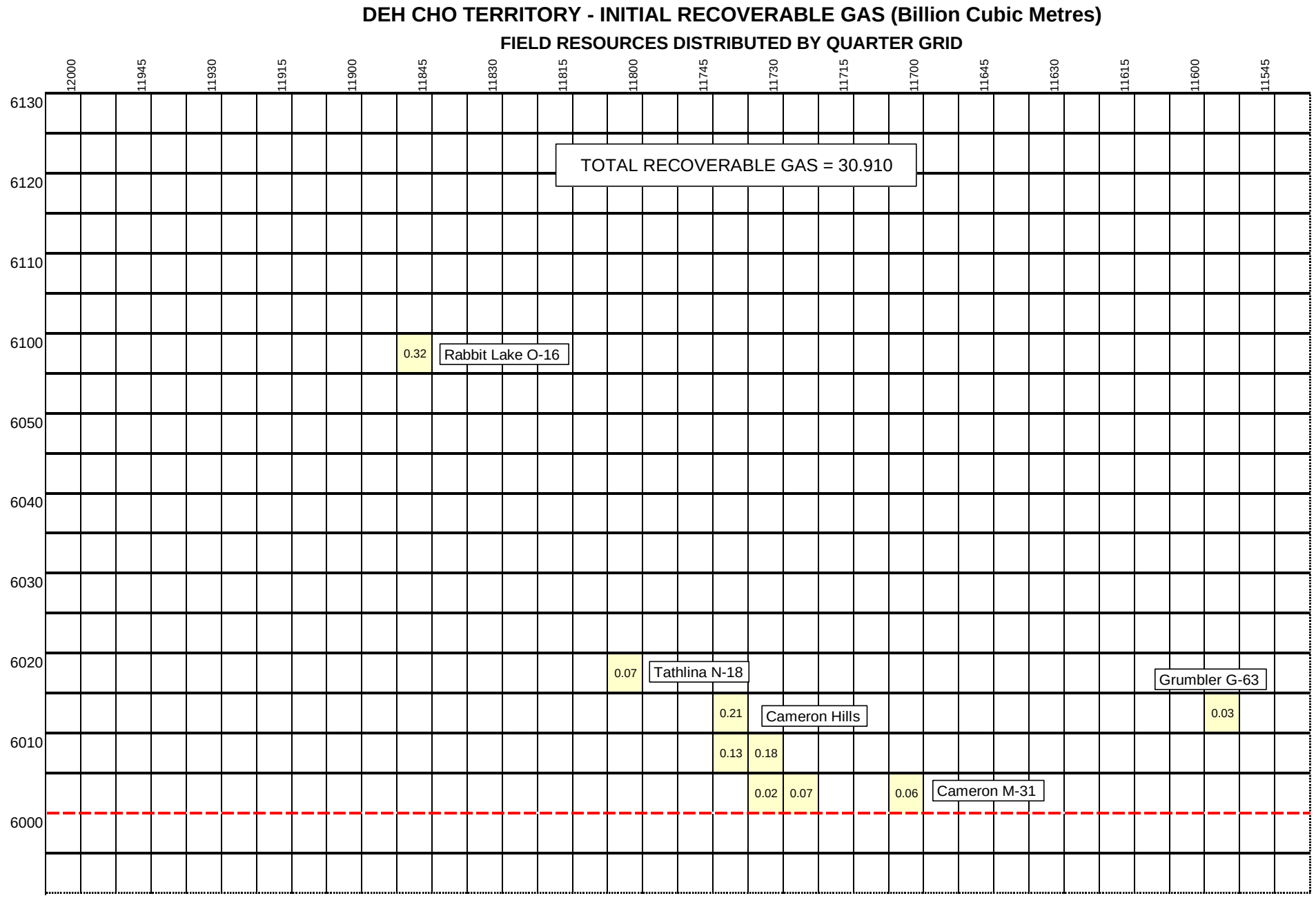


Figure 7. Map of Discovered Recoverable Gas Resources by Quarter Grid

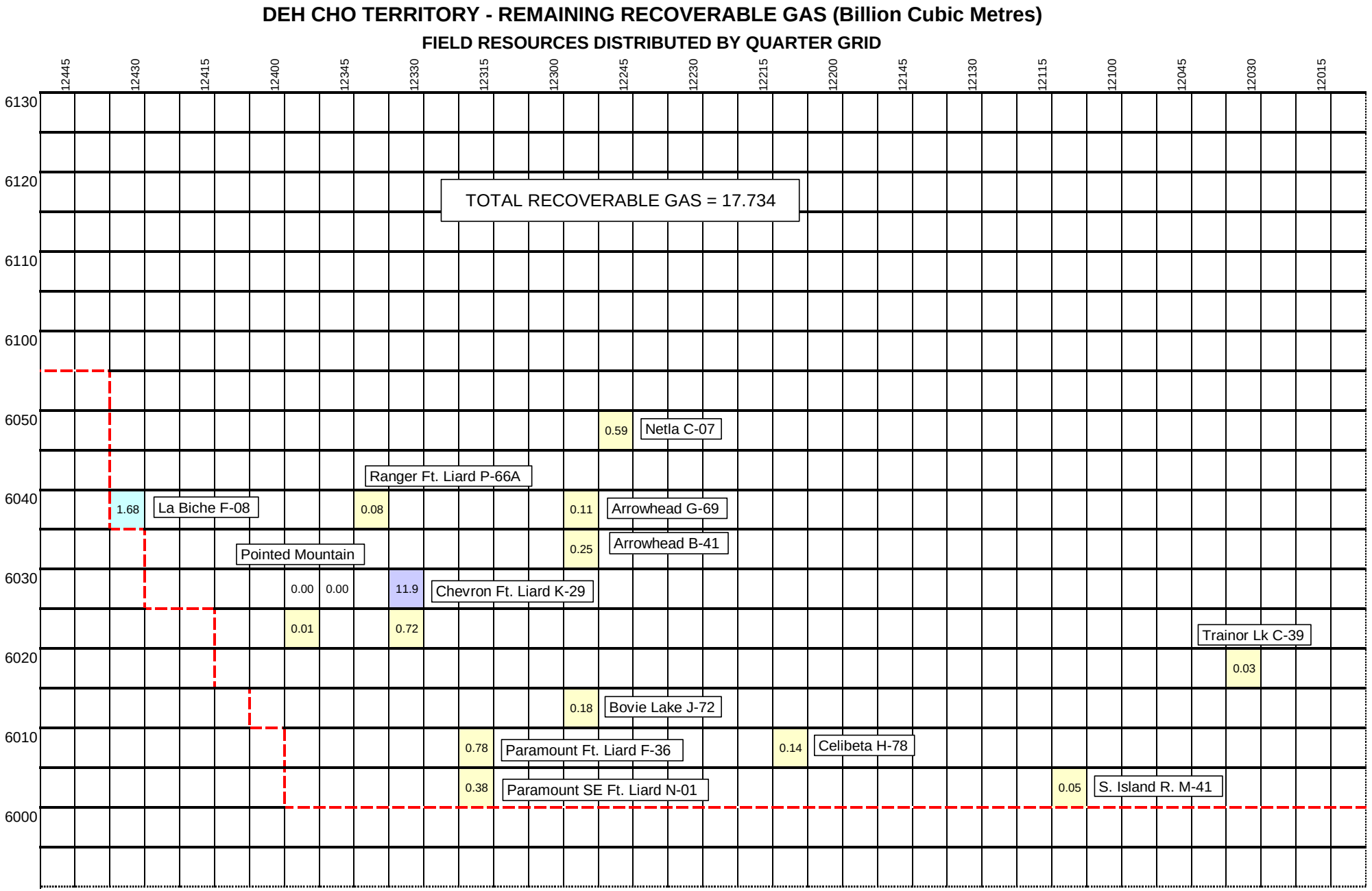


Figure 8. Map of Discovered Remaining Recoverable Gas by Quarter Grid

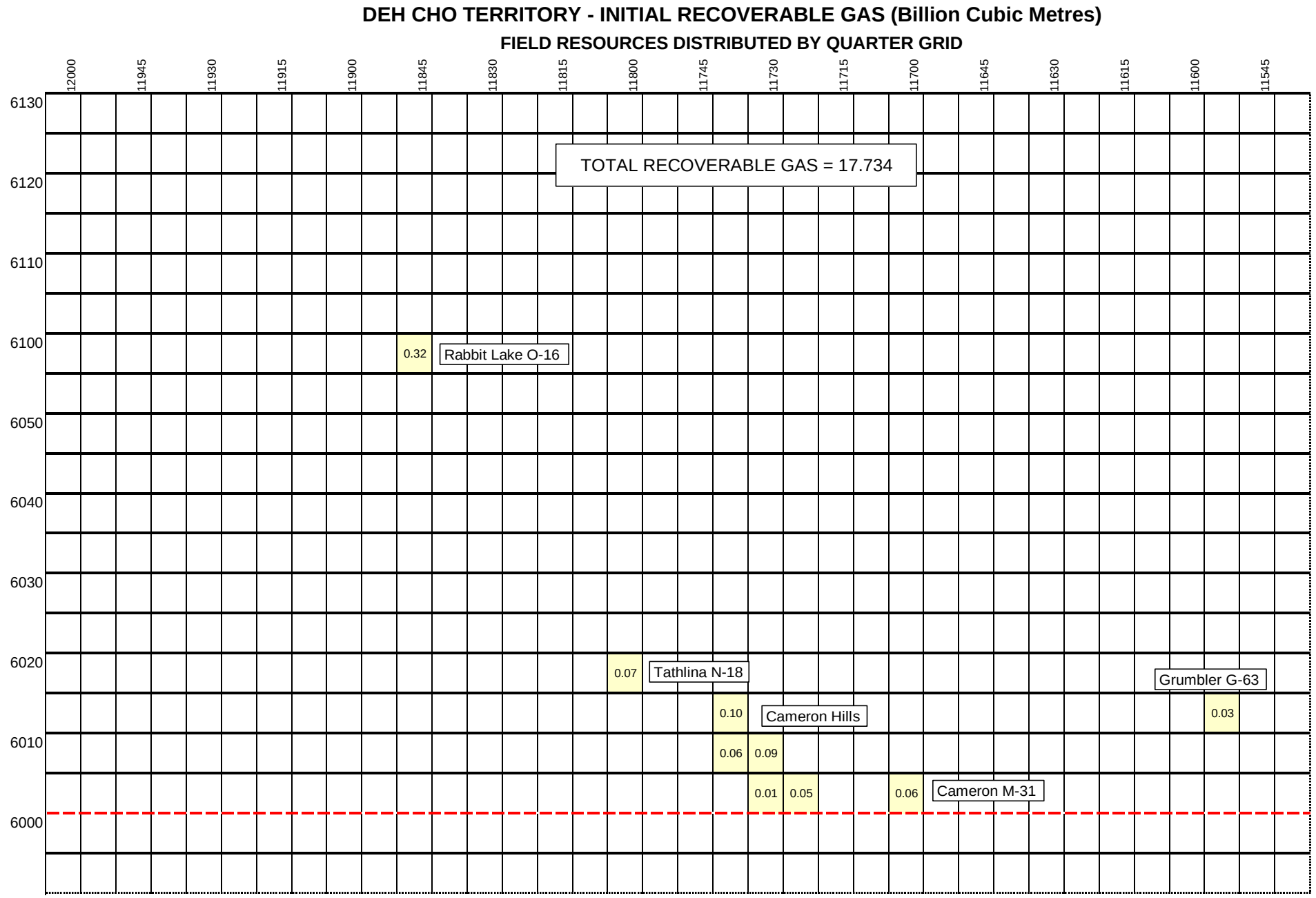


Figure 8. Map of Discovered Remaining Recoverable Gas by Quarter Grid

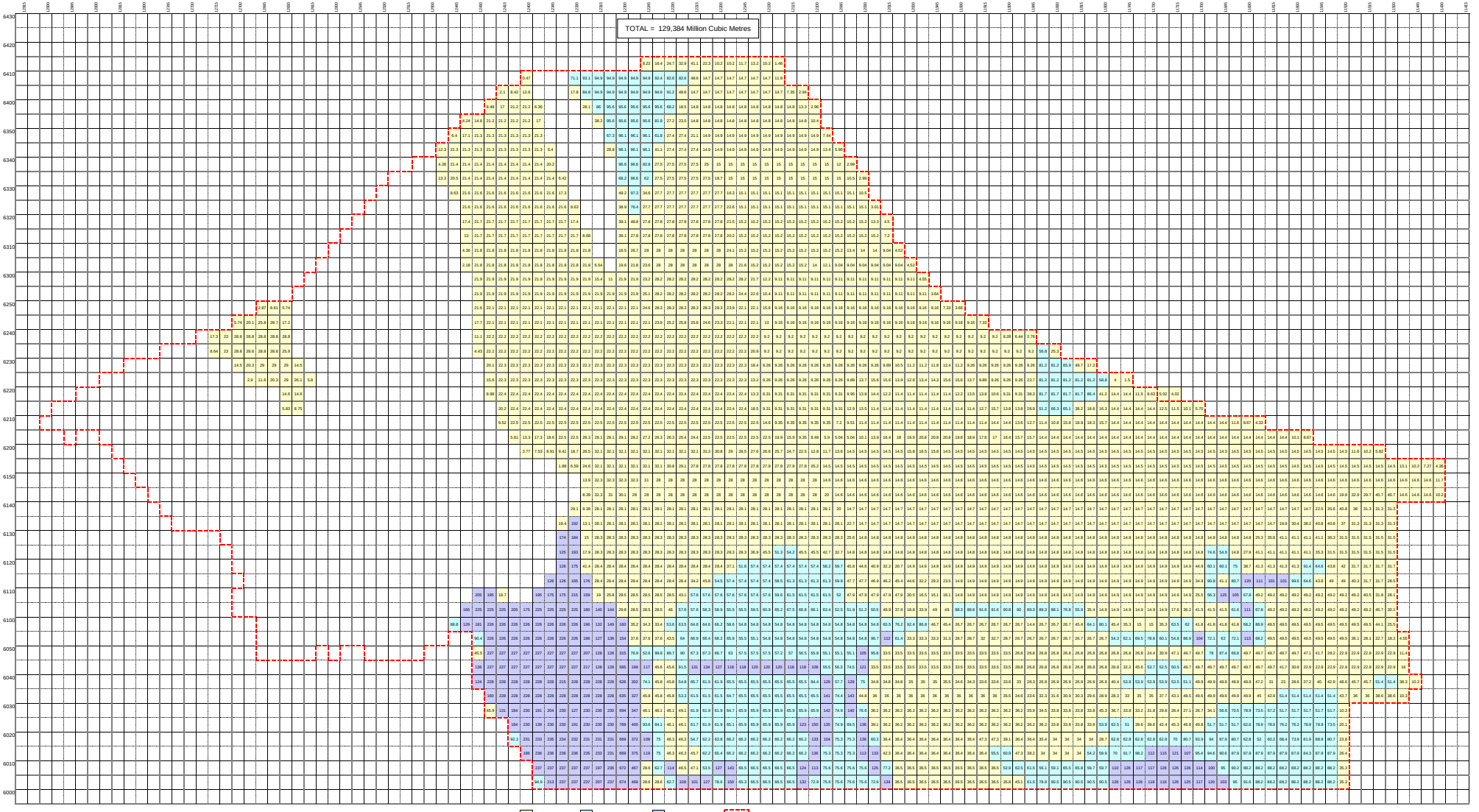


Figure 9. Map of UndiscoveredRecoverable Gas - All Plays by Quarter Grid

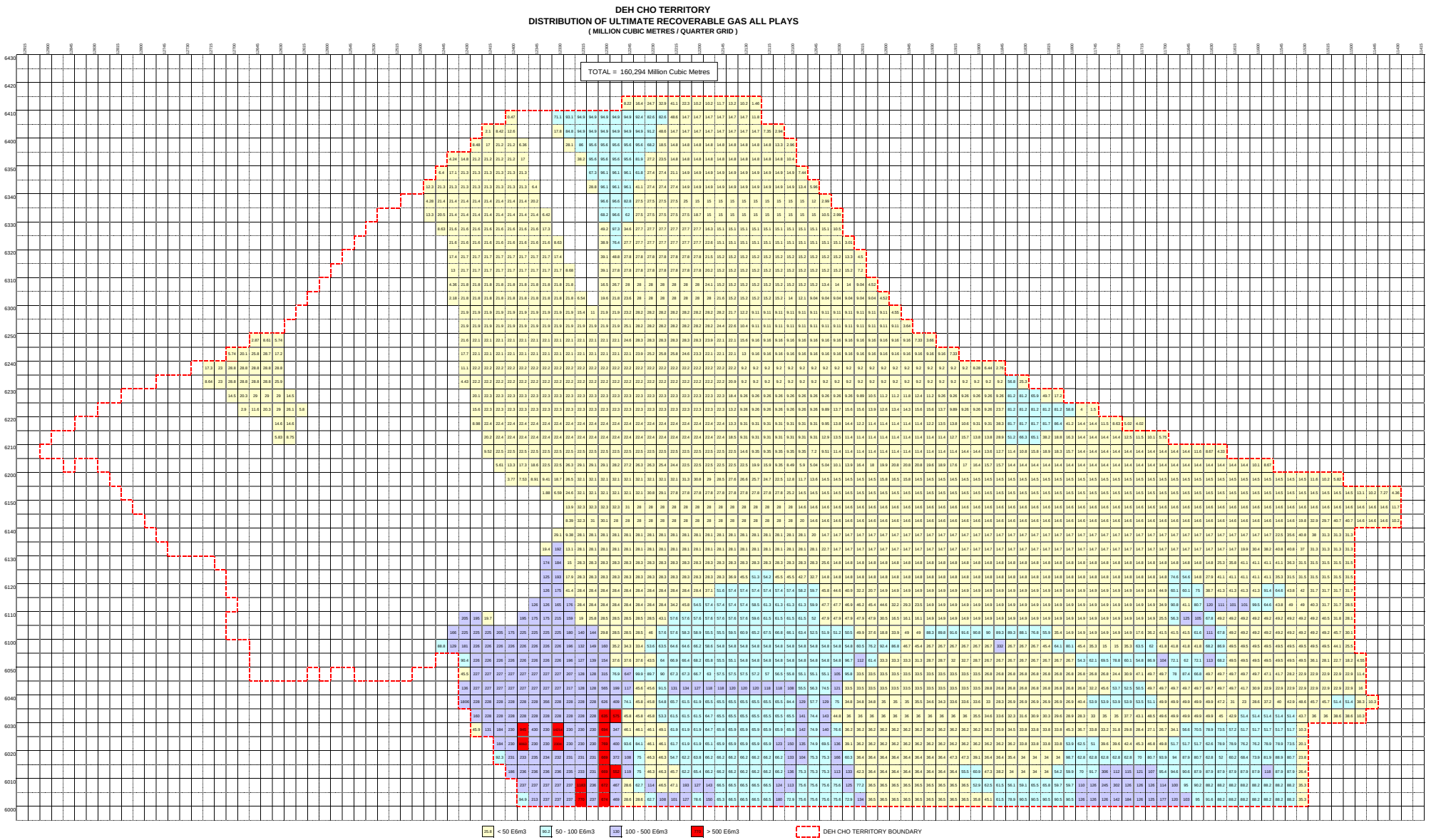


Figure 10. Map of Ultimate Recoverable Gas - All Plays by Quarter Grid

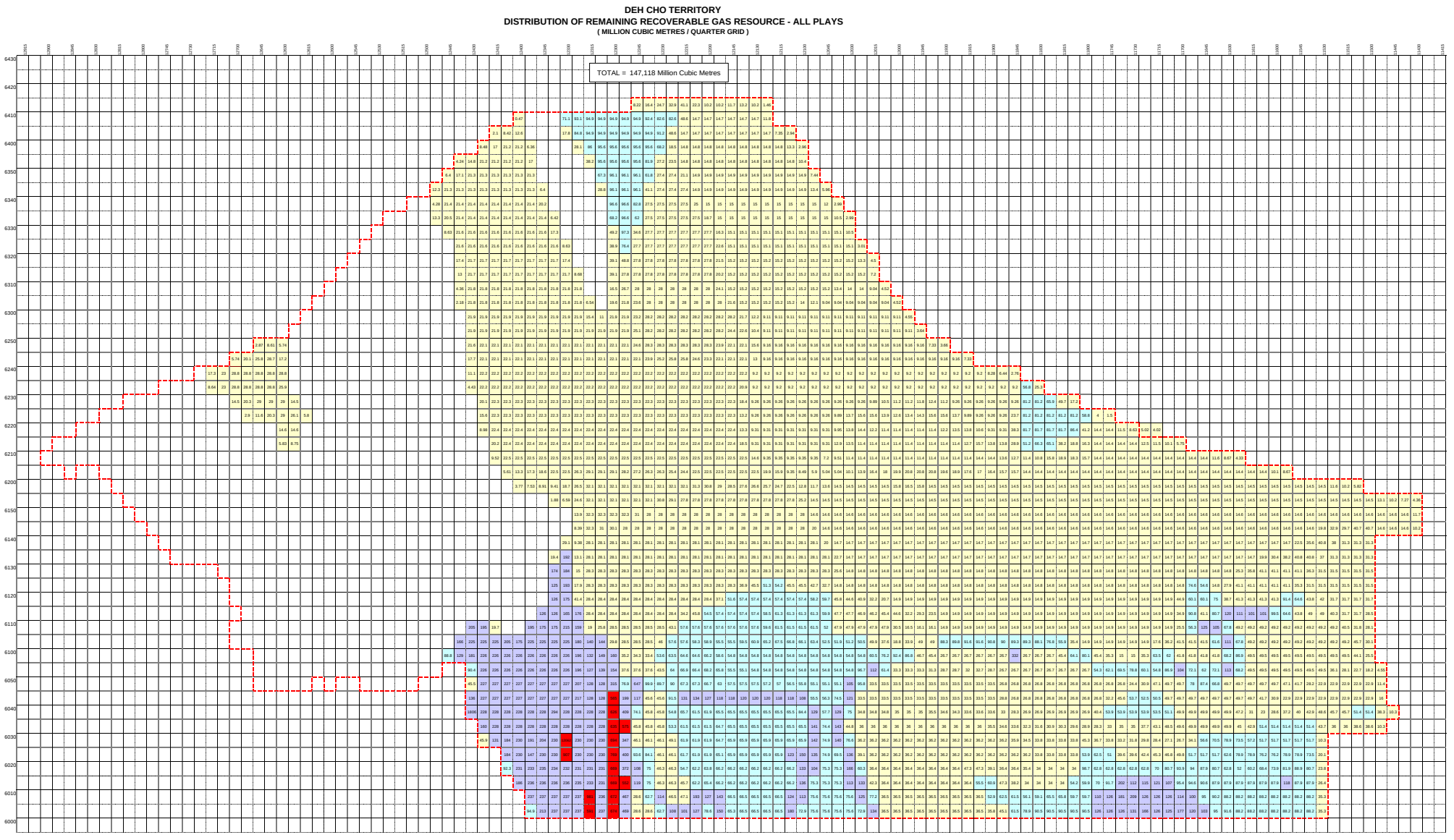


Figure 11. Map of Remaining Recoverable Gas Resource - All Plays by Quarter Grid

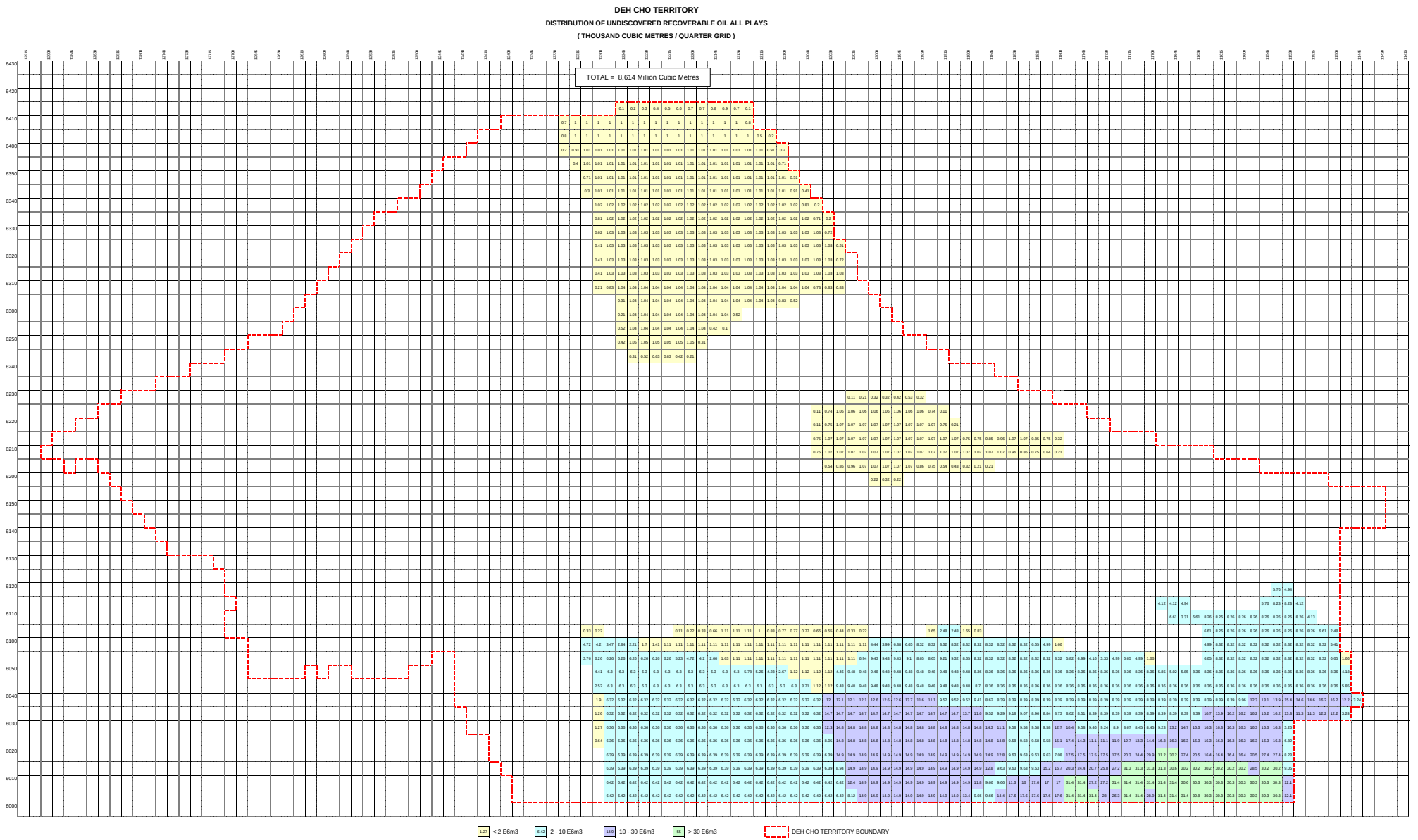


Figure 12. Map of Undiscovered Recoverable Oil - All Plays by Quarter Grid

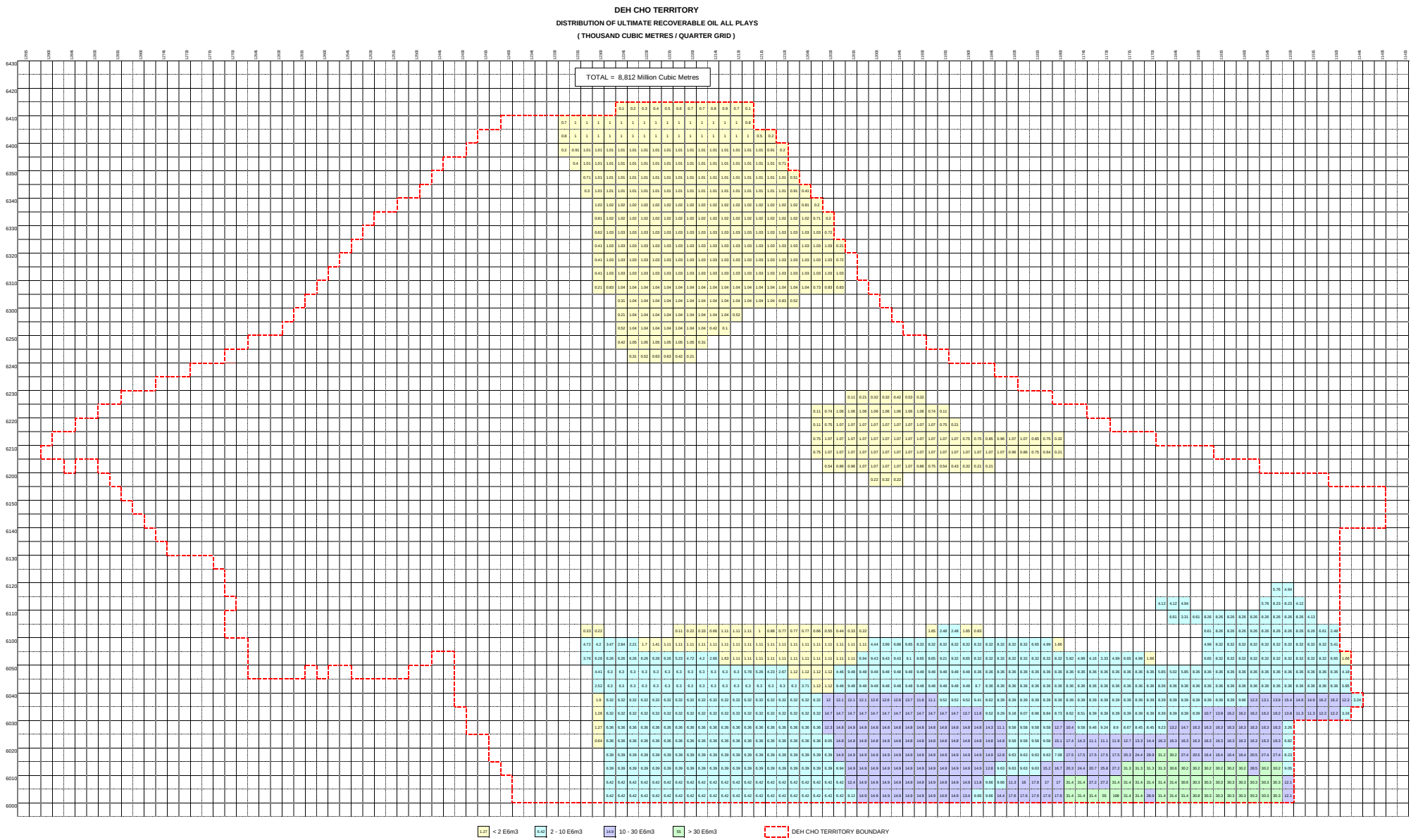


Figure 13. Map of Ultimate Recoverable Oil - All Plays by Quarter Grid

DEH CHO TERRITORY

DISTRIBUTION OF REMAINING RECOVERABLE OIL RESOURCE ALL PLAYS

(THOUSAND CUBIC METRES / QUARTER GRID)

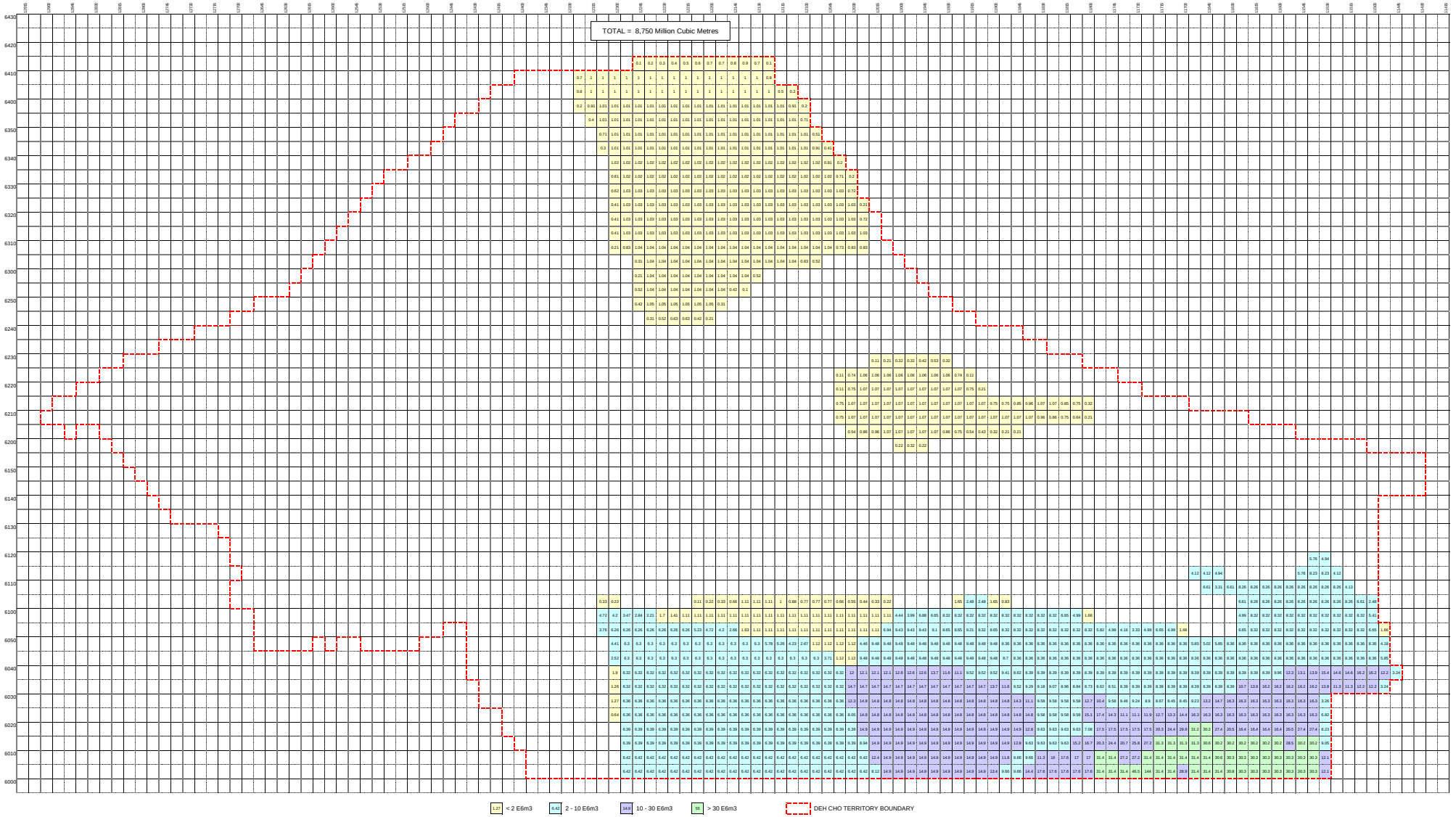


Figure 14 Map of Remaining Recoverable Oil Resource - All Plays by Quarter Grid

Field Size Distribution of Oil and Gas for the Deh Cho Territory

Gas Fields

The field size distribution analysis for gas shows the largest field, Chevron Ft. Liard K-29, has been discovered, with 16,200 million cubic metres of recoverable gas. There are 19 discovered fields with 30,910 million cubic metres of recoverable gas, for an average of 1,627 million cubic metres.

There are an estimated total of 1181 undiscovered fields, with 129,384 million cubic metres of recoverable gas. The average undiscovered field size is 110 million cubic metres. The largest undiscovered field size is estimated to be 6,000 million cubic metres. The field would be ranked number three in the overall distribution.

There is an estimated 145 undiscovered fields greater than 200 million cubic metres, with 76,175 million cubic metres of recoverable gas, and a total of 42 undiscovered fields greater than 500 million cubic metres, with 44,706 million cubic metres of recoverable gas.

The total ultimate number of fields is 1200 containing 160,294 million cubic metres of recoverable gas, for an average field size of 134 million cubic metres.

Oil Fields

In the analysis the only discovered oil field, Cameron Hills, with 198.6 thousand cubic metres of recoverable oil, is ranked number five.

There are an estimated total of 225 undiscovered fields, with 8,613.8 thousand cubic metres of recoverable oil. The average undiscovered field size is 38.3 thousand cubic metres. The largest undiscovered field, ranked number one, is estimated to be 320 thousand cubic metres.

There is an estimated 19 undiscovered fields greater than 100 thousand cubic metres, with 3,137 thousand cubic metres of recoverable oil, and a total of 4 undiscovered fields greater than 200 thousand cubic metres, with 1,066 thousand cubic metres of recoverable oil.

The total ultimate number of fields is 226 containing 8,812 thousand cubic metres of recoverable gas, for an average field size of 39.0 thousand cubic metres.

DEH CHO TERRITORY ALL PLAYS - ULTIMATE RECOVERABLE RAW GAS

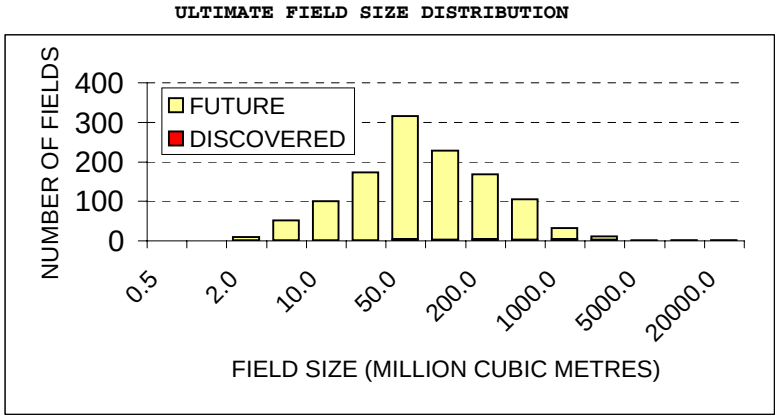
FIELD SIZE DISTRIBUTION

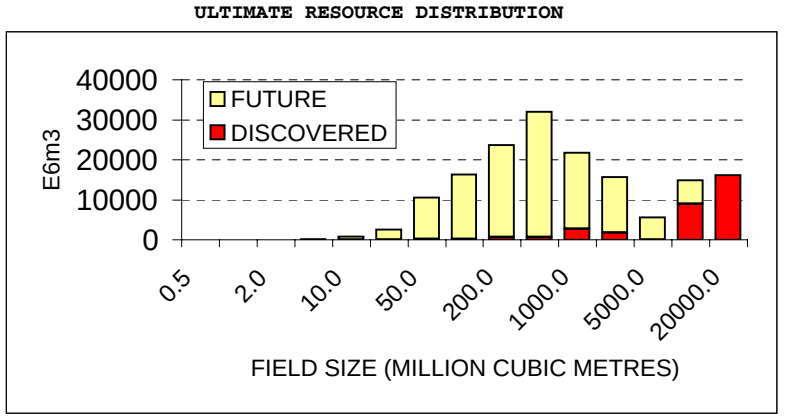
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	160294.4	30910.2	129384.2
NUMBER OF FIELDS	1200	19	1181
AVERAGE SIZE (E6m3)	133.6	1626.9	109.6
LARGEST FIELD (E6m3)	16200	16200	6000
SMALLEST FIELD (E6m3)	1.12	26.99	1.12

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	9	12.8	0	0.0	9	12.8
5	52	177.3	0	0.0	52	177.3
10	100	749.9	0	0.0	100	749.9
20	173	2579.0	0	0.0	173	2579.0
50	315	10485.8	4	141.9	311	10343.9
100	229	16326.9	2	130.0	227	16196.9
200	168	23714.8	4	565.5	164	23149.3
500	105	32034.9	2	566.0	103	31468.9
1000	32	21790.1	4	2721.6	28	19068.5
2000	12	15743.6	1	1682.2	11	14061.4
5000	2	5576.3	0	0.0	2	5576.3
10000	2	14903.0	1	8903.0	1	6000.0
20000	1	16200.0	1	16200.0	0	0.0

FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	536	309	145	42
POTENTIAL (E6m3)	115521	99324	76175	44706
PROBABILITY (%)	45.4%	26.2%	12.3%	3.6%
AVERAGE SIZE (E6m3)	215.5	321.4	525.3	1064.4

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	15	13	9	7
POTENTIAL (E6m3)	30768	30638	30073	29507
PROBABILITY (%)	78.9%	68.4%	47.4%	36.8%
AVERAGE SIZE (E6m3)	2051.2	2356.8	3341.4	4215.3





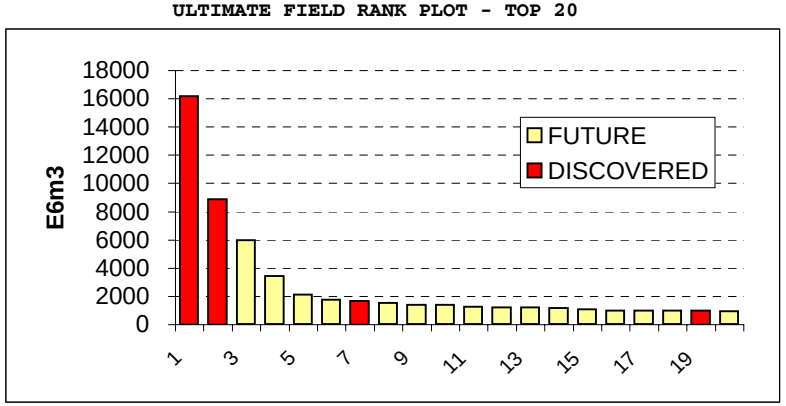


Figure 15. Field Size Distribution of Ultimate Recoverable Gas - All Plays

DEH CHO TERRITORY ALL PLAYS - ULTIMATE OIL POTENTIAL

FIELD SIZE DISTRIBUTION

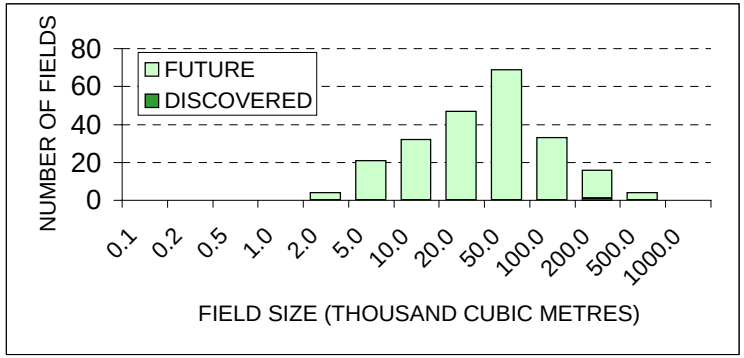
	ULTIMATE	DISCOVERED	FUTURE
OIL RESOURCES (E3m3)	8812.4	198.6	8613.8
NUMBER OF FIELDS	226	1	225
AVERAGE SIZE (E3m3)	39.0	198.6	38.3
LARGEST FIELD (E3m3)	320	199	320
SMALLEST FIELD (E3m3)	1.13	198.64	1.13

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	4	4.7	0	0.0	4	4.7
5	21	73.3	0	0.0	21	73.3
10	32	242.6	0	0.0	32	242.6
20	47	686.5	0	0.0	47	686.5
50	69	2196.3	0	0.0	69	2196.3
100	33	2273.3	0	0.0	33	2273.3
200	16	2270.1	1	198.6	15	2071.4
500	4	1065.7	0	0.0	4	1065.7
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

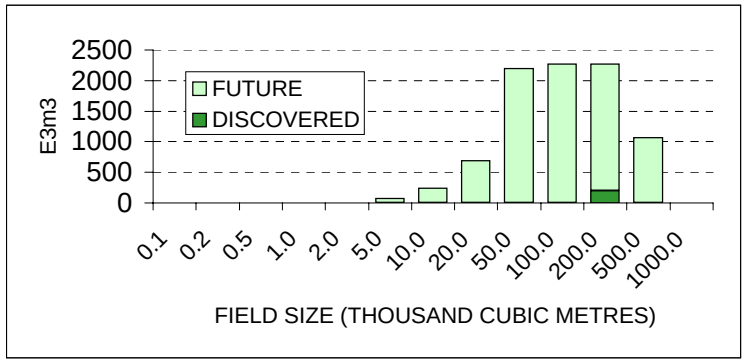
FUTURE FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	52	19	4	0
POTENTIAL (E3m3)	5410	3137	1066	0
PROBABILITY (%)	23.1%	8.4%	1.8%	0.0%
AVERAGE SIZE (E3m3)	104.0	165.1	266.4	#DIV/0!

DISCOVERED FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	1	1	0	0
POTENTIAL (E3m3)	199	199	0	0
PROBABILITY (%)	100.0%	100.0%	0.0%	0.0%
AVERAGE SIZE (E3m3)	198.6	198.6	#DIV/0!	#DIV/0!

ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

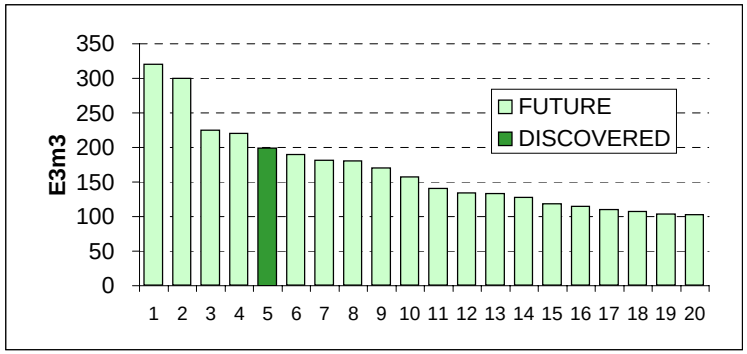


Figure 16. Field Size Distribution of Ultimate Recoverable Oil - All Plays

Conclusions

The ultimate oil and gas resource for the Deh Cho Territory has been assessed at 8.8 million cubic metres of recoverable oil and 160.3 billion cubic metres of recoverable gas.

The discovered recoverable oil resource is 0.2 million cubic metres, with an undiscovered potential of 8.6 million cubic metres. The undiscovered oil potential is expected to be in a total of 225 fields, with an average field size of 38.3 thousand cubic metres. The largest undiscovered field is estimated to have 320 thousand cubic metres of recoverable oil.

There is an estimated 19 undiscovered oil fields greater than 100 thousand cubic metres, with 3,137 thousand cubic metres of recoverable oil, and a total of 4 undiscovered fields greater than 200 thousand cubic metres, with 1,066 thousand cubic metres of recoverable oil.

The discovered recoverable gas resource is 30.9 billion cubic metres, with an undiscovered potential of 129.4 billion cubic metres. The undiscovered gas potential is expected to be in a total of 1,181 fields, with an average field size of 109.6 million cubic metres. The largest undiscovered field is estimated to have 6.0 billion cubic metres of recoverable gas.

There is an estimated 145 undiscovered gas fields greater than 200 million cubic metres, with 76,175 million cubic metres of recoverable gas, and a total of 42 undiscovered fields greater than 500 million cubic metres, with 44,706 million cubic metres of recoverable gas.

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List of Acronyms and Abbreviations

NT	Northwest Territories
NWT	Northwest Territories
NU	Nunavut
YU	Yukon
ST	Southern Territories
LP	Liard Plateau
AEUB	Alberta Energy Utilities Board
BC MEM	British Columbia Ministry of Energy and Mines
CERI	Canadian Energy Research Institute
CGPC	Canadian Gas Potential Committee
CSPG	Canadian Society of Petroleum Geologists
ERCB	Energy Resources Conservation Board (now AEUB)
GSC	Geological Survey of Canada
NEB	National Energy Board
NOGD	Northern Oil and Gas Directorate (Indian and Northern Affairs Canada)
CON	Conceptual (no oil or gas has been discovered)
Cum Prod.	Cumulative Production
Cum	Cumulative
Cum_RRG	Cumulative Raw Gas production
Cumoil	Cumulative Oil Production
Cumul	Cumulative
Disc_GIP	Discovered Gas in-place (reserves and/or resources)
Disc_IMG	Discovered Initial Marketable Gas (reserves and/or resources)
Disc_OIP	Discovered Oil in-place (reserves and/or resources)
Disc_RecO	Discovered Recoverable Oil (reserves and/or resources)
Disc_RRG	Discovered Recoverable Raw Gas (reserves and/or resources)
E3m3	Thousand Cubic Metres
E6m3	Million Cubic Metres
E9m3	Billion Cubic Metres
EST	Established (Established play – oil and/or gas has been discovered)
Frac	Fraction
GIP	Gas in-place
IMG	Initial Marketable Gas (Sales Gas)
OOIP	Original Oil in-place
Rec_Oil	Recoverable Oil
Recov	Recoverable
Rem_RRG	Remaining Raw Gas(reserves and/or resources)
Remoil	Remaining Oil (reserves and/or resources)
RRG	Recoverable Raw Gas
Terr	Territory
TOT	Total
Ult	Ultimate (Reserves and/or resources)

Ult_GIP	Ultimate Gas in-place (reserves and/or resources)
Ult_IMG	Ultimate Initial Marketable Gas (reserves and/or resources)
Ult_OIP	Ultimate Oil in-place (reserves and/or resources)
Ult_RecO	Ultimate Recoverable Oil (reserves and/or resources)
Ult_RRG	Ultimate Recoverable Raw Gas (reserves and/or resources)
Und_GIP	Undiscovered Gas in-place (resources)
Und_IMG	Undiscovered Initial Marketable Gas (reserves and/or resources)
Und_OIP	Undiscovered Oil in-place (resources)
Und_RecO	Undiscovered Recoverable Oil (resources)
Und_RRG	Undiscovered Recoverable Raw Gas (resources)
Undisc	Undiscovered (oil and/or gas resources)

RESOURCE ESTIMATION USING @RISK WITH EXCEL

Undiscovered resource estimation is done using the Palisade Corporation @Risk add-in for Excel. The probabilistic methodology used has been adapted from Roadifer, 1979. The methodology requires a set of input variables, which are sampled using a random sampling method such as Monte Carlo. The Monte Carlo simulation uses a range of input parameters to give a distribution of results. A probabilistic estimate of resources can be achieved by multiplying computer-generated numbers for volume, yield and risk (probability of success). The variable input parameters for the undiscovered resource methodology is summarized as follows:

Hydrocarbon Volume	Untested Play Area
	Fraction of Untested Play Area in Trap
	Areal Fill of Traps
	Average Net Pay
Yield	Porosity
	Hydrocarbon Saturation
	Recovery Factor
Risk	Probability of Hydrocarbons

Hydrocarbon Volume x Yield x Risk = Undiscovered Resource

@RISK

The @RISK program is an add-in, which adds simulation analysis capabilities to the Excel spreadsheet. It allows the user to define uncertain cell values as probability distribution functions in Excel. There are numerous distribution functions available, including triangular, lognormal, beta, cumulative, etc. The functions are entered for all the variables, as net pay, porosity, area, recovery factor, etc, used in the oil or gas equation. The equations for oil and gas, multiplying all the various variables, are entered into cells, which are designated as the output for @RISK. The program will then execute a Monte Carlo, or Latin Hypercube simulation a specified number of iterations, i.e. 5,000, and generate a cumulative frequency distribution, to give a range of probabilities for resource estimates. The program utilizes the graphics capabilities of Excel to generate graphical output for the results.

Probability Distribution Functions

Any number of distribution functions can be used for the various variables used in the template. The author prefers the triangular distribution as it is the easiest to understand. The triangular distribution requires estimates of, minimum, maximum, and most likely, for each of the parameters.

Reference

Roadifer, R. E., 1979, A probability approach to estimate volumes of undiscovered oil and gas, *in* M. Grenon, ed., Proceedings of the first IIASA conference on Energy Resources, Laxenburg, Austria: Oxford, Pergamon Press, p. 268-278.

FIELD/POOL SIZE DISTRIBUTION PROGRAM

A computer program in Excel, has been developed that uses the extrapolation of the log-normal straight line to predict the number and size of postulated future discoveries, using the undiscovered potential as a separate population. This is incorporated with the discovered fields/pools to give an ultimate field size distribution.

The program input is:

- List of discovered Field or Pool sizes
- Undiscovered resource estimate
- Estimated largest field/pool size expected in the future
- Estimated smallest field/pool expected in the future

The largest field is the most important input parameter. Guidelines for selecting the largest field size include:

- Basins with discovered fields or pools
  - What is the rank of the largest discovered field/pool (1^{st}, 2^{nd}, 3^{rd}, etc)
- Basins with no discoveries
  - Use basin analogs
  - Size of defined prospects
  - The percentage of the estimated ultimate resource in the largest field.

The field size distribution model is based on the unique characteristics of a log normal distribution. It relies on the calculation of the mean and standard deviation for a given population. Only two points are required to define a log normal distribution, and the mean can be calculated given two cumulative probability points, i.e. 2% and 98%. In the model these are considered mid-point cumulative percentages. The mid-point % is calculated for a field rank from a number of pools by the formula (2i-1)/2N, where i is the field rank number and N the total number of fields.

The mean of a log normal distribution is the Exponent of (alpha + 0.5*$beta^2$), where alpha is the mean of a log normal distribution and beta is the standard deviation of a log normal distribution. Alpha is the log of the median. Beta can be calculated from any two points. Beta = [Ln(largest)-Ln(smallest)]/2Z, where Z is the number of standard deviations between the two points.

The field size distribution program has essentially three parts.

1) Calculate mean and number of fields to fit a log normal distribution
2) Assign values to the undiscovered fields
3) Merge discovered and undiscovered fields into one ultimate distribution

Step 1 – Calculate the mean and number of pools given the largest and smallest field sizes and an estimated undiscovered volume of oil. When these three values are entered, new values for the mean and number of fields, to fit a log normal distribution are calculated. These are calculated by a circular calculation set up in the worksheet, as shown in table 1.

A key component of the program is the use of the Lookup function, to lookup values in a cumulative probability table of 'Z' values. Values of 'Z', the number of standard deviations, are derived from looking up the cumulative percentage of fields in the table, and conversely the cumulative percentage is also derived by looking up the 'Z' value.

The mid-point cum % is calculated from the number of fields. The ‘Z’ values are obtained by looking up the cum% values in the cumulative probability table. Alpha and beta are calculated from the largest and smallest field sizes and the ‘Z’ value. The circular calculation will repeat for a number of iterations until the numbers converge on a set of numbers that satisfy a log normal distribution. The maximum number of iterations is set to 100 with a maximum change of .001, and calculation is automatic.

Step 2 – The second part of the program is to assign values to the individual undiscovered fields. The mid-pt percentages (100 * [2i-1]/2N) are calculated for each field rank and ‘Z’ values determined for each rank. The log of the field size is calculated by the formula – beta * ‘Z’ +alpha. The exponent of this is the size of the undiscovered field. All undiscovered fields are calculated in this manner.

The sum of the calculated field size distribution in general does not always give the same total potential as input. In order to make these agree the difference is prorated among all the fields after the largest field is set to agree with the input. Or alternatively, the smallest field/pool size can be adjusted to get an exact number of undiscovered fields/pools.

Step 3 – The final step is to merge the discovered and undiscovered fields into one ultimate field size distribution, done in the Results worksheet. The match of discovered and undiscovered is examined and if necessary adjustments made to the largest or smallest field size, and the program is re-run, to improve the fit to a log normal distribution.

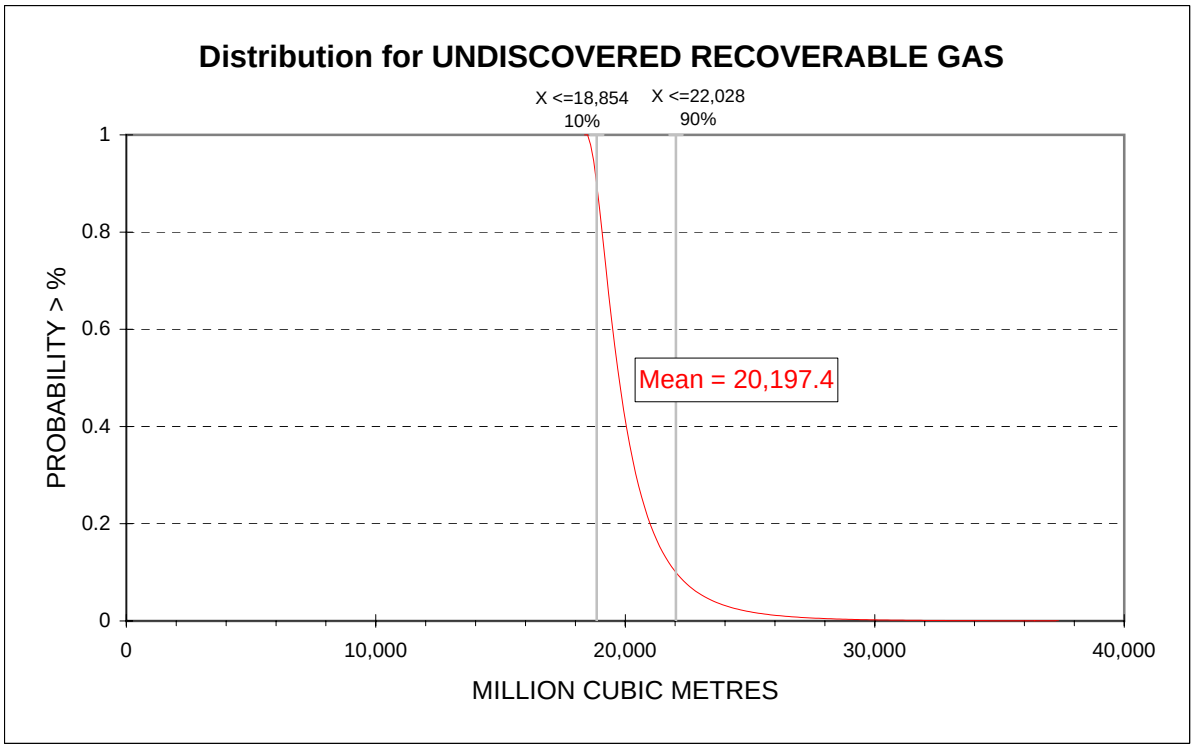
PLAY SUMMARIES

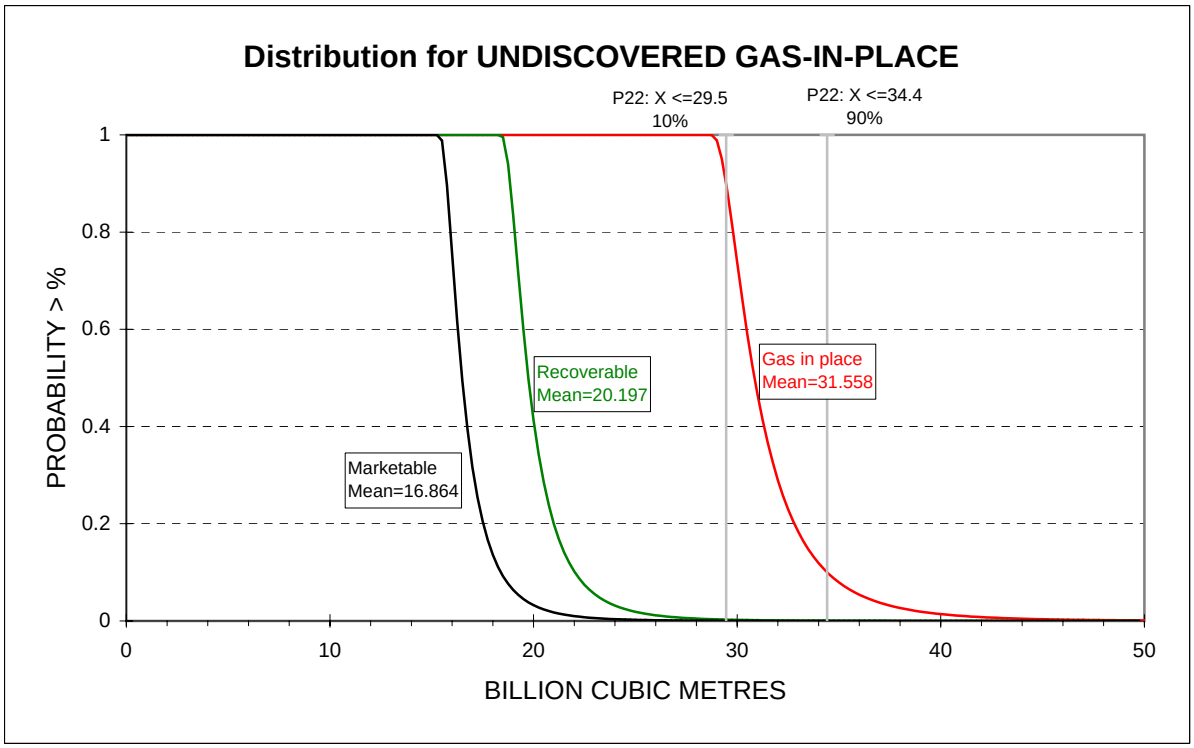
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	1
Play Name	Laramide/Manetoe
References	Laramide Structures (NEB); Liard Fold Belt LFP1 (CGPC)
Reservoir Unit	Manetoe facies of lower Paleozoic carbonates (Arnica, Headless, Nahanni, Landry fms)
Distribution	Western boundary is carbonate bank to shale basin transition; northern boundary is outcrop belt of Manetoe facies; eastern boundary is limit of Laramide deformation
Source/Seal	Muskwa, Horn River (and equivalents) fms/Muskwa, Horn River (and equivalents) fms
Trap Style	Structural-Laramide antiforms cross-cut by faults; fracturing associated with the axial traces of antiforms increases porosity and permeability; stratigraphic/diagenetic-Manetoe facies dolomitization
Gas/Oil	gas (sour)
Exploration Risks	Dolomitization; formation damage by mud invasion while drilling (due to fracturing)
Mapped Area	1.021 Miilion Ha (2.522 Million Acres)
Deh Cho significant fields/wells	Pointed Mountain, Liard K-29, Liard P-66A and La Biche F-08
Discovered Resources	4 Gas Fields - 26,926 million cubic metres (955.7Bcf) recoverable gas.
Undiscovered Recoverable Gas	20,197 Million cubic metres (716.88 Bcf)
Undiscovered Marketable Gas	16,865 Million cubic metres (598.59 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	35 Fields, Largest 6,000 million cubic feet (213.0 Bcf)
Undiscovered Oil Fields	Gas play only

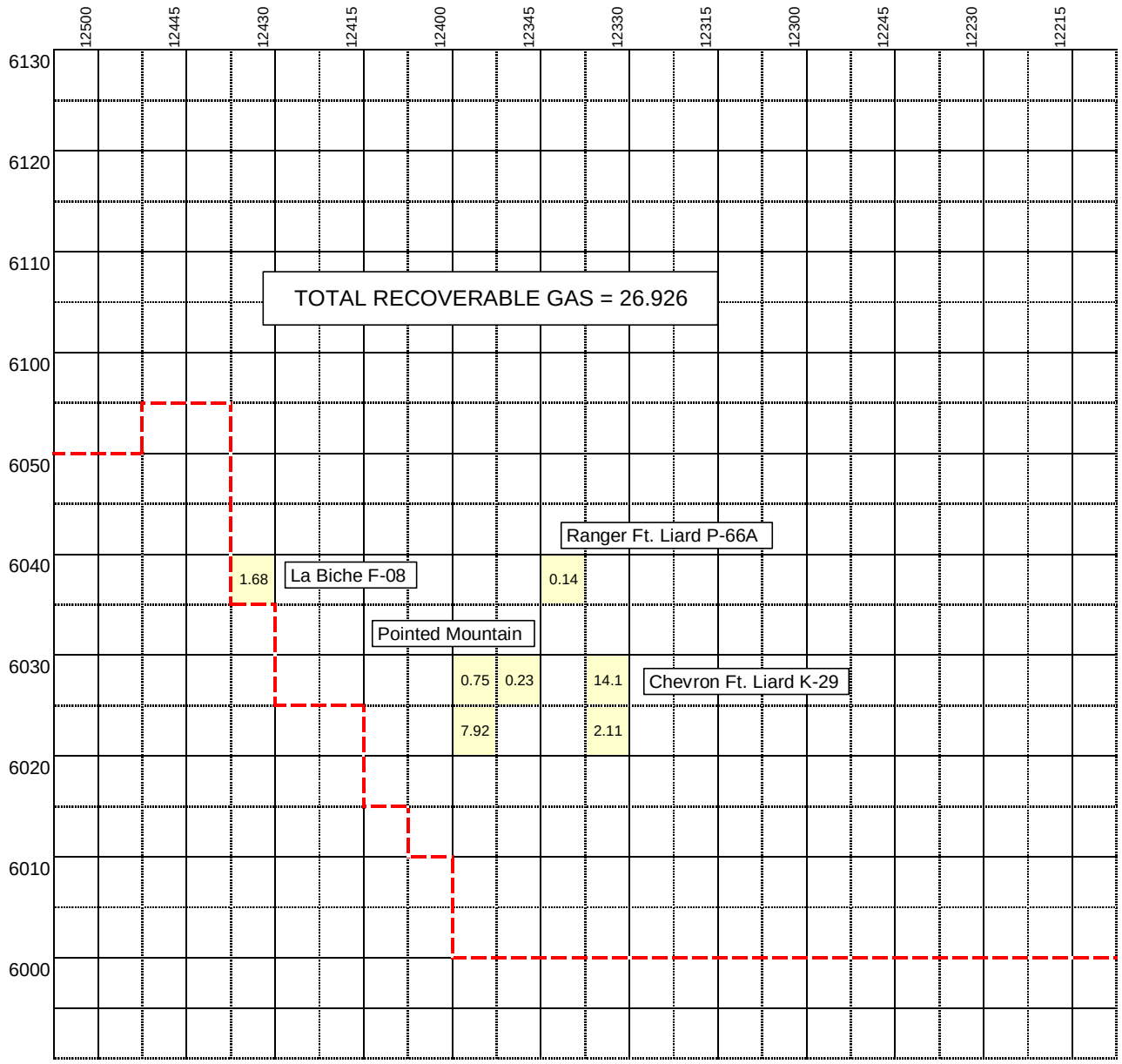
DEH CHO TERRITORY
LARAMIDE / MANETOE (PLAY 1)
(ADAPTED FROM NEB, 1996)





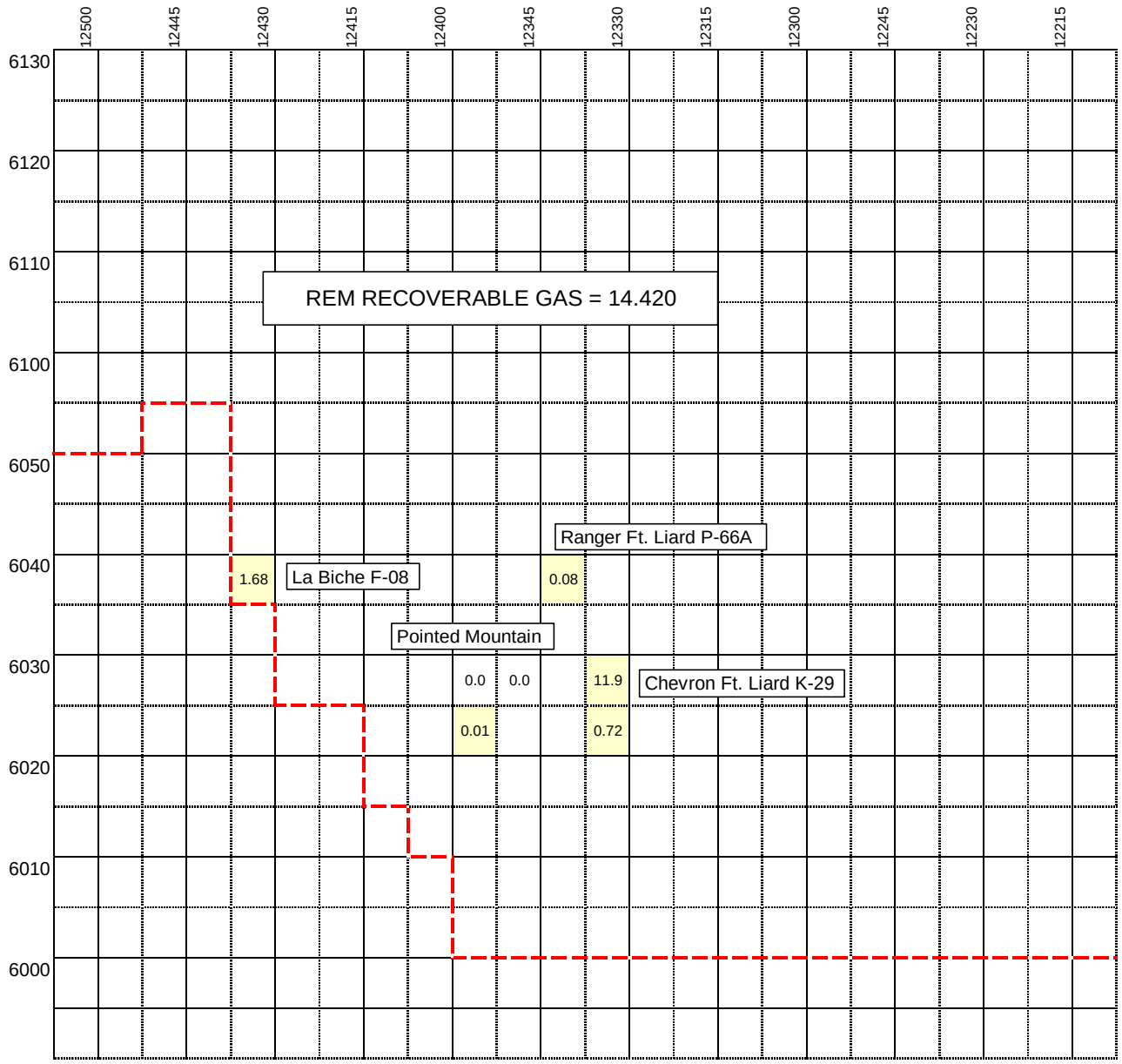
DEH CHO TERRITORY - PLAY 1 LARAMIDE MANETOE

INITIAL RECOVERABLE GAS (Billion Cubic Metres)



DEH CHO TERRITORY - PLAY 1 LARAMIDE MANETOE

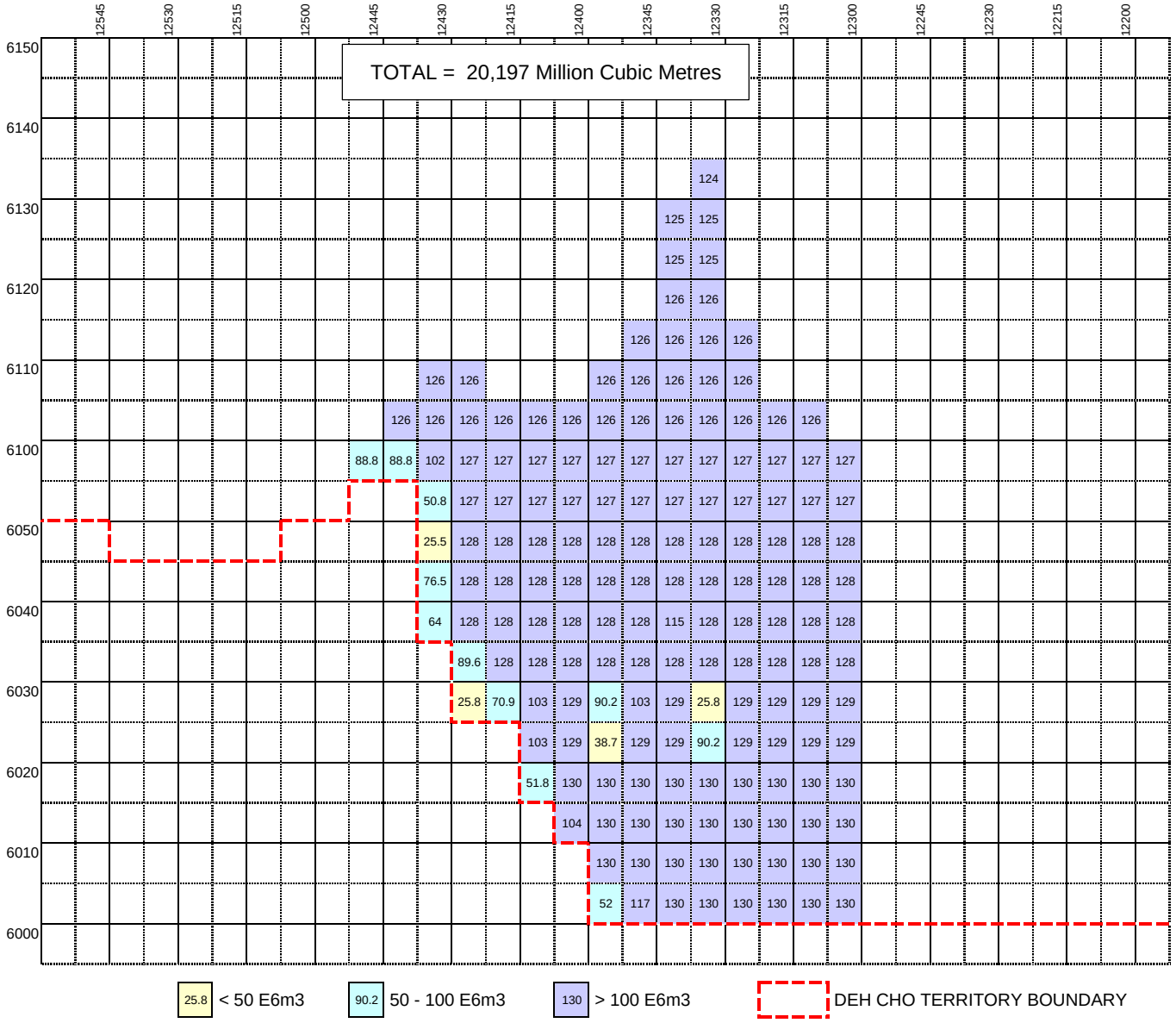
REMAINING RECOVERABLE GAS (Billion Cubic Metres)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 1 - LARAMIDE/MANETOE

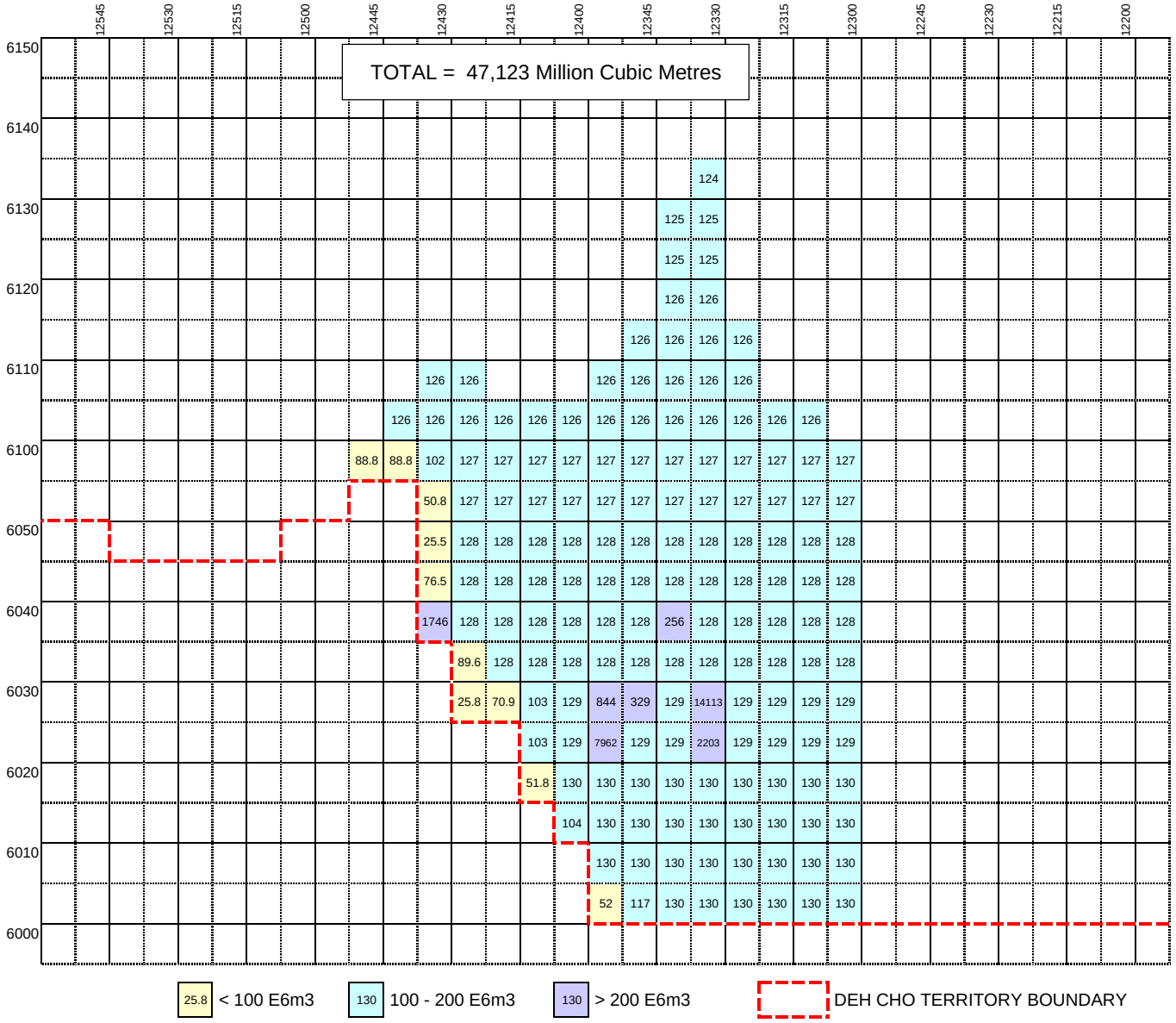
(Million cubic metres / quarter grid unit)



DEH CHO TERRITORY

DISTRIBUTION OF ULTIMATE RECOVERABLE GAS PLAY 1 - LARAMIDE/MANETOE

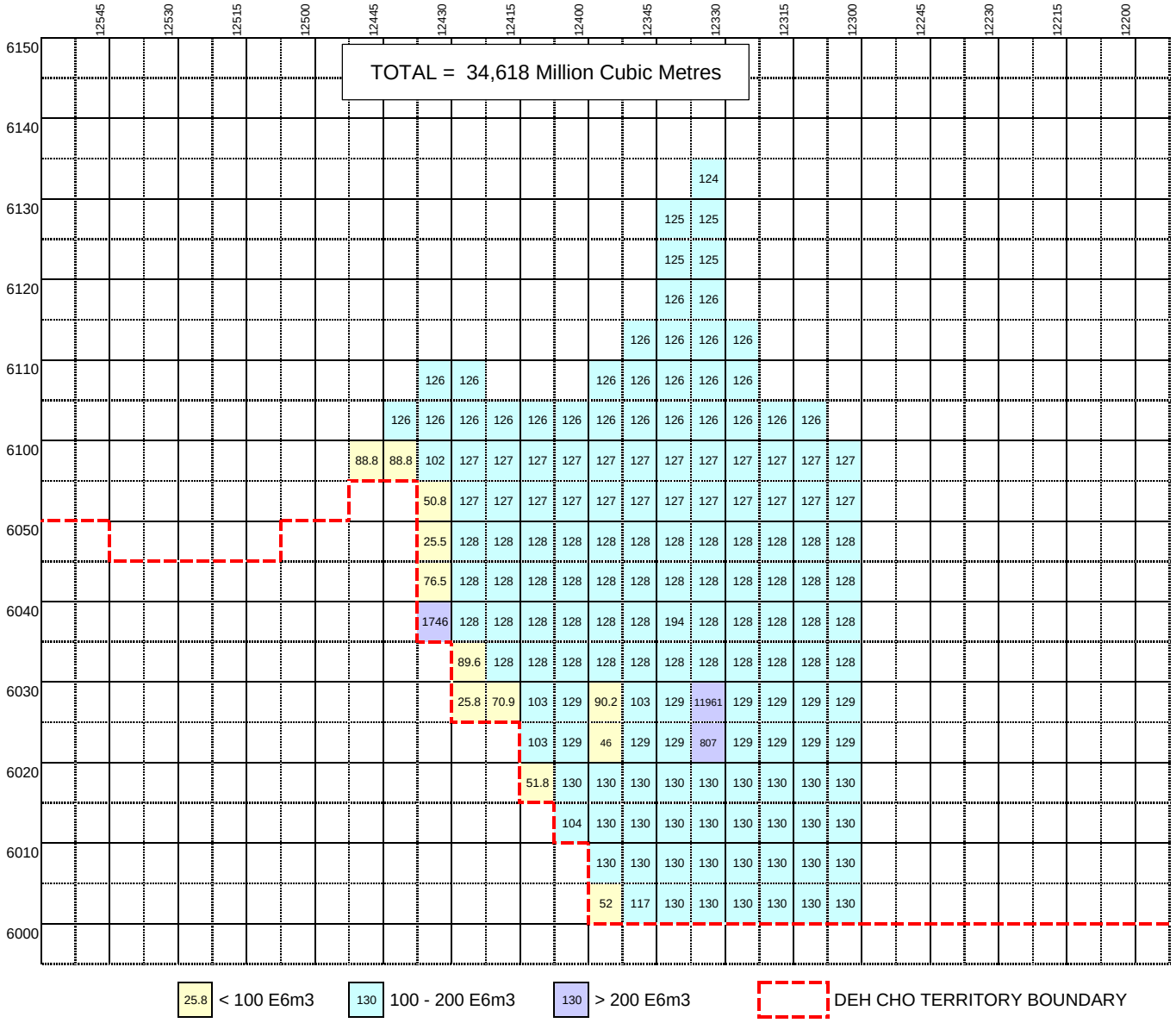
(Million cubic metres / quarter grid unit)



DEH CHO TERRITORY

DISTRIBUTION OF REMAINING RECOVERABLE GAS RESOURCE PLAY 1 - LARAMIDE/MANETOE

(Million cubic metres / quarter grid unit)



PLAY AREA 1 - LARAMIDE/MANETOE - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

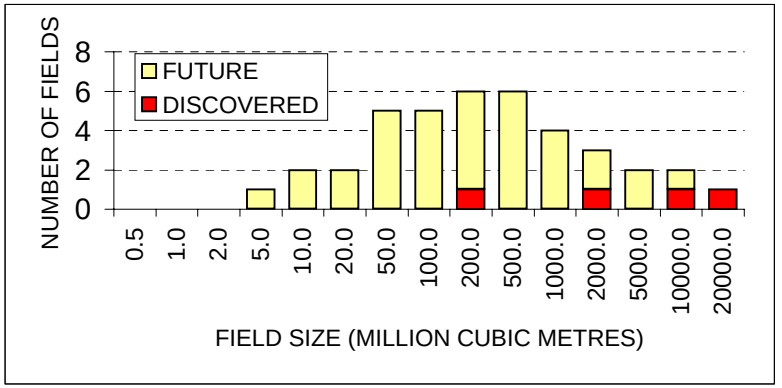
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	47123.4	26926.1	20197.4
NUMBER OF FIELDS	39	4	35
AVERAGE SIZE (E6m3)	1208.3	6731.5	577.1
LARGEST FIELD (E6m3)	16200	16200	6000
SMALLEST FIELD (E6m3)	2.41	140.87	2.41

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	1	2.4	0	0.0	1	2.4
10	2	15.1	0	0.0	2	15.1
20	2	30.2	0	0.0	2	30.2
50	5	165.1	0	0.0	5	165.1
100	5	362.9	0	0.0	5	362.9
200	6	858.4	1	140.9	5	717.5
500	6	1862.5	0	0.0	6	1862.5
1000	4	2784.1	0	0.0	4	2784.1
2000	3	4363.6	1	1682.2	2	2681.4
5000	2	5576.3	0	0.0	2	5576.3
10000	2	14903.0	1	8903.0	1	6000.0
20000	1	16200.0	1	16200.0	0	0.0

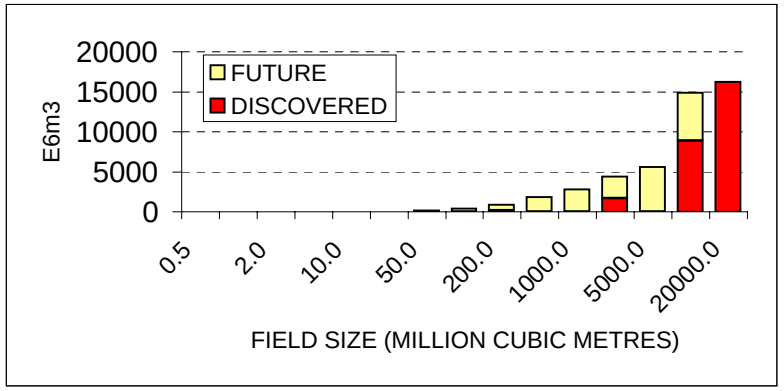
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	25	20	15	9
POTENTIAL (E6m3)	19985	19622	18904	17042
PROBABILITY (%)	71.4%	57.1%	42.9%	25.7%
AVERAGE SIZE (E6m3)	799.4	981.1	1260.3	1893.5

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	4	4	3	3
POTENTIAL (E6m3)	26926	26926	26785	26785
PROBABILITY (%)	100.0%	100.0%	75.0%	75.0%
AVERAGE SIZE (E6m3)	6731.5	6731.5	8928.4	8928.4

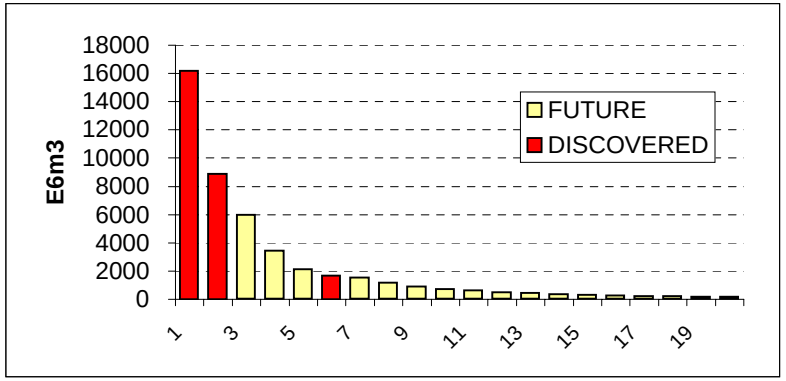
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

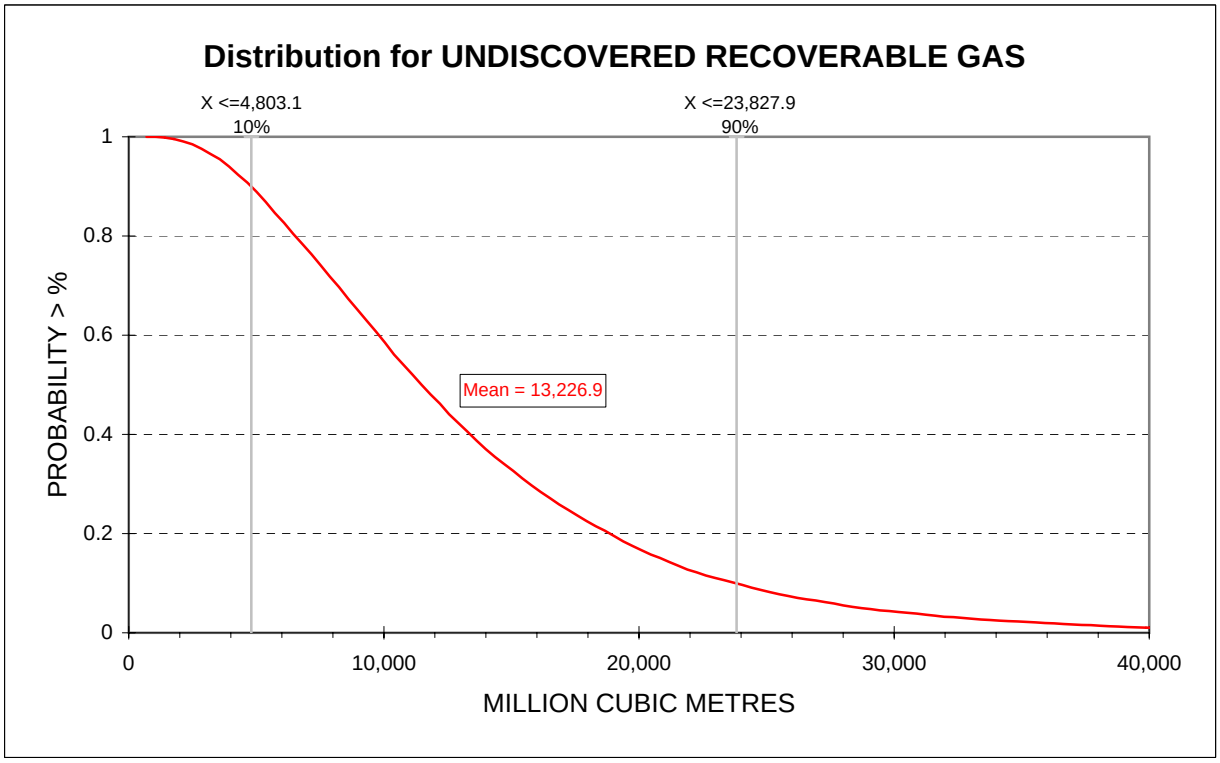


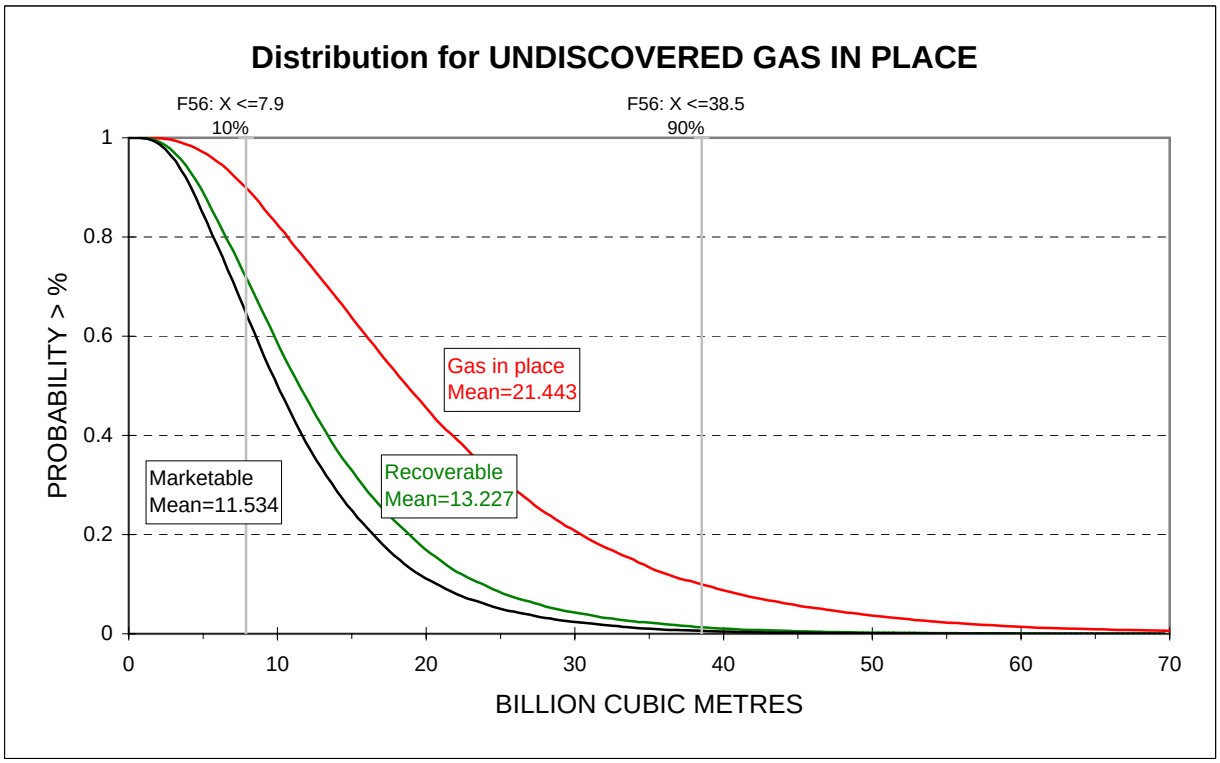
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	2
Play Name	Laramide/Windflower
References	Laramide Structures-Mesozoic Clastics/Carbonates (NEB); Laramide Fold Belt LFP1 (CGPC)
Reservoir Unit	All beds other than Manetoe facies in Laramide structural traps
Distribution	Delineated on west and north by outcropping host formations; east boundary is Bovie structure
Source/Seal	Besa River, Horn River, Muskwa, Etanda fms, Toad- Grayling Fm/Besa River, Horn River, Muskwa, Etanda fms, Toad-Grayling Fm, also tight Mattson Fm facies and Fantasque Fm
Trap Style	Structural-Laramide antiforms cross-cut by faults; fracturing associated with the axial traces of antiforms is essential to production; all except Cretaceous reservoirs should be fractured to be productive; stratigraphic-facies changes in Mattson Fm fluvio-deltaic and Lower Cretaceous clastics
Gas/Oil	gas (non-associated slightly sour)
Exploration Risks	Timing of traps with respect to hydrocarbon migration; sufficient porosity/permeability
Mapped Area	0.844 Miilion Ha (2.087 Million Acres)
Deh Cho significant fields/wells	Ft.Liard F-36, SE Ft Liard N-01
Discovered Resources	2 Gas Fields - 1,550 million cubic metres (55.0Bcf) recoverable gas.
Undiscovered Recoverable Gas	13,227 Million cubic metres (469.47 Bcf)
Undiscovered Marketable Gas	11,534 Million cubic metres (409.38 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	113 Fields, Largest 1,420 million cubic feet (50.4 Bcf)
Undiscovered Oil Fields	Gas play only

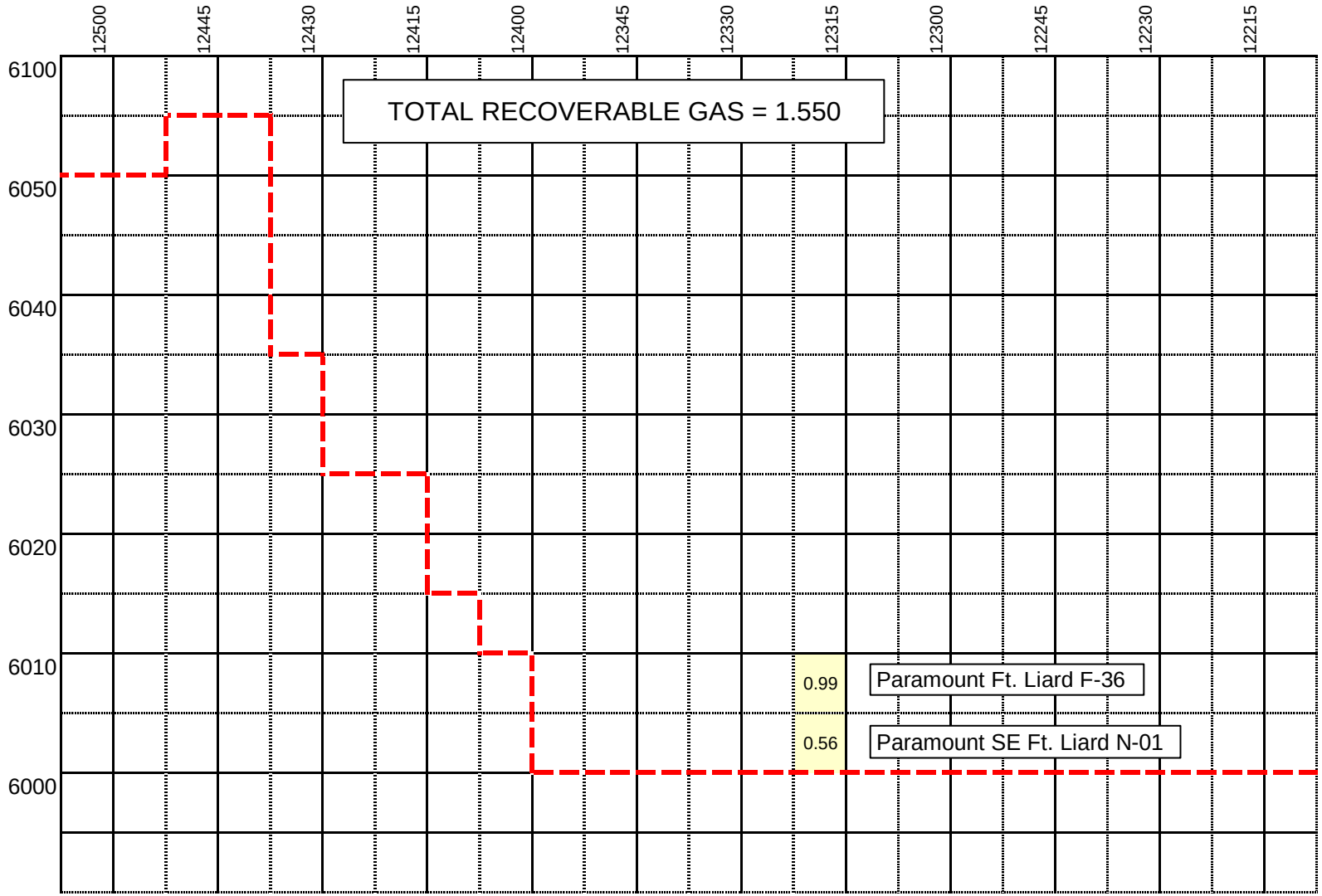
DEH CHO TERRITORY
LARAMIDE / WINDFLOWER (PLAY 2)
(ADAPTED FROM NEB, 1996)





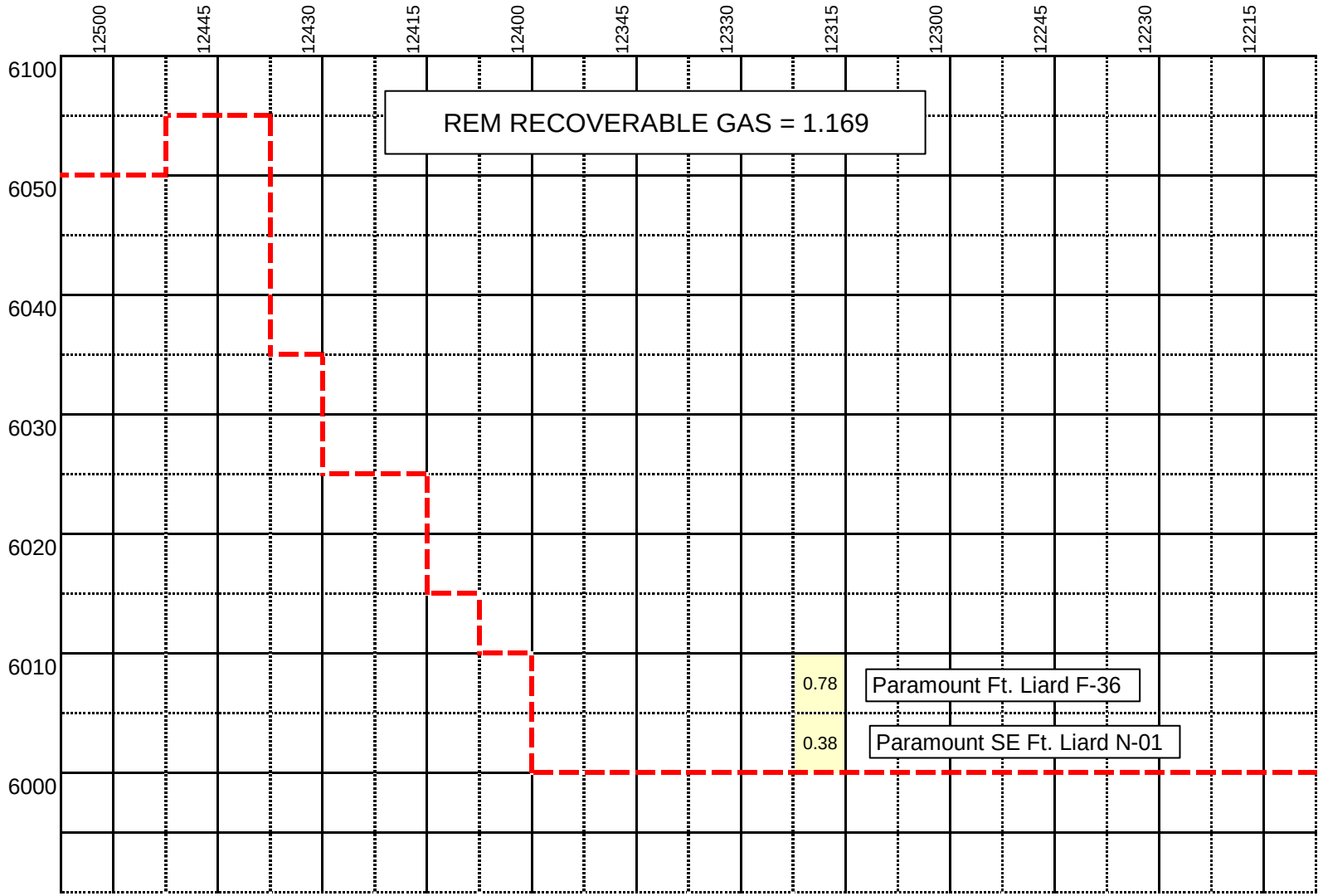
DEH CHO TERRITORY - PLAY 2 LARAMIDE / WINDFLOWER

INITIAL RECOVERABLE GAS (Billion Cubic Metres)



DEH CHO TERRITORY - PLAY 2 LARAMIDE / WINDFLOWER

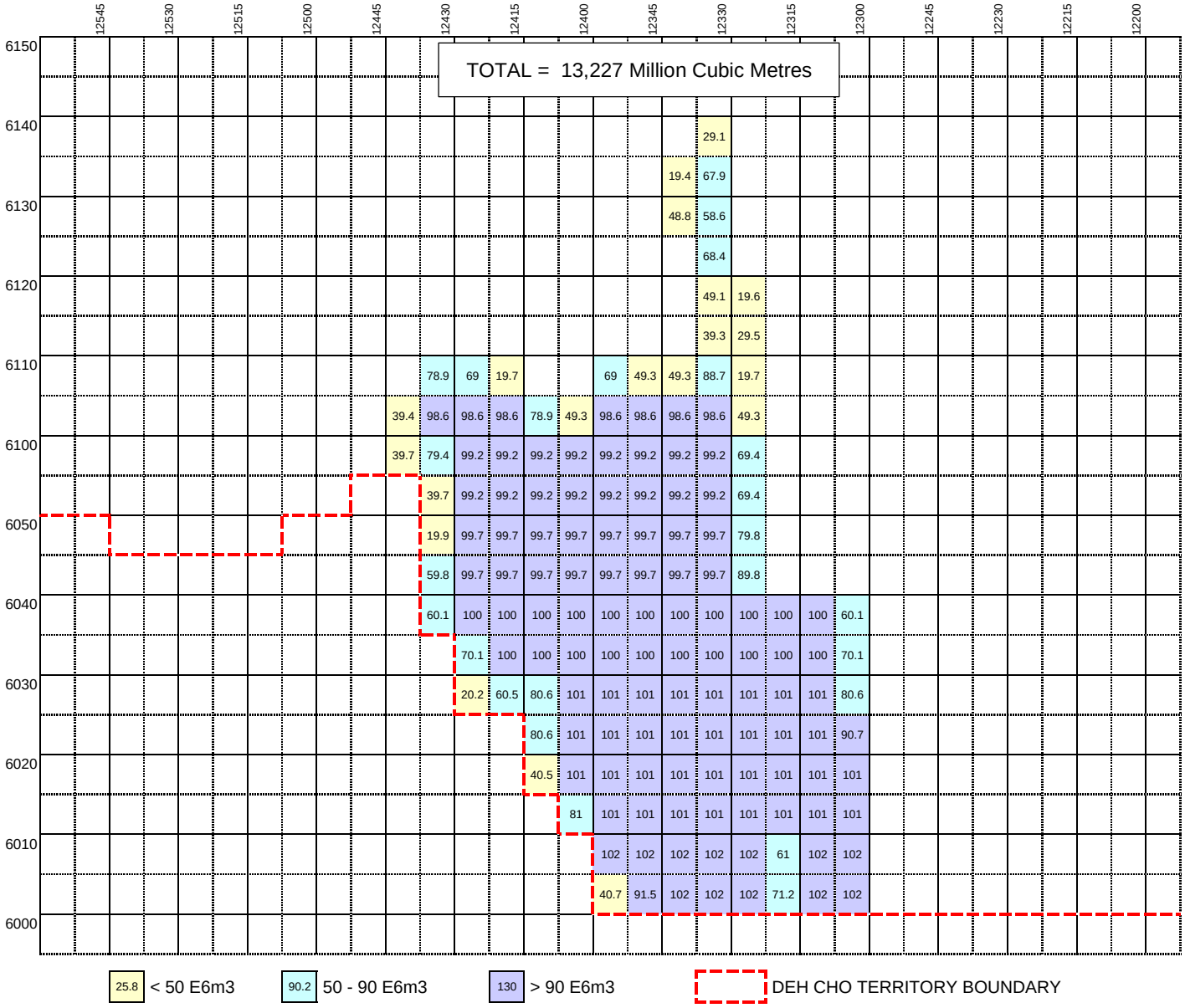
REMAINING RECOVERABLE GAS (Billion Cubic Metres)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 2 - LARAMIDE/WINDFLOWER

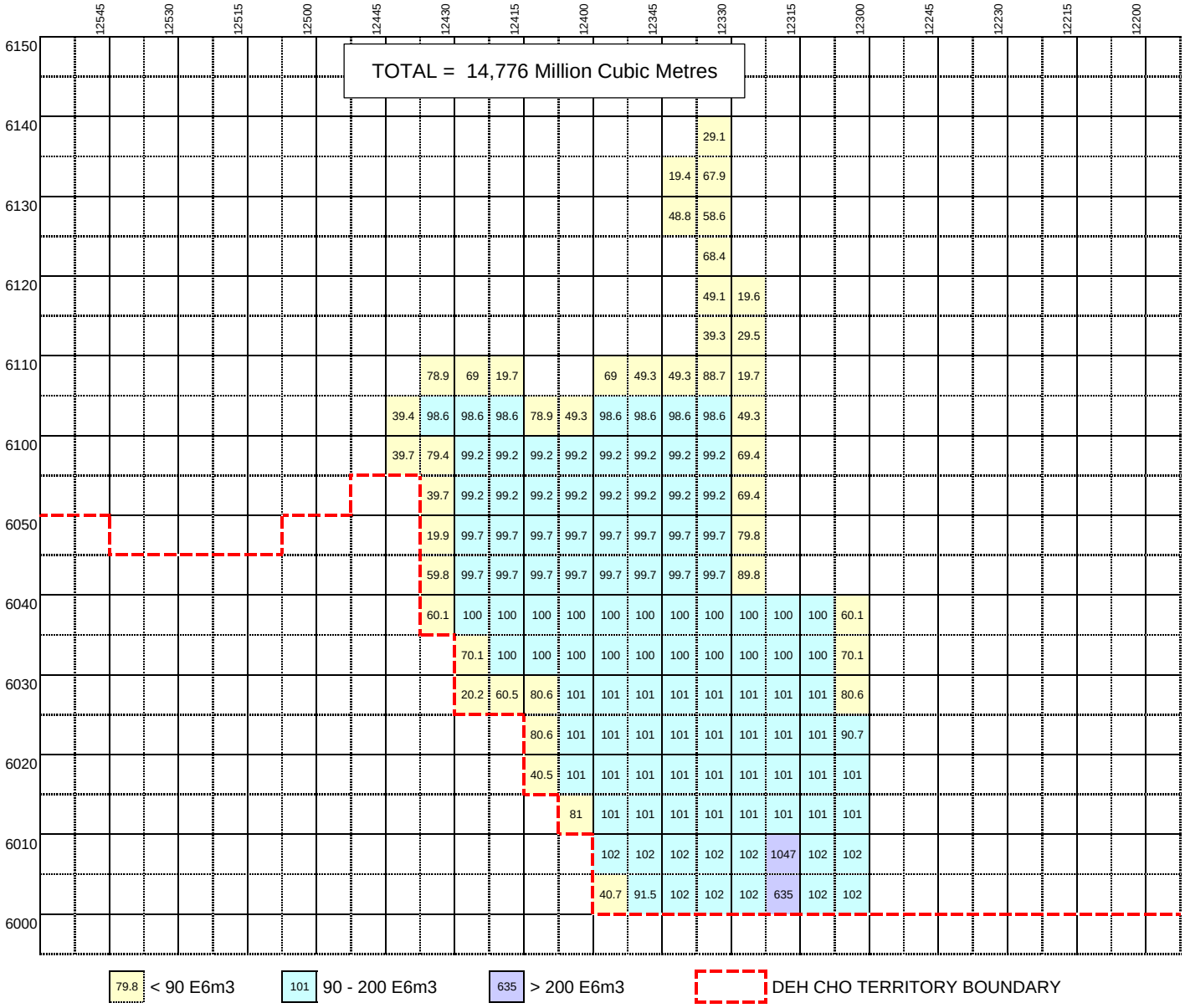
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF ULTIMATE RECOVERABLE GAS PLAY 2 - LARAMIDE/WINDFLOWER

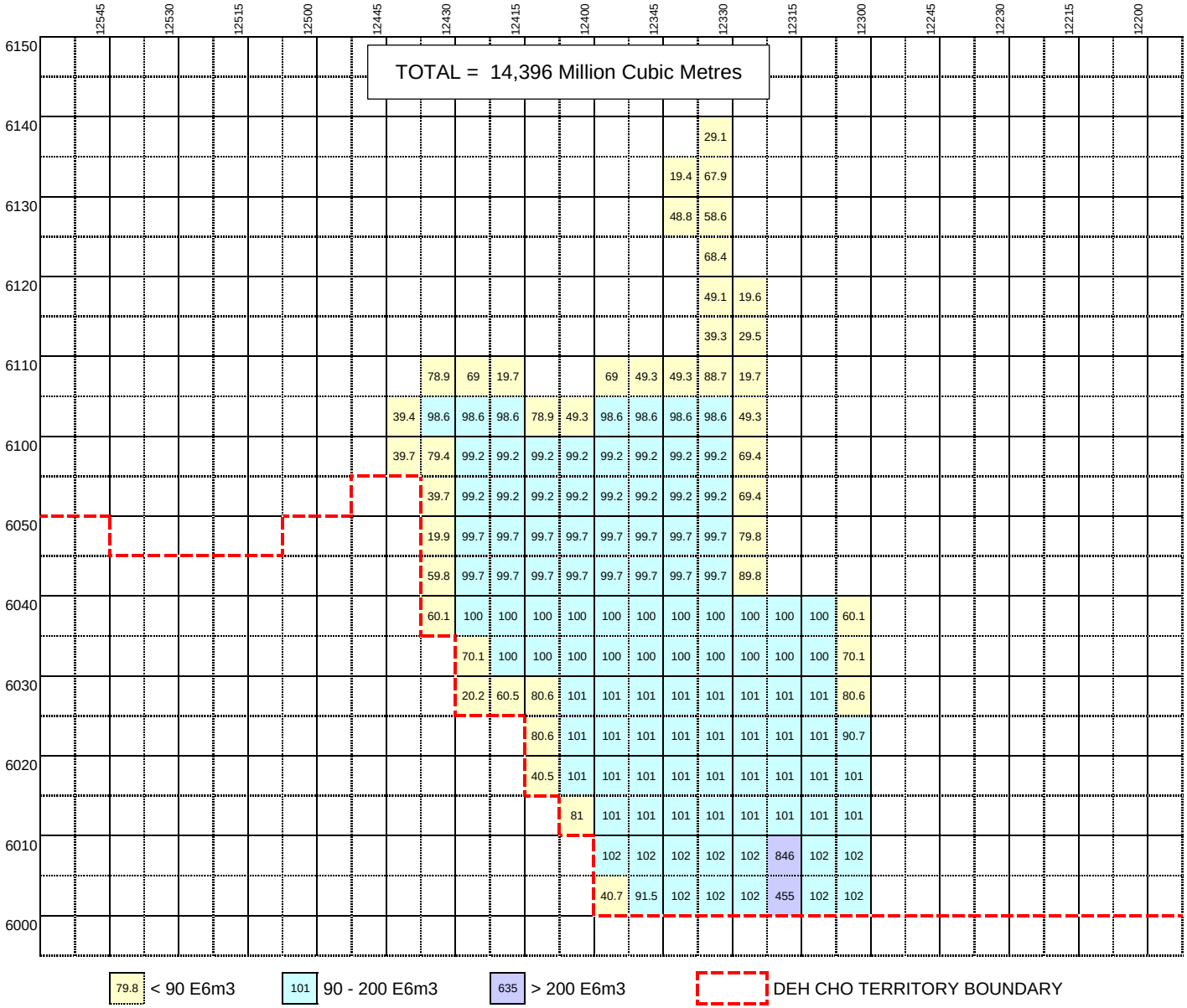
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF REMAINING RECOVERABLE GAS RESOURCE PLAY 2 - LARAMIDE/WINDFLOWER

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 2 - LARAMIDE/WINDFLOWER - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

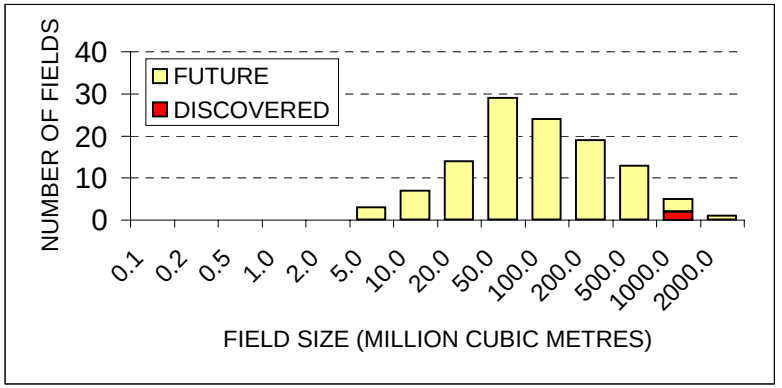
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	14776.5	1549.6	13226.9
NUMBER OF FIELDS	115	2	113
AVERAGE SIZE (E6m3)	128.5	774.8	117.1
LARGEST FIELD (E6m3)	1420	986	1420
SMALLEST FIELD (E6m3)	2.06	563.48	2.06

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	3	9.9	0	0.0	3	9.9
10	7	53.1	0	0.0	7	53.1
20	14	211.0	0	0.0	14	211.0
50	29	973.2	0	0.0	29	973.2
100	24	1710.6	0	0.0	24	1710.6
200	19	2671.8	0	0.0	19	2671.8
500	13	4037.3	0	0.0	13	4037.3
1000	5	3689.8	2	1549.6	3	2140.2
2000	1	1420.0	0	0.0	1	1420.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

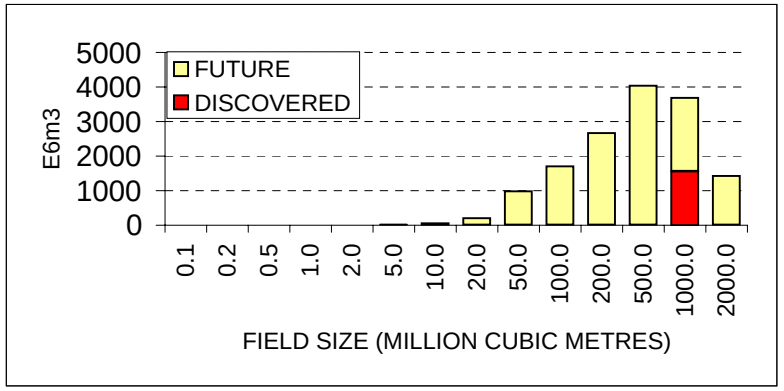
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	60	36	17	4
POTENTIAL (E6m3)	11980	10269	7597	3560
PROBABILITY (%)	53.1%	31.9%	15.0%	3.5%
AVERAGE SIZE (E6m3)	199.7	285.3	446.9	890.1

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	2	2	2	2
POTENTIAL (E6m3)	1550	1550	1550	1550
PROBABILITY (%)	100.0%	100.0%	100.0%	100.0%
AVERAGE SIZE (E6m3)	774.8	774.8	774.8	774.8

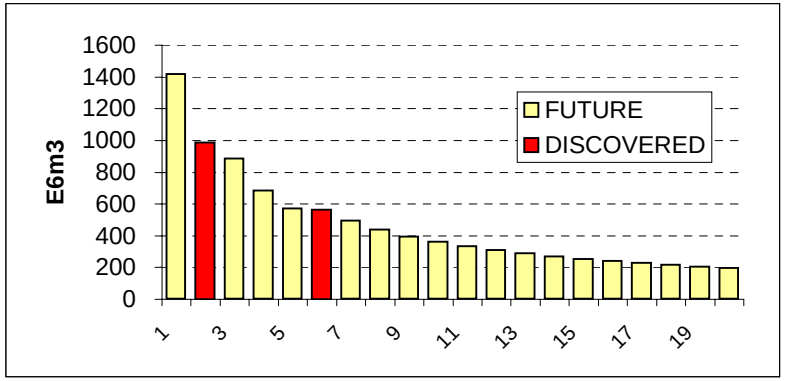
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

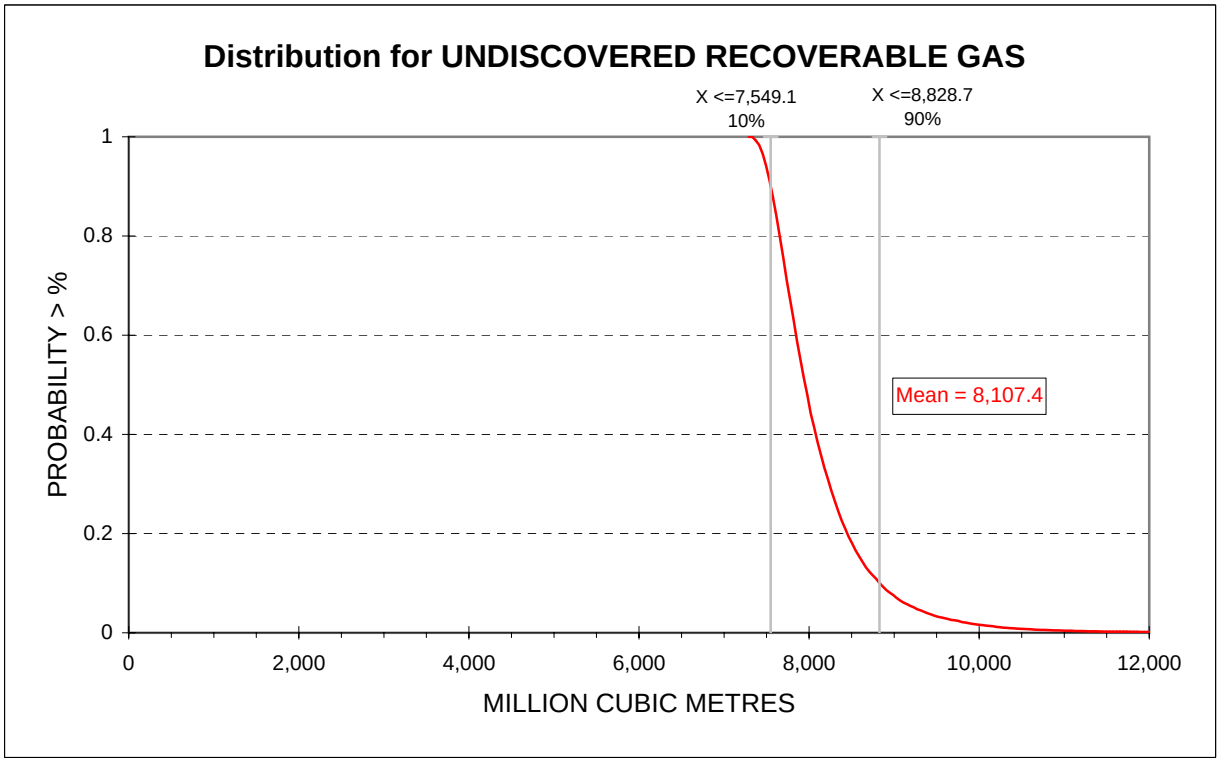


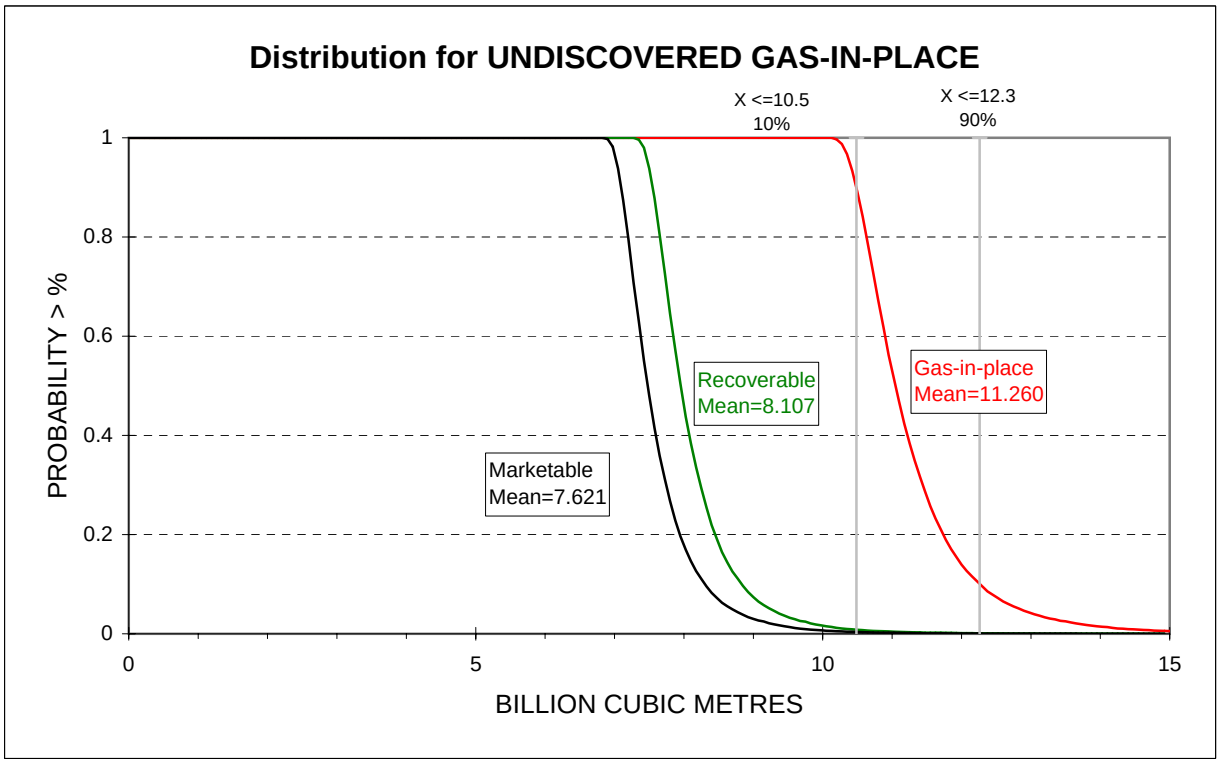
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

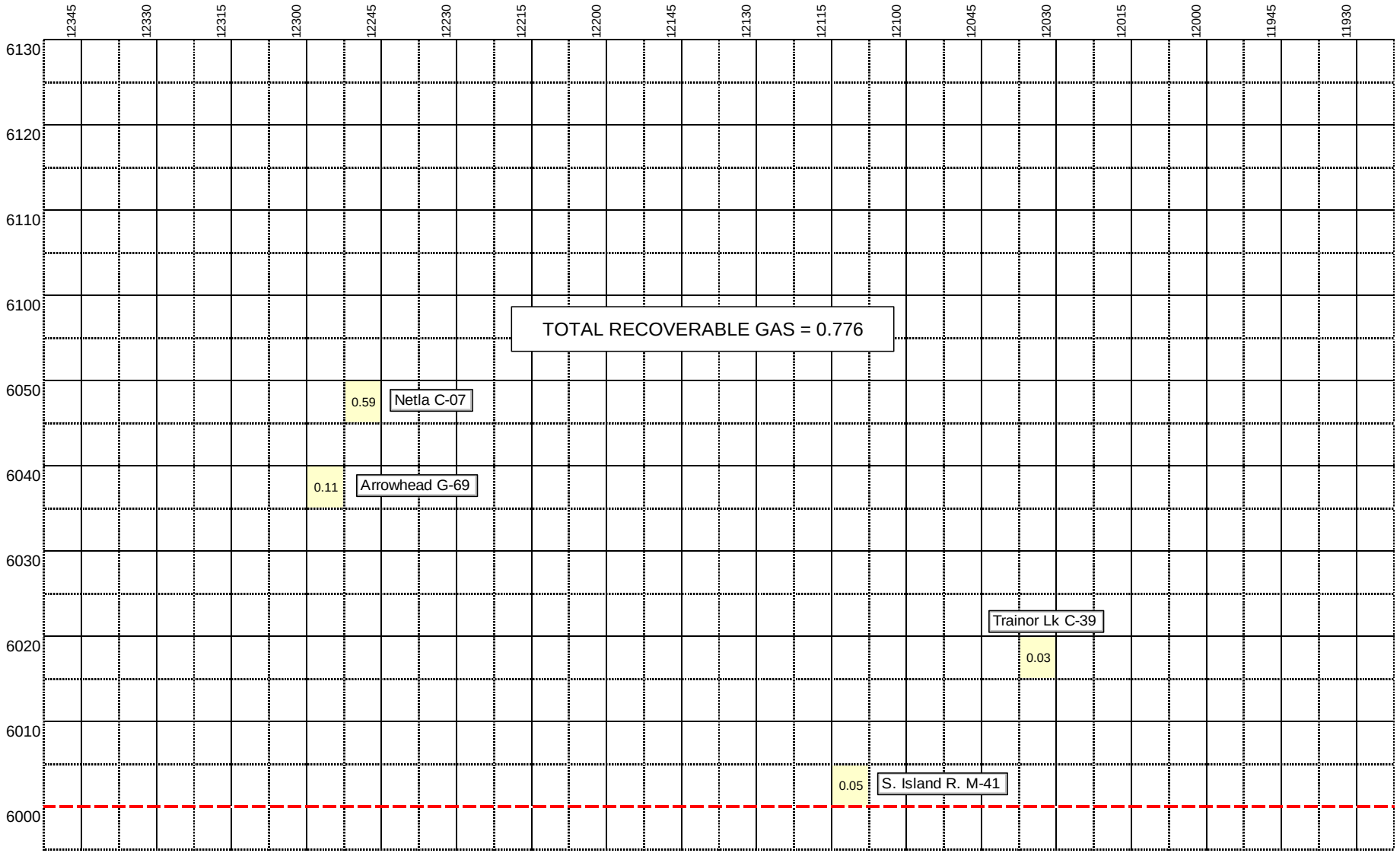
Play #	3
Play Name	Slave Point edge
References	Slave Point Barrier-Helmet, part of Slave Point Barrier Reef and Isolated reefs (Clarke Lake-Yoyo-Kotcho), Upper Keg River (Pine Point) barrier-Clarke Lake (NEB); Slave Point Barrier Reef (Clarke Lake; GSC); 3F337, F340 (CGPC)
Reservoir Unit	Preferably dolomitized Sulphur Point/Slave Point fms (shelf, slope and bank edge reefal margin shelf) along Slave Point edge
Distribution	Slave Point edge and barrier foreslope; back barrier limit about 5 km from edge
Source/Seal	Horn River, Muskwa fms/basinward seal by Horn River Fm, top seal by Muskwa Fm or tight Slave Point Fm
Trap Style	Stratigraphic-Slave/Sulphur Point reef-type limestone buildups near barrier edge in narrow zone between basinal shales/micrites and tight back-reef carbonates; dolomitization preferable (necessary?); fracturing increases porosity and permeability
Gas/Oil	gas (non-associated sour);oil possible in east
Exploration Risks	Dolomite distribution, fracturing
Mapped Area	0.448 Miilion Ha (1.106 Million Acres)
Deh Cho significant fields/wells	Trainor Lake C-39, Arrowhead G-69
Discovered Resources	4 Gas Fields - 776 million cubic metres (27.6Bcf) recoverable gas.
Undiscovered Recoverable Gas	8,107 Million cubic metres (287.76 Bcf)
Undiscovered Marketable Gas	7,621 Million cubic metres (270.50 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	68 Fields, Largest 1,240 million cubic feet (44.0 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
SLAVE POINT EDGE (PLAY 3)
(ADAPTED FROM NEB, 1996)





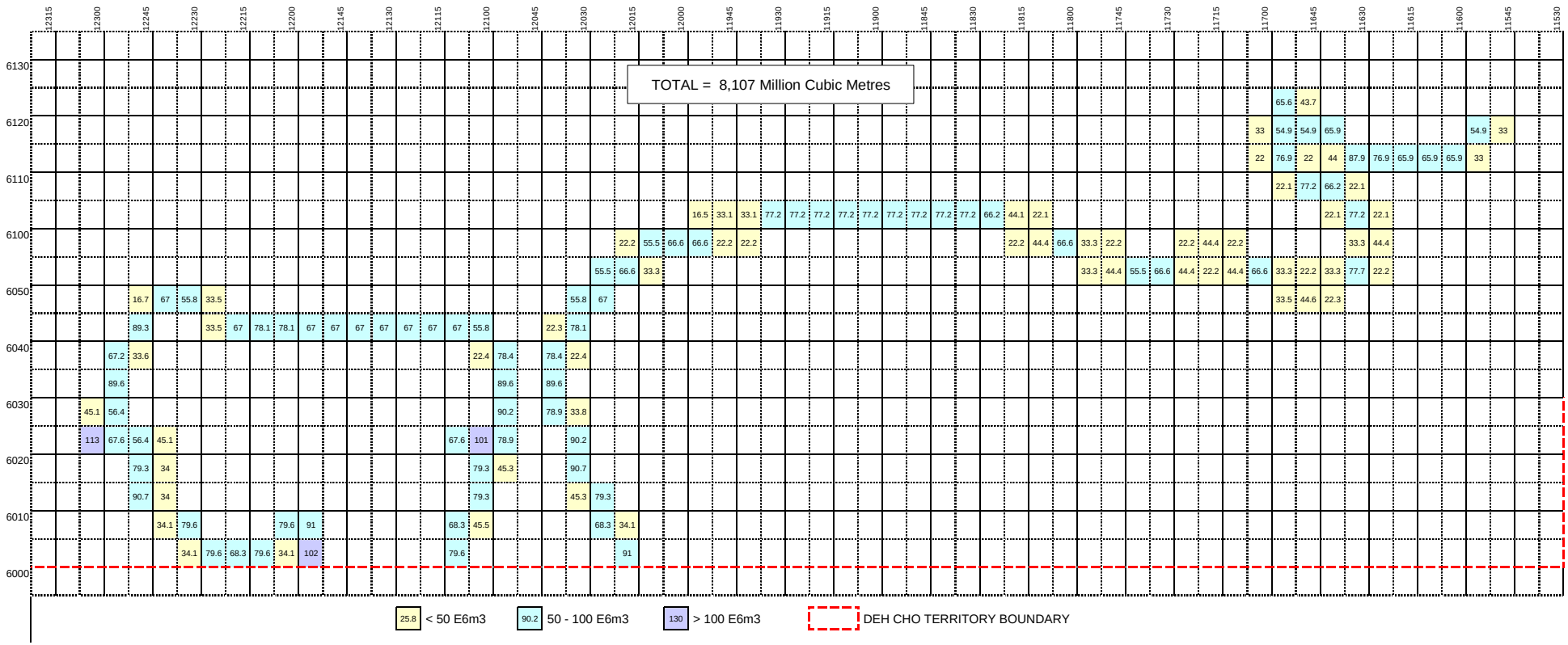
DEH CHO TERRITORY - PLAY 3 SLAVE POINT EDGE
INITIAL RECOVERABLE GAS (Billion Cubic Metres)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 3 - SLAVE POINT EDGE

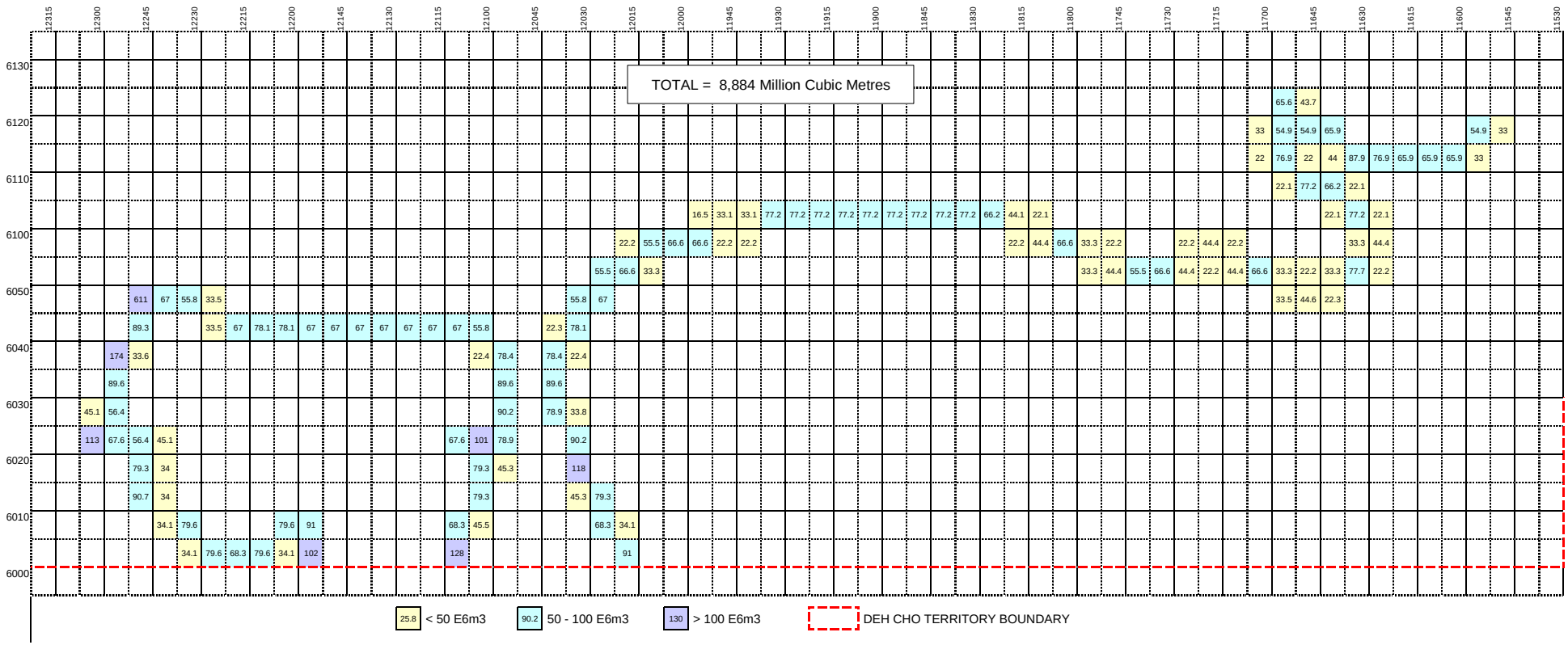
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF ULTIMATE RECOVERABLE GAS PLAY 3 - SLAVE POINT EDGE

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 3 - SLAVE POINT EDGE - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

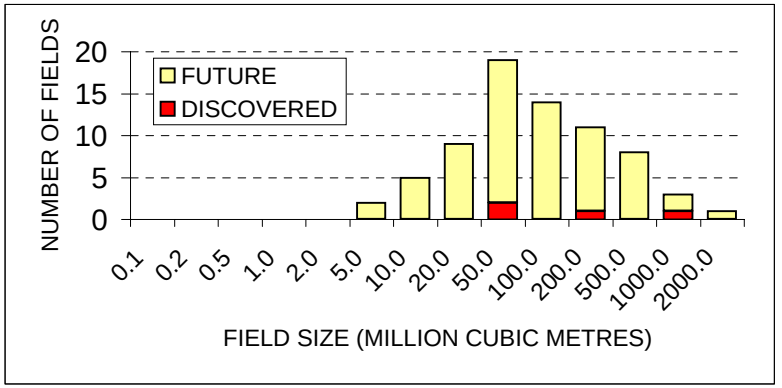
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	8883.8	776.5	8107.4
NUMBER OF FIELDS	72	4	68
AVERAGE SIZE (E6m3)	123.4	194.1	119.2
LARGEST FIELD (E6m3)	1240	594	1240
SMALLEST FIELD (E6m3)	2.15	26.99	2.15

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	5.9	0	0.0	2	5.9
10	5	36.6	0	0.0	5	36.6
20	9	136.3	0	0.0	9	136.3
50	19	651.4	2	74.9	17	576.5
100	14	1018.4	0	0.0	14	1018.4
200	11	1510.4	1	107.1	10	1403.3
500	8	2388.5	0	0.0	8	2388.5
1000	3	1896.5	1	594.5	2	1302.0
2000	1	1240.0	0	0.0	1	1240.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

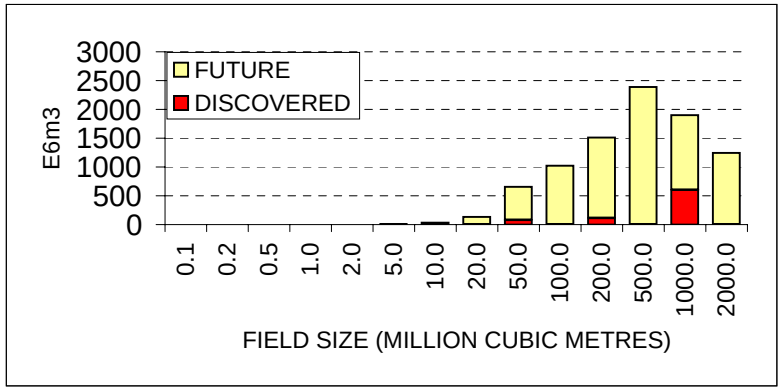
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	35	21	11	3
POTENTIAL (E6m3)	7352	6334	4930	2542
PROBABILITY (%)	51.5%	30.9%	16.2%	4.4%
AVERAGE SIZE (E6m3)	210.1	301.6	448.2	847.3

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	2	2	1	1
POTENTIAL (E6m3)	702	702	594	594
PROBABILITY (%)	50.0%	50.0%	25.0%	25.0%
AVERAGE SIZE (E6m3)	350.8	350.8	594.5	594.5

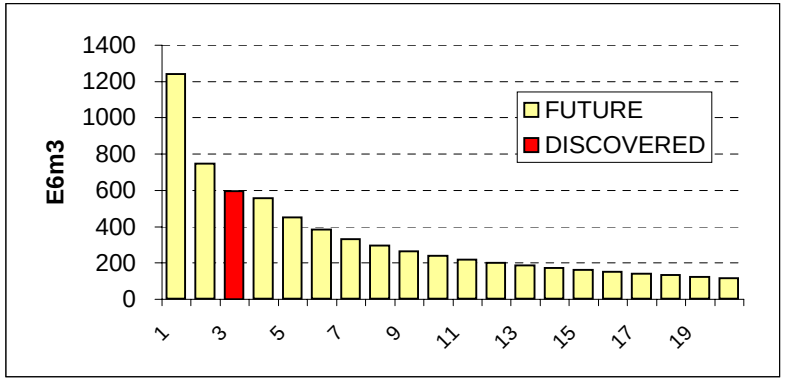
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

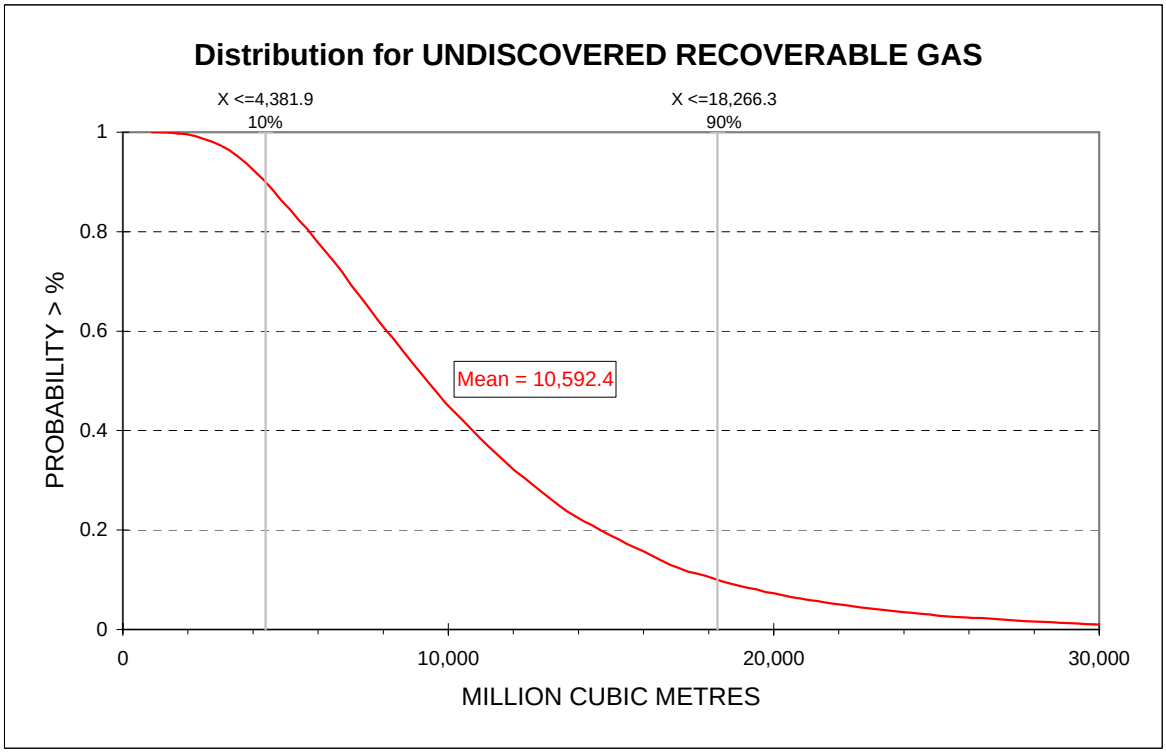


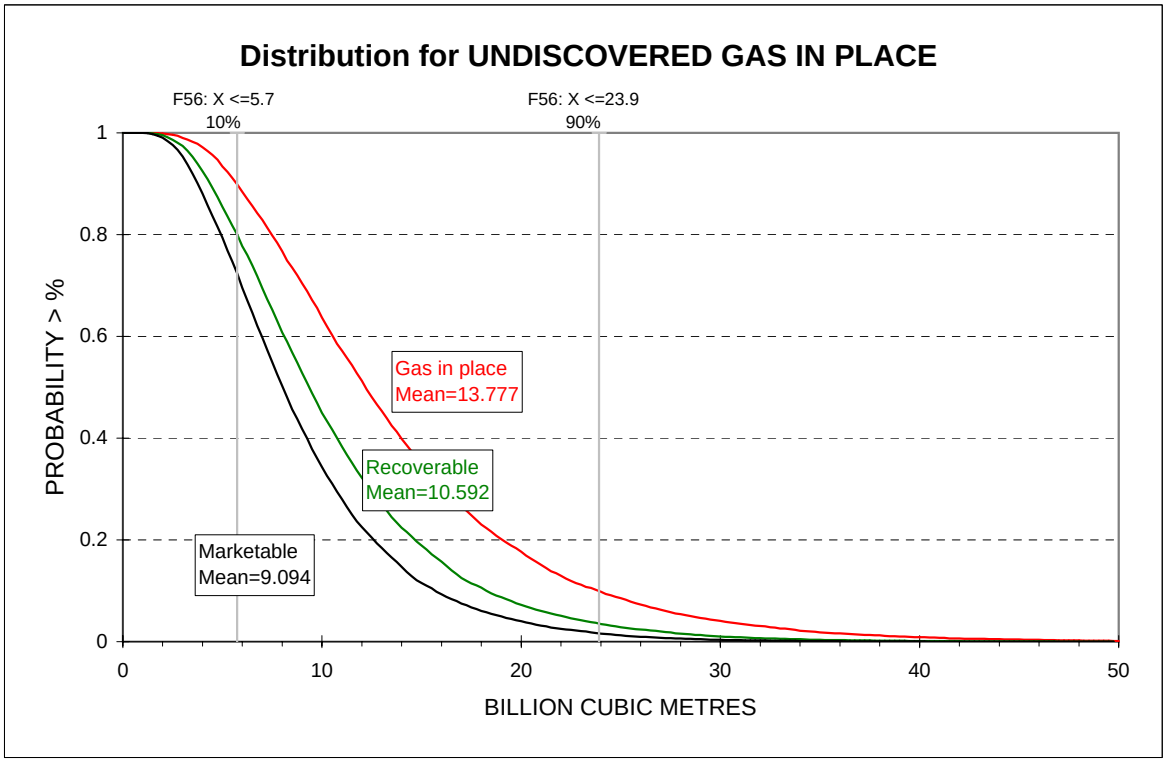
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

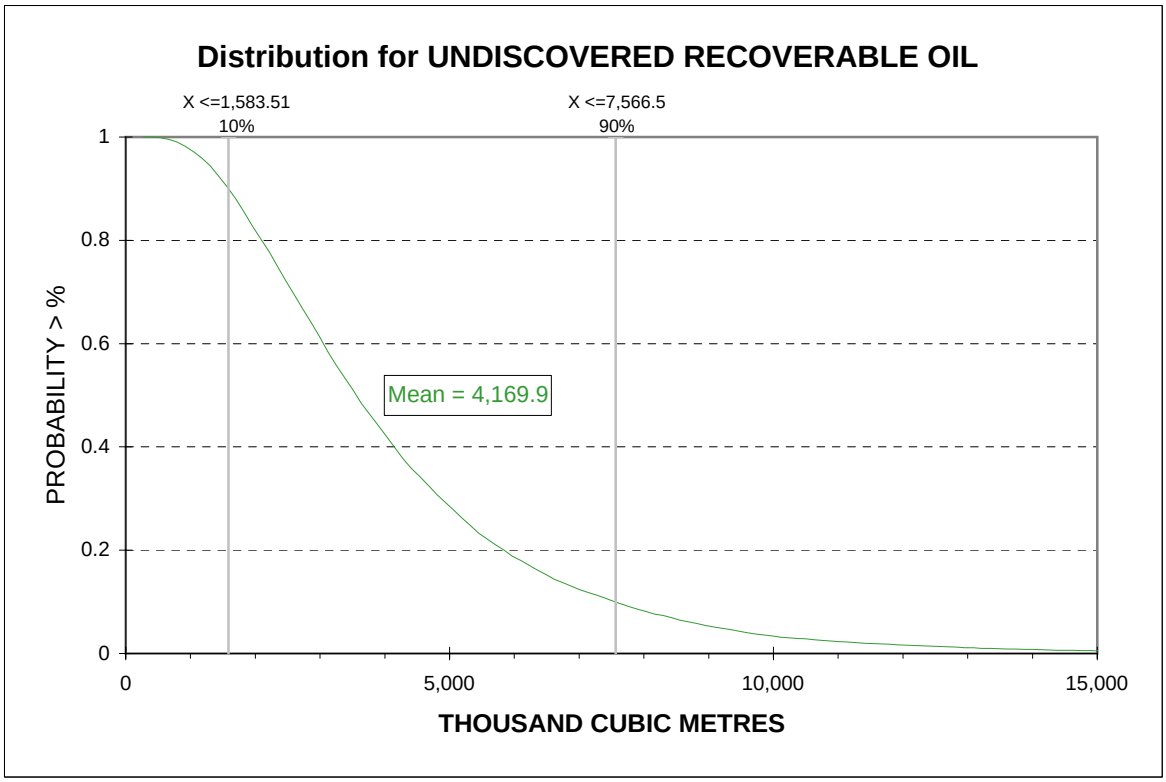
Play #	4
Play Name	Slave Point back barrier/NE fault structures
References	Slave Point Platform-Ekwan/Celibeta, Upper Keg River Sulphur Point back barrier, Upper Keg River (Pine Point) Cameron Hills play, Slave Point platform Ekwan/Celibeta (NEB); J349, J348, J 338? plus F, J 337 (CGPC)
Reservoir Unit	Slave Point and Sulphur Point fms biostromal and platform carbonates
Distribution	Northern and western boundaries are Slave Point margin; eastern boundary is subcrop/outcrop limit
Source/Seal	Muskeg, Horn River fms/bottom seal is anydritic dolomite in basal Slave Point Fm, Watt Mountain Fm, top seal is in basal Slave Point Fm, Watt Mountain Fm, top seal is Muskeg Fm, lateral seals are faulted and juxtaposed with Muskeg Fm or tight Slave Point Fm
Trap Style	Structural/stratigraphic-complex antiforms associated with NE trending basement horsts, also drape structures in Slave Point Fm over buildups, salt solution, and pinnacle reefs; dolomitization of reservoirs associated with faulting; fracturing enhances reservoir characteristics; stratigraphic/diagenetic-porosity associated with dolomitization in isolated back barrier buildups
Gas/Oil	gas (sour, associated with oil east of Cordova embayment)
Exploration Risks	Dolomite distribution; low seismic contrast within Slave Point Fm (reefal buildup vs. platform)
Mapped Area	3.692 Miilion Ha (9.124 Million Acres)
Deh Cho significant fields/wells	Cameron Hills, Celibeta H-78, Tathlina N-18, Grumbler G-63, Cameron Hills F-51, Cameron Hills M-31, and Rabbit Lake O-16.
Discovered Resources	7 Gas Fields - 1,233 million cubic metres (43.7Bcf) recoverable gas.1 Oil Field - 199 cubic metres (1.25 MB) recoverable oil.
Undiscovered Recoverable Gas	10,592 Million cubic metres (375.96 Bcf)
Undiscovered Marketable Gas	9,094 Million cubic metres (322.78 Bcf)
Undiscovered Recoverable Oil	4,170 Thousand cubic metres (26.24 MB)
Undiscovered Gas Fields	142 Fields, Largest 800 million cubic feet (28.4 Bcf)
Undiscovered Oil Fields	91 Fields, Largest 320 thousand cubic feet (2.0 MMB)

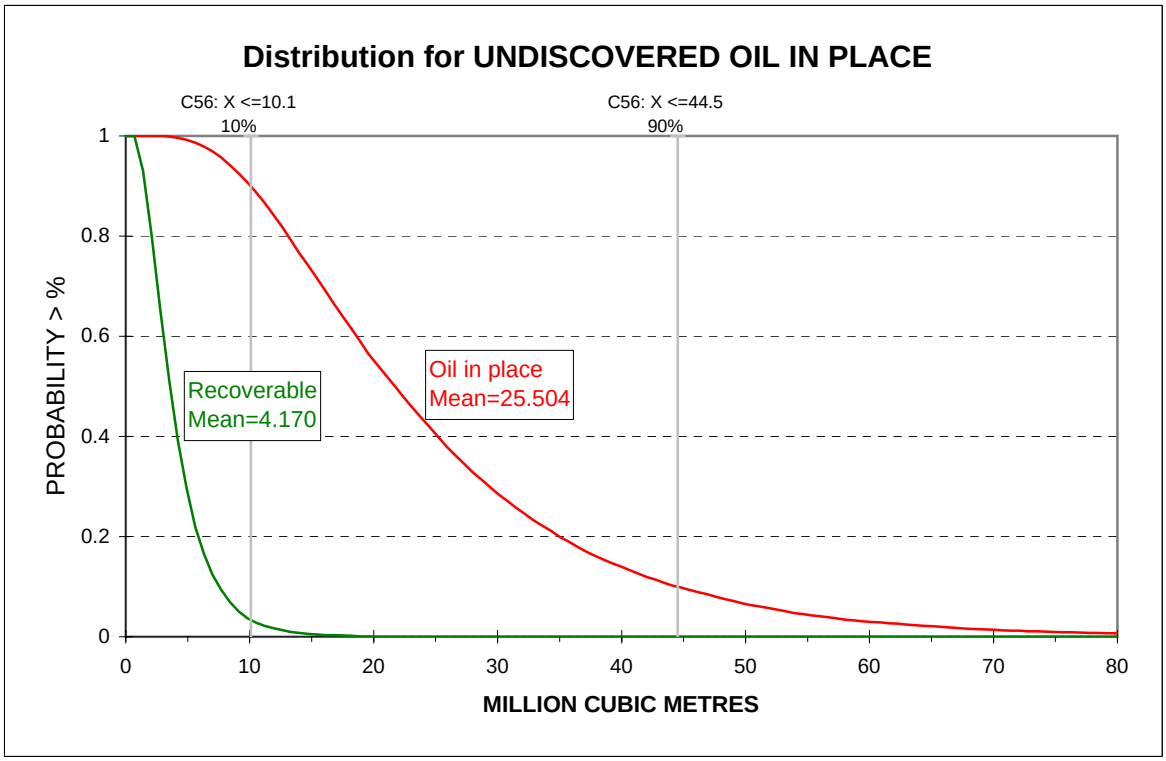
DEH CHO TERRITORY
SLAVE POINT BACK BARRIER (Play 4)





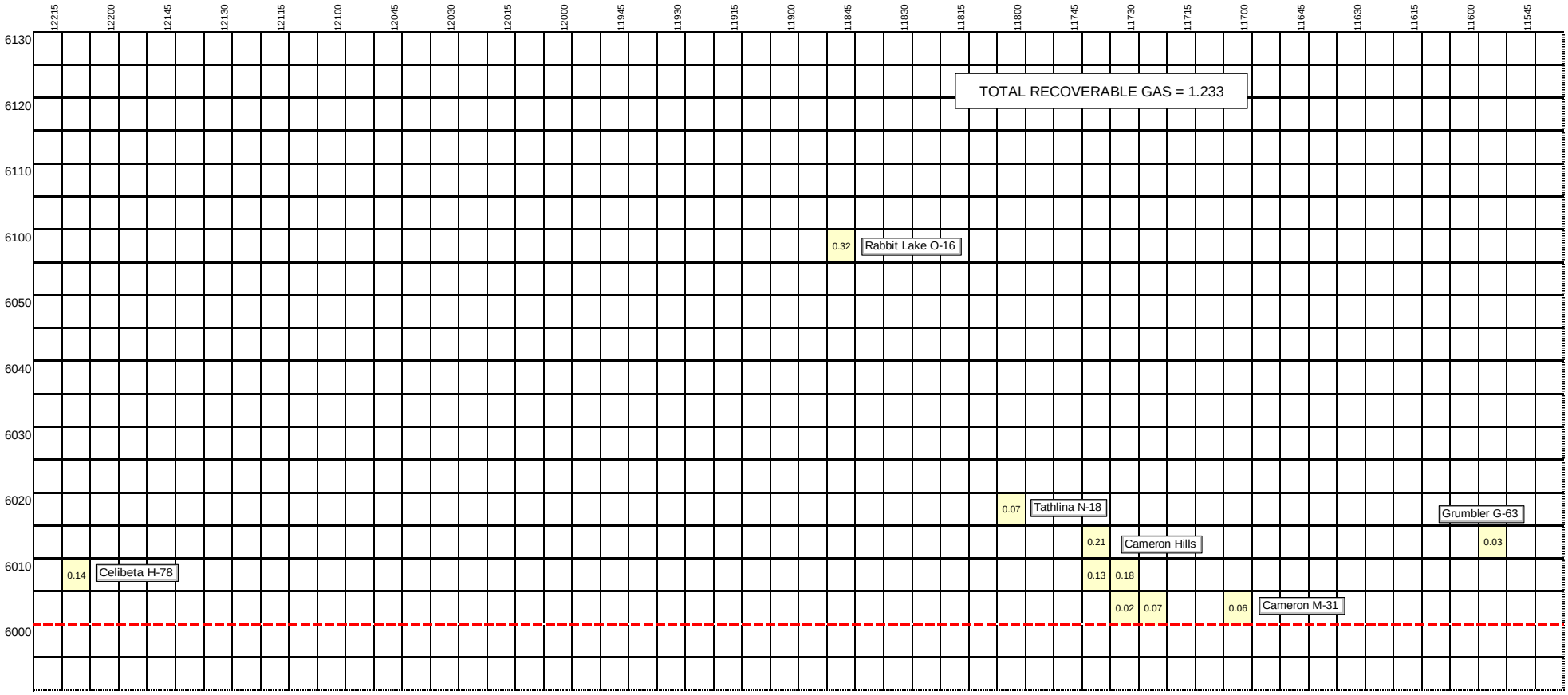
DEH CHO TERRITORY
SLAVE POINT BACK BARRIER (Play 4)





DEH CHO TERRITORY - PLAY 4 SLAVE POINT BACK BARRIER

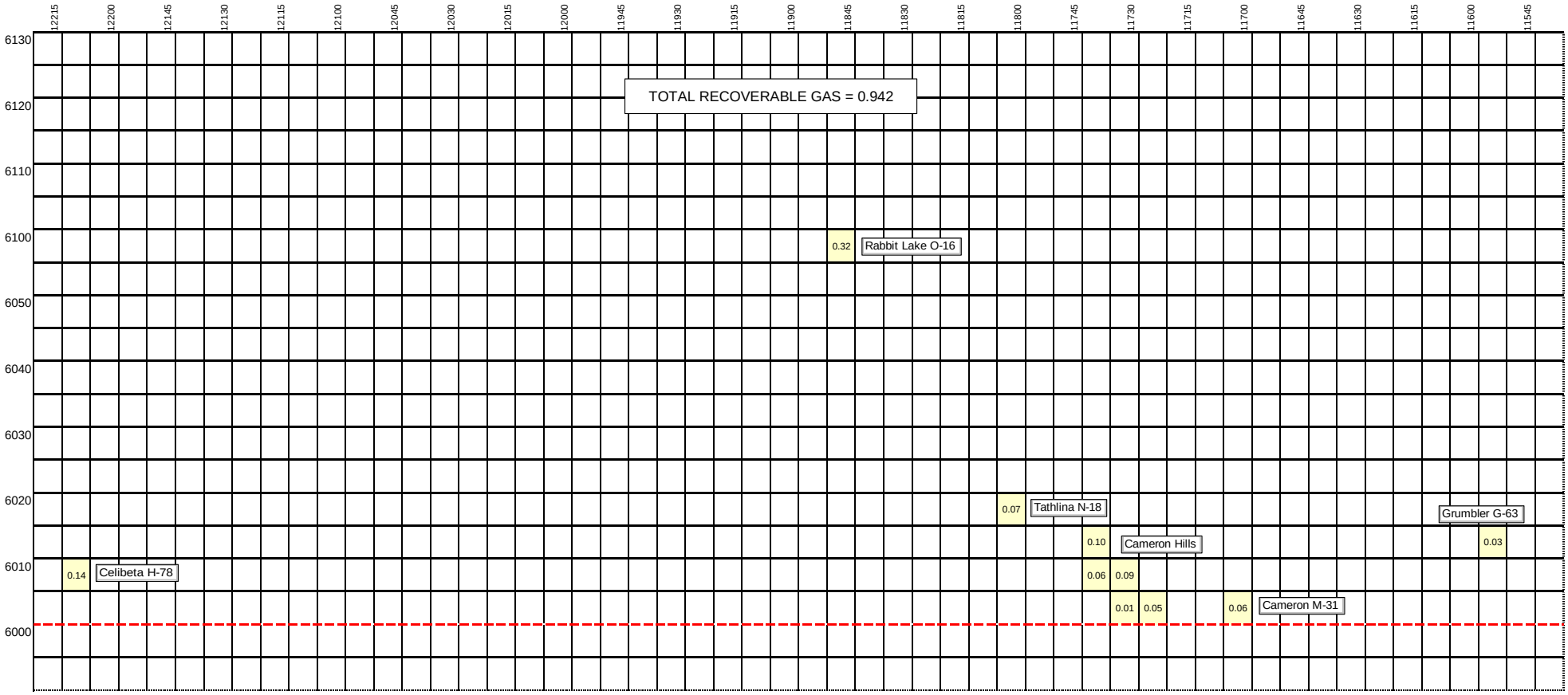
INITIAL RECOVERABLE GAS (Billion Cubic Metres)



DehCho_XLMapsPlay4R.xls

DEH CHO TERRITORY - PLAY 4 SLAVE POINT BACK BARRIER

REMAINING RECOVERABLE GAS (Billion Cubic Metres)

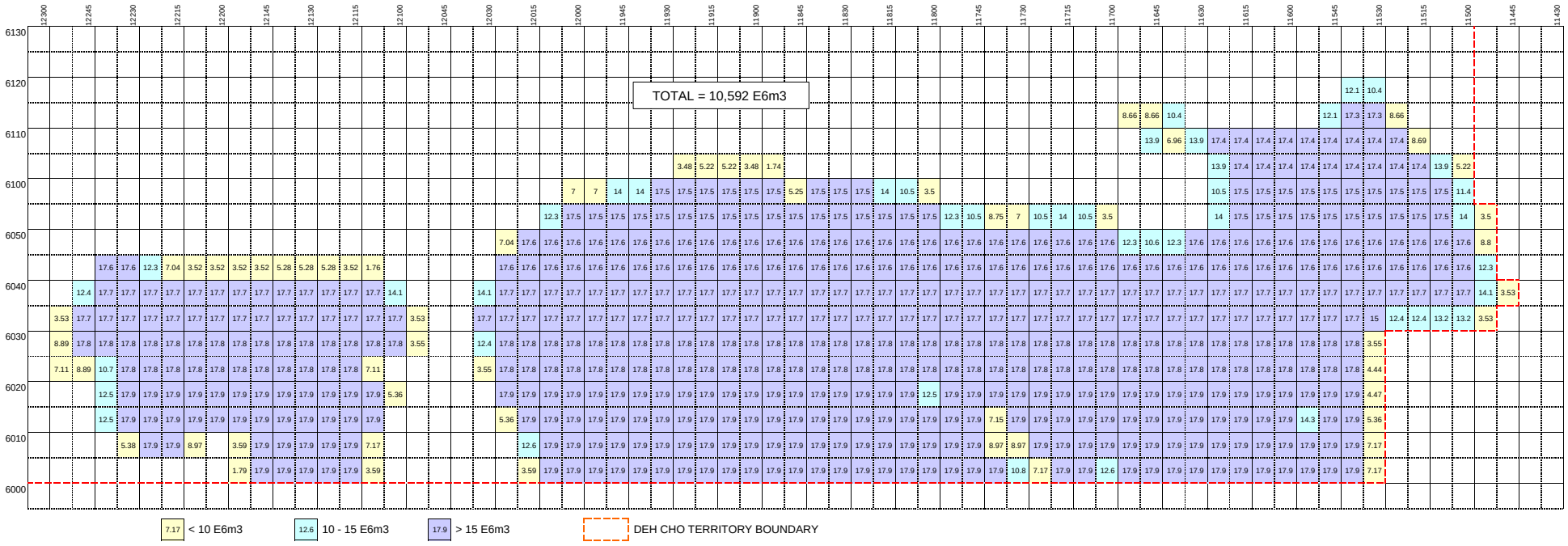


DehCho_XLMapsPlay4R.xls

DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 4 - SLAVE POINT BACK BARRIER/NE FAULT STRUCTURES

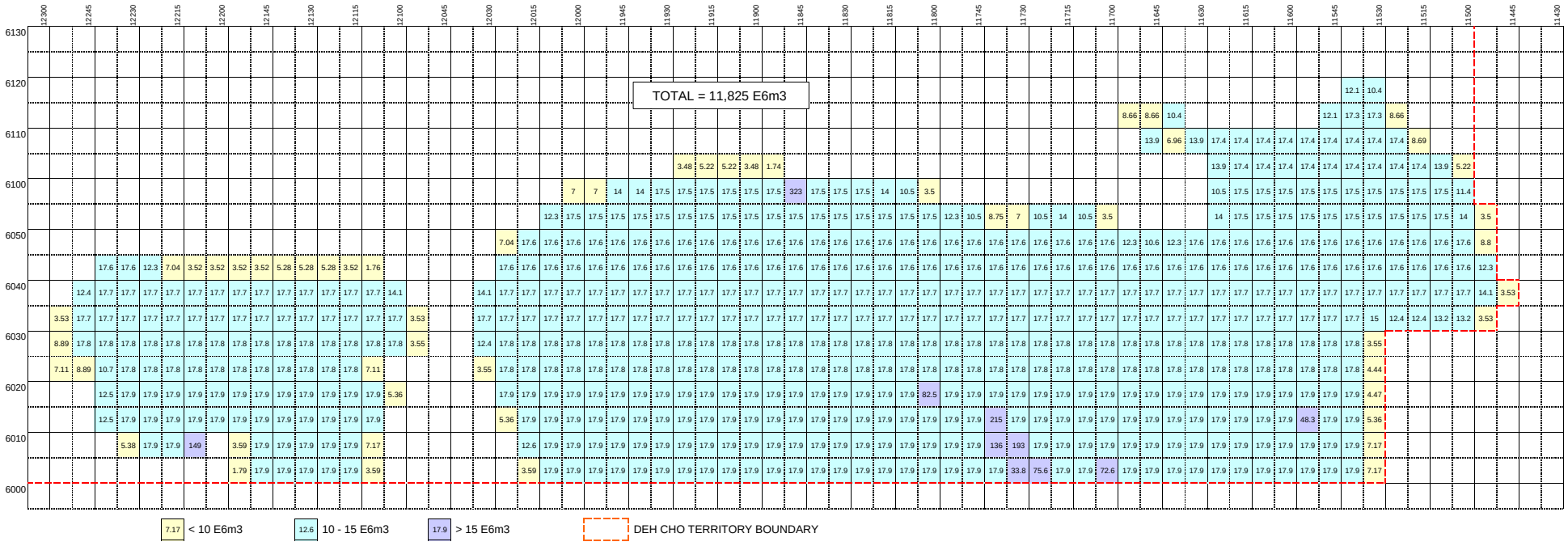
(MILLION CUBIC METRES / QUARTER GRID UNIT)



DEH CHO TERRITORY

DISTRIBUTION OF ULTIMATE RECOVERABLE GAS PLAY 4 - SLAVE POINT BACK BARRIER/NE FAULT STRUCTURES

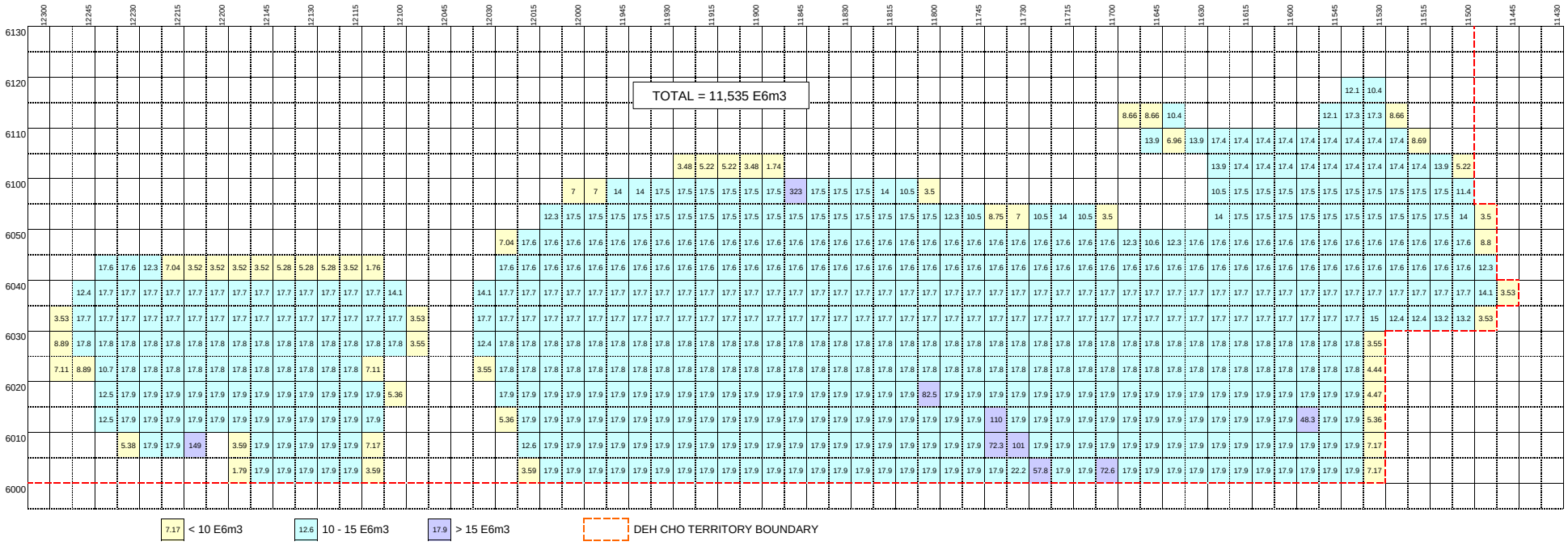
(MILLION CUBIC METRES / QUARTER GRID UNIT)



DEH CHO TERRITORY

DISTRIBUTION OF ULTIMATE REMAINING RECOVERABLE GAS PLAY 4 - SLAVE POINT BACK BARRIER/NE FAULT STRUCTURES

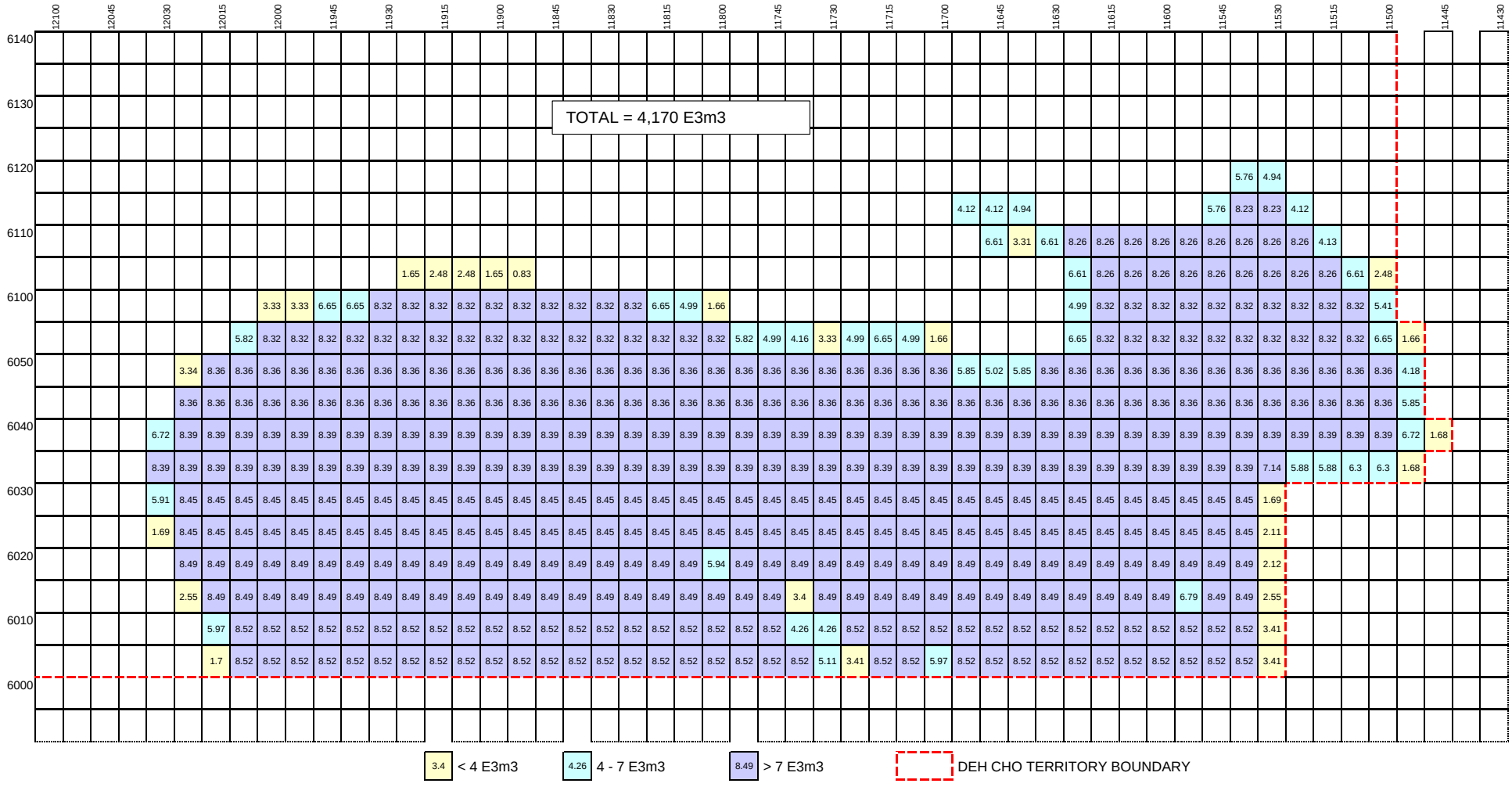
(MILLION CUBIC METRES / QUARTER GRID UNIT)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE OIL PLAY 4 - SLAVE POINT BACK BARRIER/NE FAULT STRUCTURES

(THOUSAND CUBIC METRES / QUARTER GRID UNIT)



DehCho_XLMapUndROILPlay4R.xls

PLAY AREA 4 - SLAVE POINT BACK BARRIER/NE FAULT STRUCTURES - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

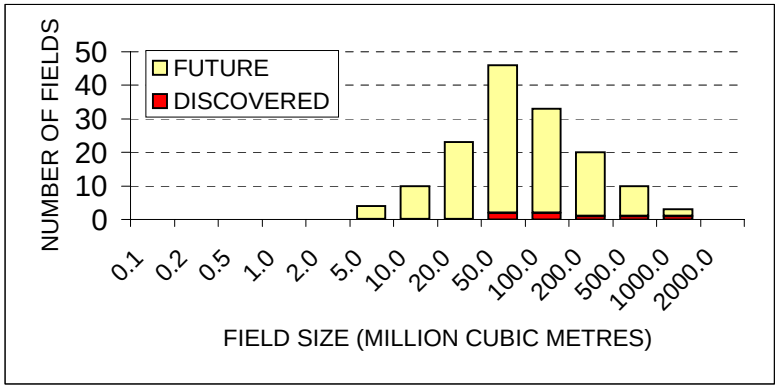
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	11825.0	1232.6	10592.4
NUMBER OF FIELDS	149	7	142
AVERAGE SIZE (E6m3)	79.4	176.1	74.6
LARGEST FIELD (E6m3)	800	578	800
SMALLEST FIELD (E6m3)	2.07	32.99	2.07

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	4	13.9	0	0.0	4	13.9
10	10	75.0	0	0.0	10	75.0
20	23	342.4	0	0.0	23	342.4
50	46	1529.2	2	67.0	44	1462.2
100	33	2322.1	2	130.0	31	2192.0
200	20	2760.2	1	140.0	19	2620.3
500	10	2876.8	1	318.0	9	2558.8
1000	3	1905.5	1	577.6	2	1328.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

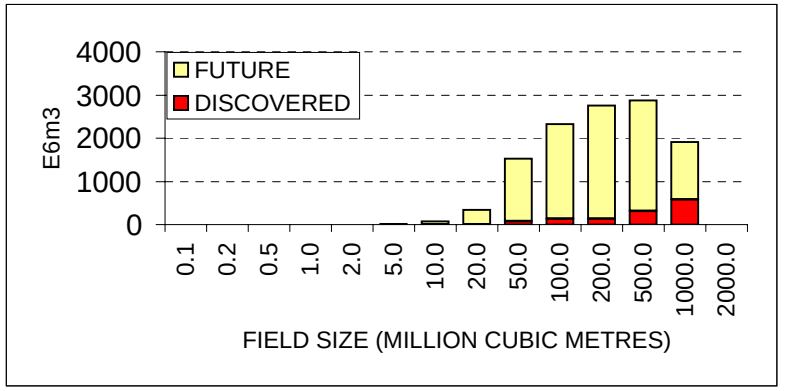
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	61	30	11	2
POTENTIAL (E6m3)	8699	6507	3887	1328
PROBABILITY (%)	43.0%	21.1%	7.7%	1.4%
AVERAGE SIZE (E6m3)	142.6	216.9	353.3	664.0

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	5	3	2	1
POTENTIAL (E6m3)	1166	1036	896	578
PROBABILITY (%)	71.4%	42.9%	28.6%	14.3%
AVERAGE SIZE (E6m3)	233.1	345.2	447.8	577.6

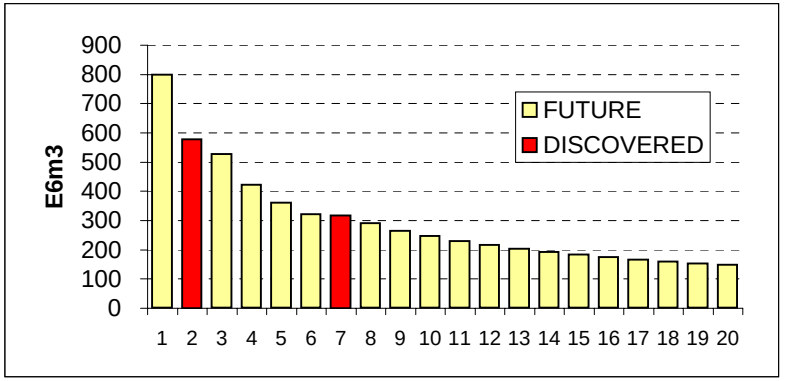
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20



DEH CHO TERRITORY PLAY 4 - SLAVE POINT BACK BARRIER/NE FAULT STRUCTURES - ULTIMATE OIL POTENTIAL

FIELD SIZE DISTRIBUTION

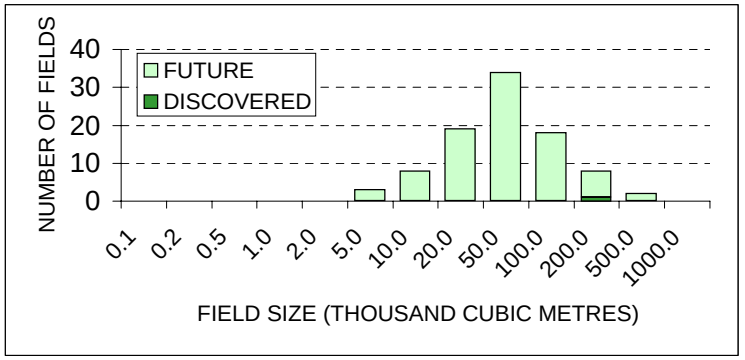
	ULTIMATE	DISCOVERED	FUTURE	
OIL RESOURCES (E3m3)	4368.5	198.6	4169.9	26.24
NUMBER OF FIELDS	92	1	91	
AVERAGE SIZE (E3m3)	47.5	198.6	45.8	
LARGEST FIELD (E3m3)	320.00	199	320	
SMALLEST FIELD (E3m3)	2.76	198.64	2.76	

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	3	11.8	0	0.0	3	11.8
10	8	62.5	0	0.0	8	62.5
20	19	281.4	0	0.0	19	281.4
50	34	1095.6	0	0.0	34	1095.6
100	18	1240.6	0	0.0	18	1240.6
200	8	1136.0	1	198.6	7	937.3
500	2	540.7	0	0.0	2	540.7
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

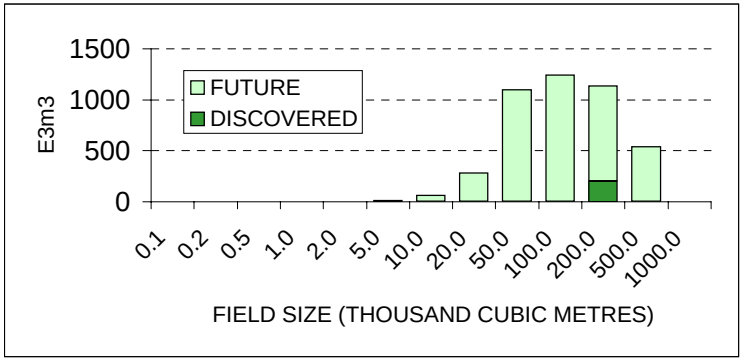
FUTURE FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	27	9	2	0
POTENTIAL (E3m3)	2719	1478	541	0
PROBABILITY (%)	29.7%	9.9%	2.2%	0.0%
AVERAGE SIZE (E3m3)	100.7	164.2	270.3	#DIV/0!

DISCOVERED FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	1	1	0	0
POTENTIAL (E3m3)	199	199	0	0
PROBABILITY (%)	100.0%	100.0%	0.0%	0.0%
AVERAGE SIZE (E3m3)	198.6	198.6	#DIV/0!	#DIV/0!

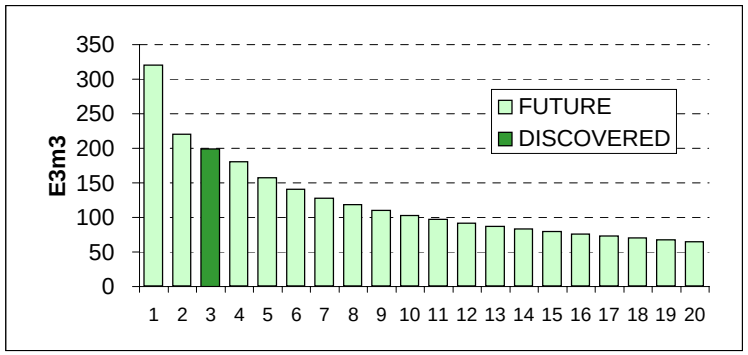
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

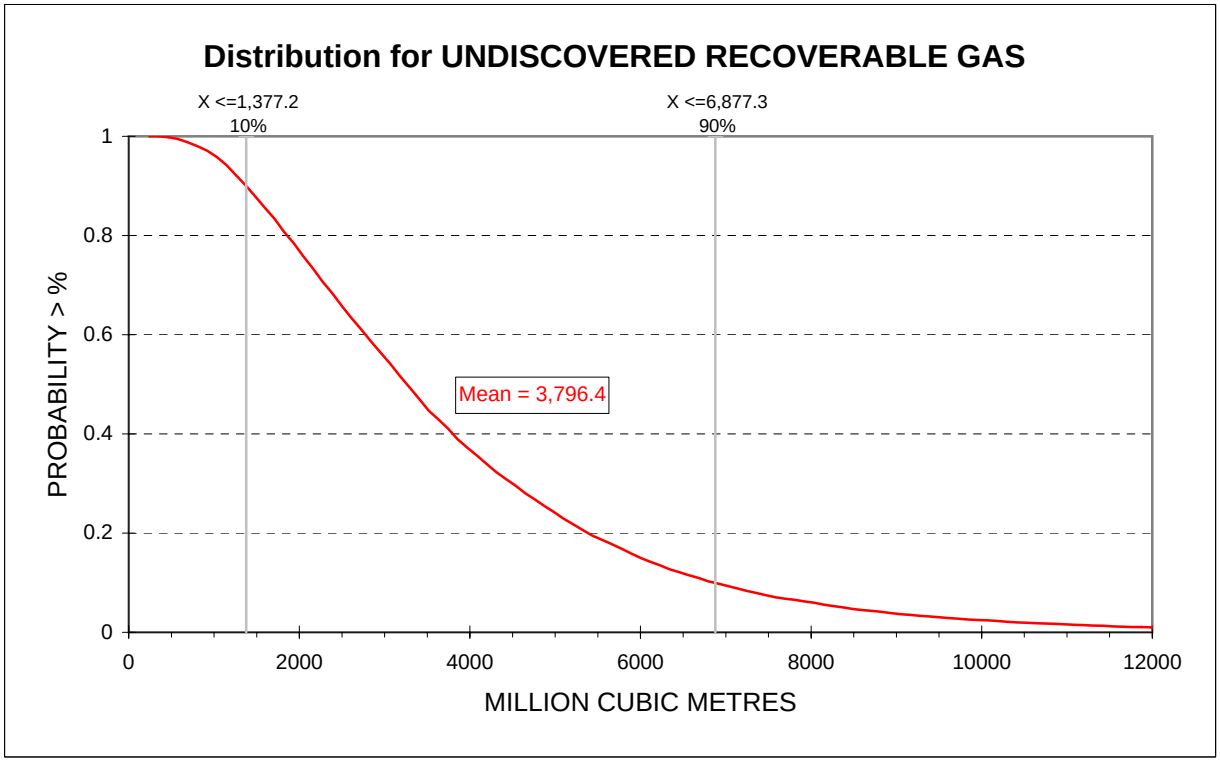


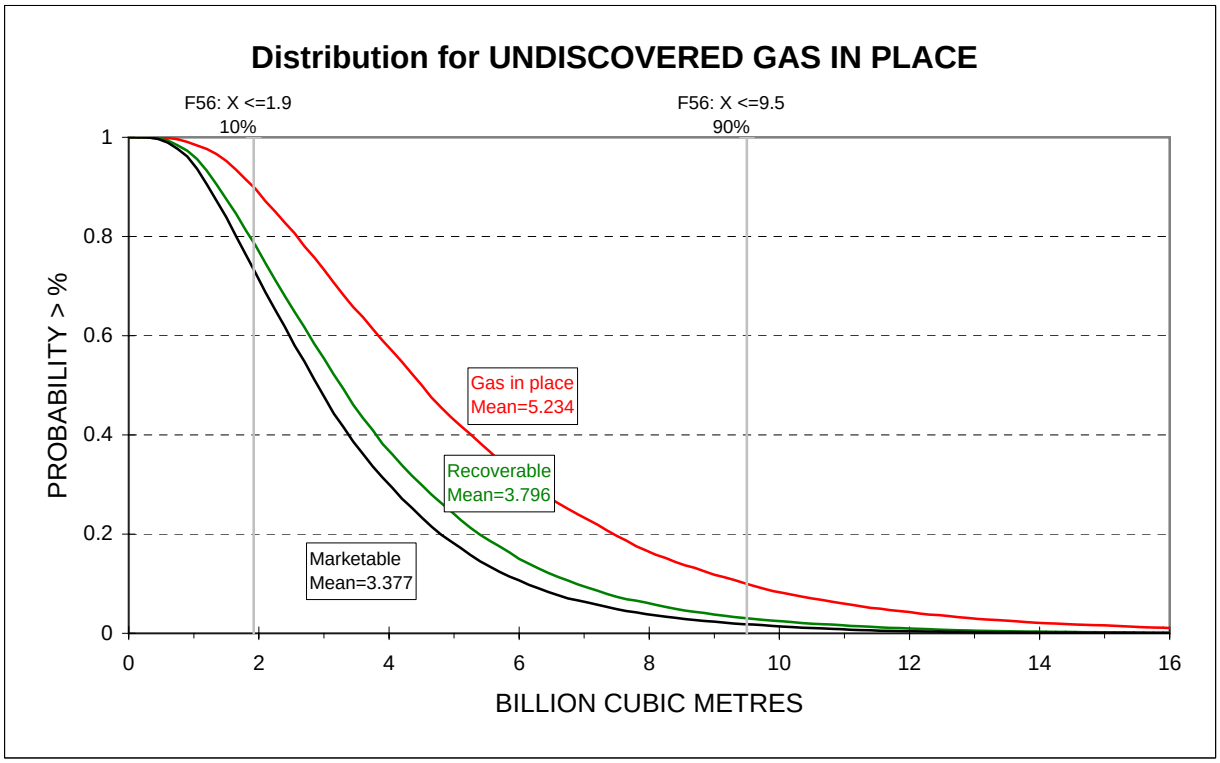
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

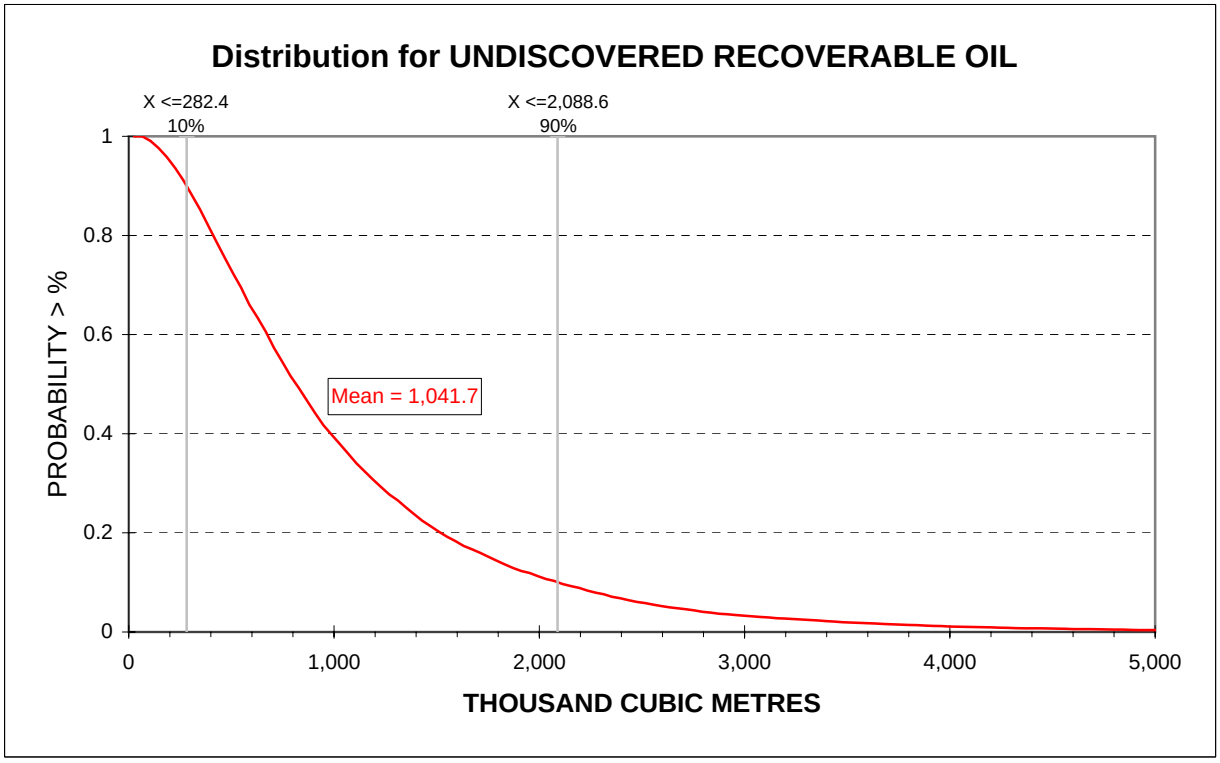
Play #	5
Play Name	Sulphur Point/Bistcho
References	Part of Upper Keg River Back Barrier-Cameron Hills, Middle Devonian Sulphur Point Bistcho (NEB); Sulphur Point platform facies-Bistcho (GSC); J349 (CGPC)
Reservoir Unit	Sulphur Point Fm (dolomitized Bistcho facies)
Distribution	To northern (and western) edge of Muskeg anhydrite; eastern boundary is sub-outcrop limit or facies transitions to tight limestones, shales and evaporites
Source/Seal	Watt Mountain and Muskeg fms/lime mudstones or anhydrite of basal Sulphur Point Fm, top seal is Muskeg Fm, lateral seals are faulted contacts with Muskeg Fm or tight carbonates, shales
Trap Style	Stratigraphic-reservoir facies are dolomitic grainstones or packstones deposited in peritidal channel environment; structural overprint (Cameron Hills)-traps in complex antiforms associated with NE trending basement horsts; dolomitization and fracturing associated with structure enhances reservoir characteristics; structural-possible drapes over salt collapse or mounds
Gas/Oil	gas (sour, non-associated west of Cordova embayment); gas and oil (east of Cordova embayment)
Exploration Risks	Recognition and distribution of facies; sufficient porosity/permeability
Mapped Area	0.848 Miilion Ha (2.094 Million Acres)
Deh Cho significant fields/wells	Cameron Hills
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	3,796 Million cubic metres (134.75 Bcf)
Undiscovered Marketable Gas	3,377 Million cubic metres (119.87 Bcf)
Undiscovered Recoverable Oil	1,042 Thousand cubic metres (6.56 MB)
Undiscovered Gas Fields	51 Fields, Largest 710 million cubic feet (25.2 Bcf)
Undiscovered Oil Fields	31 Fields, Largest 225 thousand cubic feet (1.4 MMB)

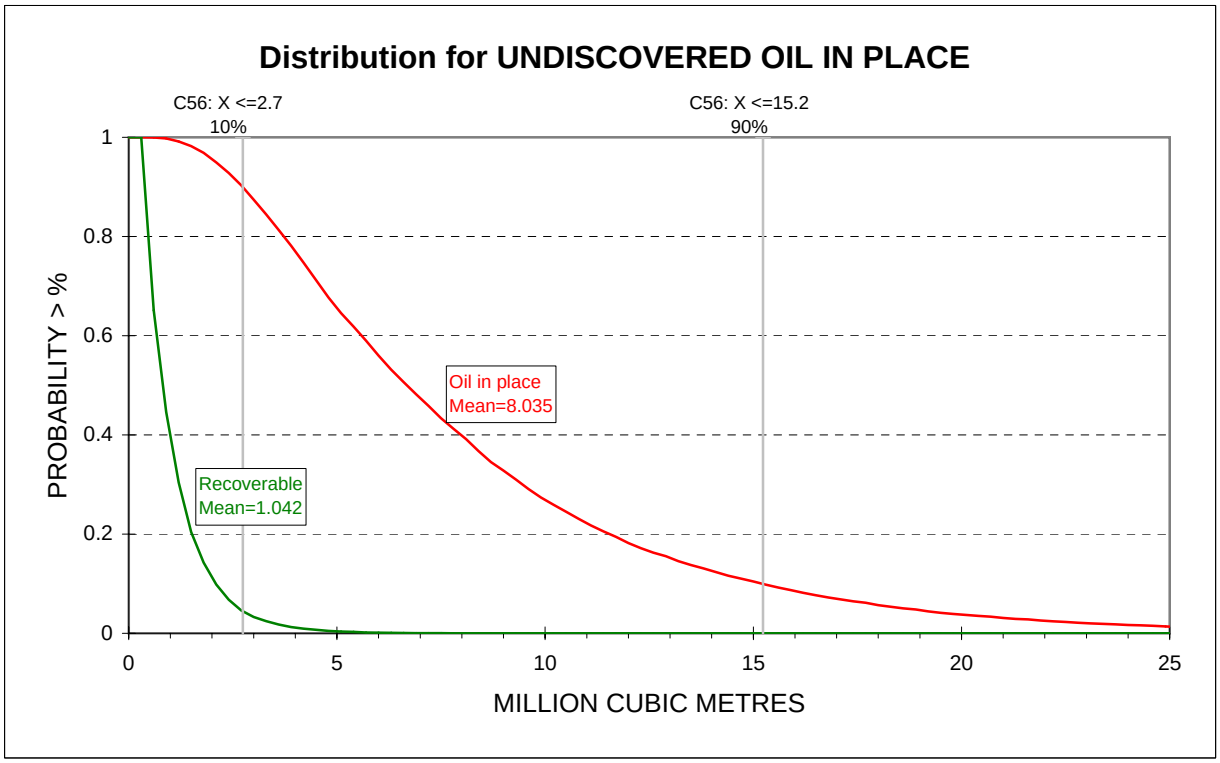
DEH CHO TERRITORY
SULPHUR POINT/BISTCHO (PLAY 5)





DEH CHO TERRITORY
SULPHUR POINT/BISTCHO (PLAY 5)

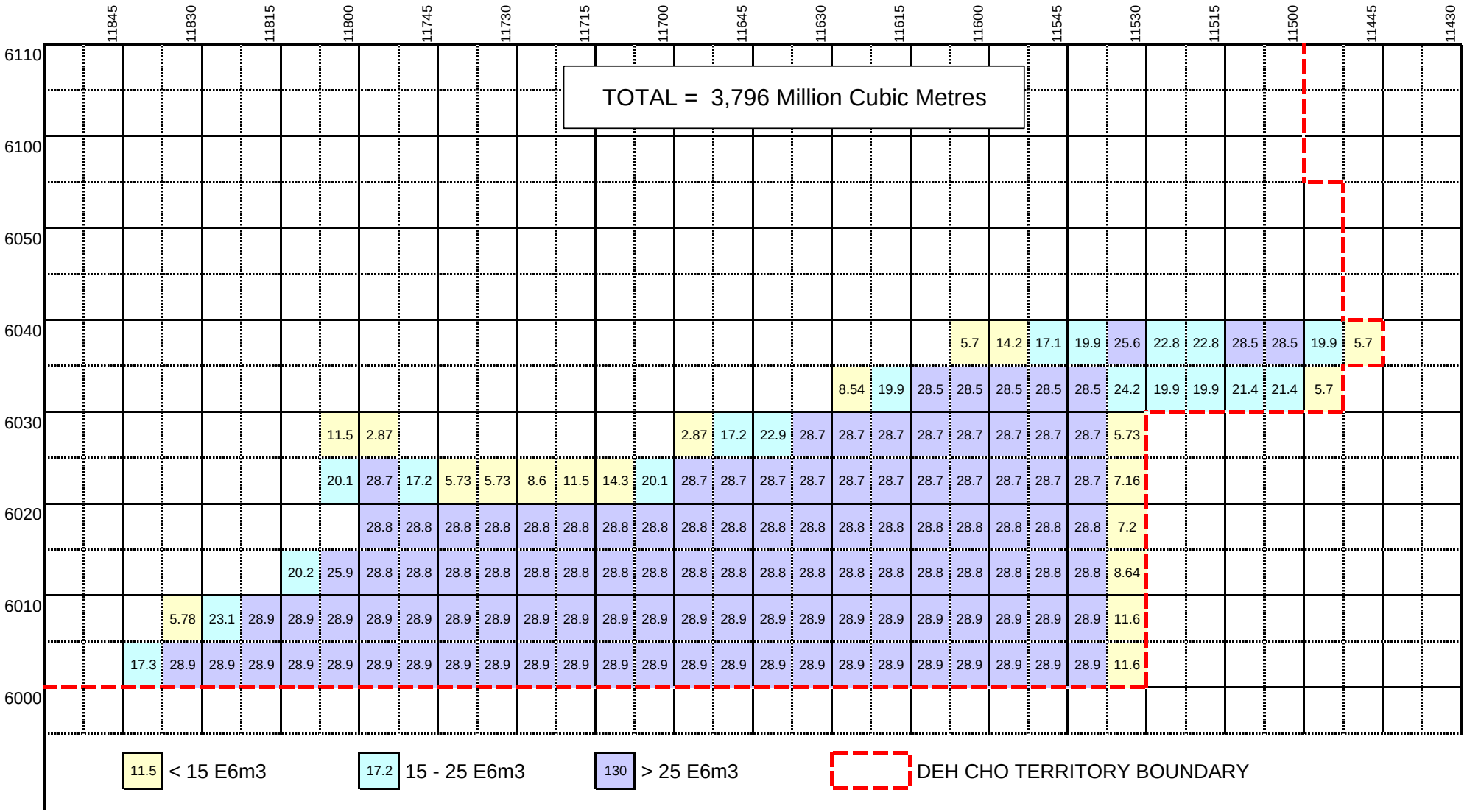




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 5 - SULPHUR POINT/BISTCHO

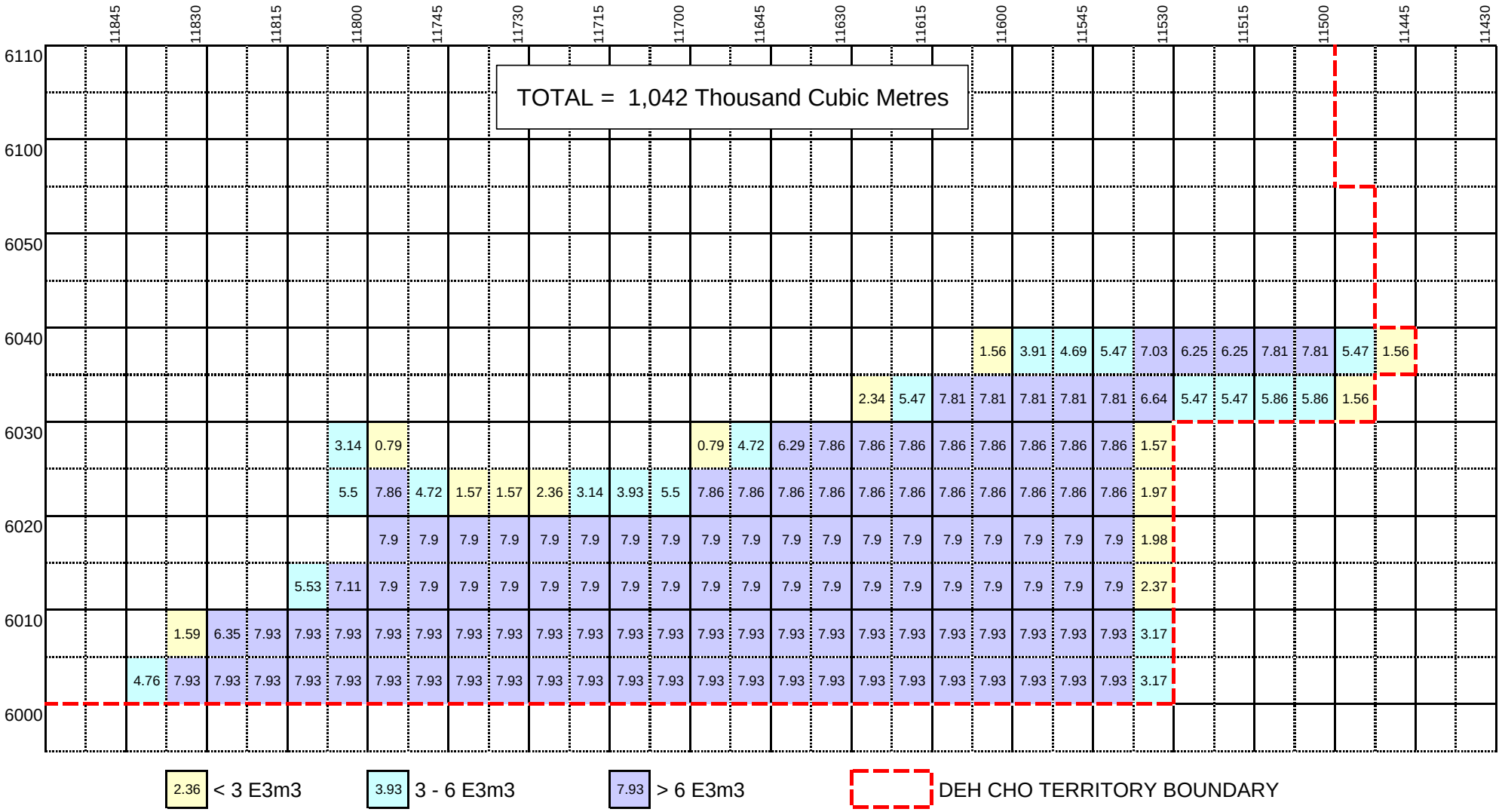
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE OIL PLAY 5 - SULPHUR POINT/BISTCHO

(THOUSAND CUBIC METRES / QUARTER GRID)



PLAY AREA 5 - SULPHUR POINT/BISTCHO - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

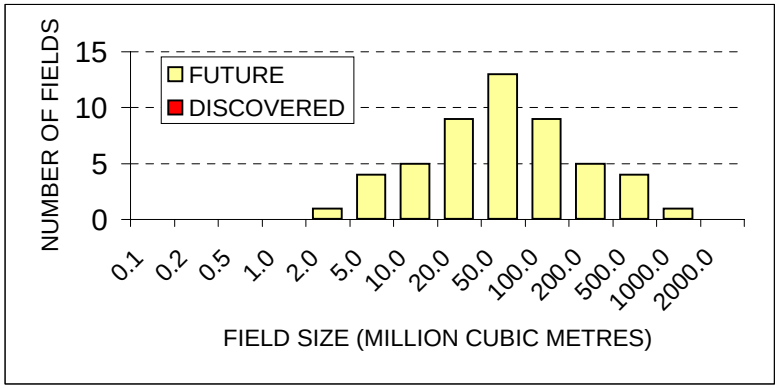
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	3796.3	0.0	3796.3
NUMBER OF FIELDS	51	0	51
AVERAGE SIZE (E6m3)	74.4		74.4
LARGEST FIELD (E6m3)	710		710
SMALLEST FIELD (E6m3)	1.30		1.30

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.3	0	0.0	1	1.3
5	4	14.8	0	0.0	4	14.8
10	5	37.7	0	0.0	5	37.7
20	9	131.9	0	0.0	9	131.9
50	13	423.6	0	0.0	13	423.6
100	9	638.0	0	0.0	9	638.0
200	5	678.3	0	0.0	5	678.3
500	4	1160.5	0	0.0	4	1160.5
1000	1	710.0	0	0.0	1	710.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

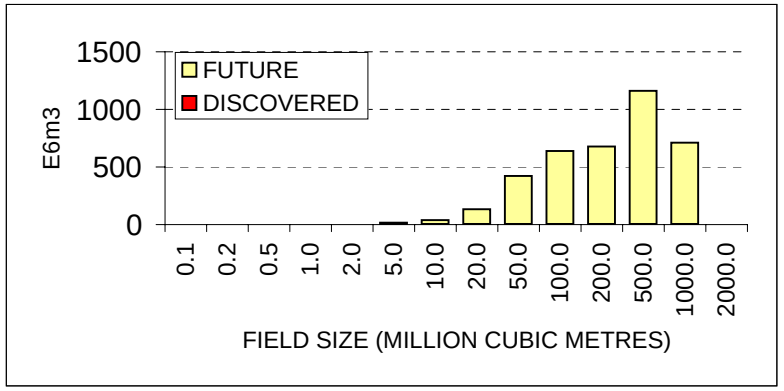
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	19	10	5	1
POTENTIAL (E6m3)	3187	2549	1871	710
PROBABILITY (%)	37.3%	19.6%	9.8%	2.0%
AVERAGE SIZE (E6m3)	167.7	254.9	374.1	710.0

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

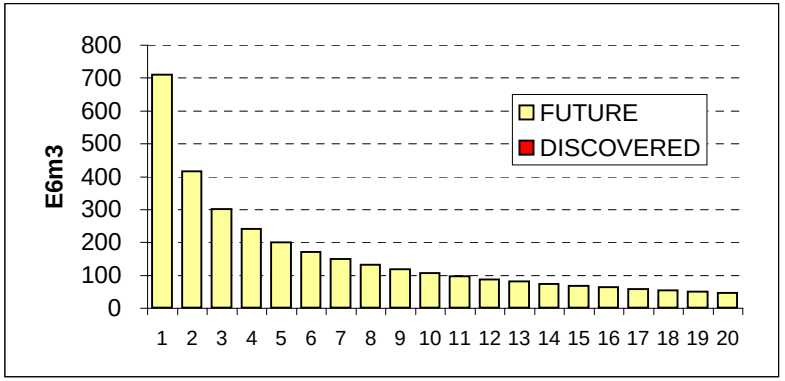
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20



DEH CHO TERRITORY PLAY 5 - SULPHUR POINT/BISTCHO - ULTIMATE OIL POTENTIAL

FIELD SIZE DISTRIBUTION

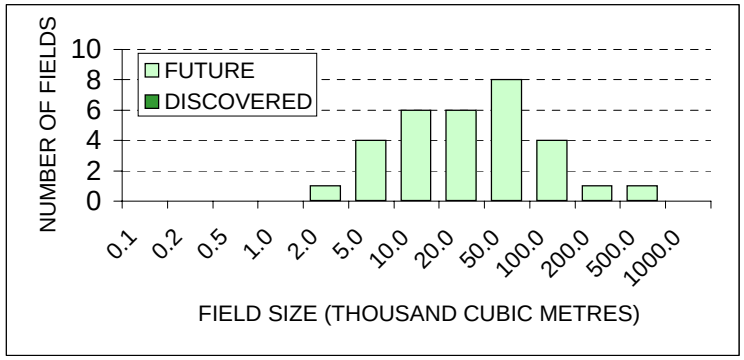
	ULTIMATE	DISCOVERED	FUTURE
OIL RESOURCES (E3m3)	1041.7	0.0	1041.7
NUMBER OF FIELDS	31	0	31
AVERAGE SIZE (E3m3)	33.6		33.6
LARGEST FIELD (E3m3)	225.00		225
SMALLEST FIELD (E3m3)	1.13		1.13

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.1	0	0.0	1	1.1
5	4	12.9	0	0.0	4	12.9
10	6	44.5	0	0.0	6	44.5
20	6	86.7	0	0.0	6	86.7
50	8	248.7	0	0.0	8	248.7
100	4	288.7	0	0.0	4	288.7
200	1	134.0	0	0.0	1	134.0
500	1	225.0	0	0.0	1	225.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

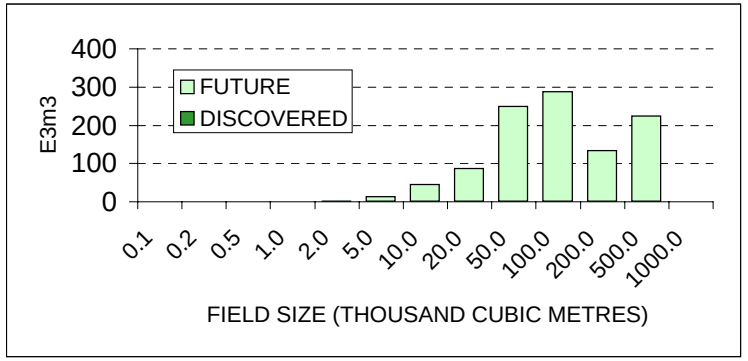
FUTURE FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	6	2	1	0
POTENTIAL (E3m3)	648	359	225	0
PROBABILITY (%)	19.4%	6.5%	3.2%	0.0%
AVERAGE SIZE (E3m3)	107.9	179.5	225.0	#DIV/0!

DISCOVERED FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	0	0	0	0
POTENTIAL (E3m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E3m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

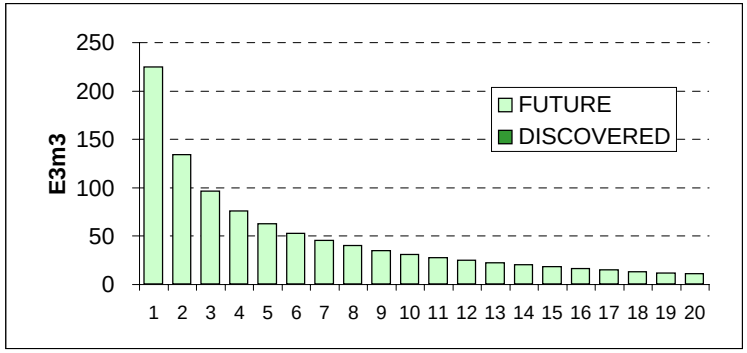
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

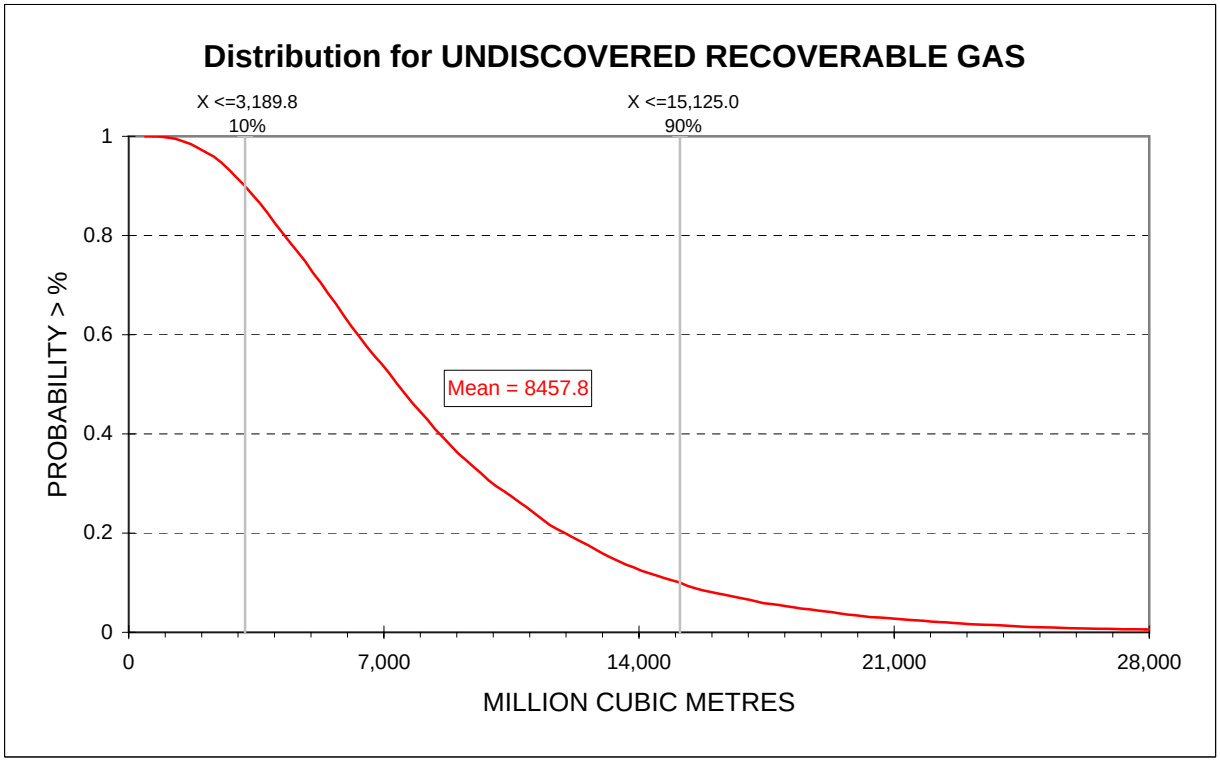


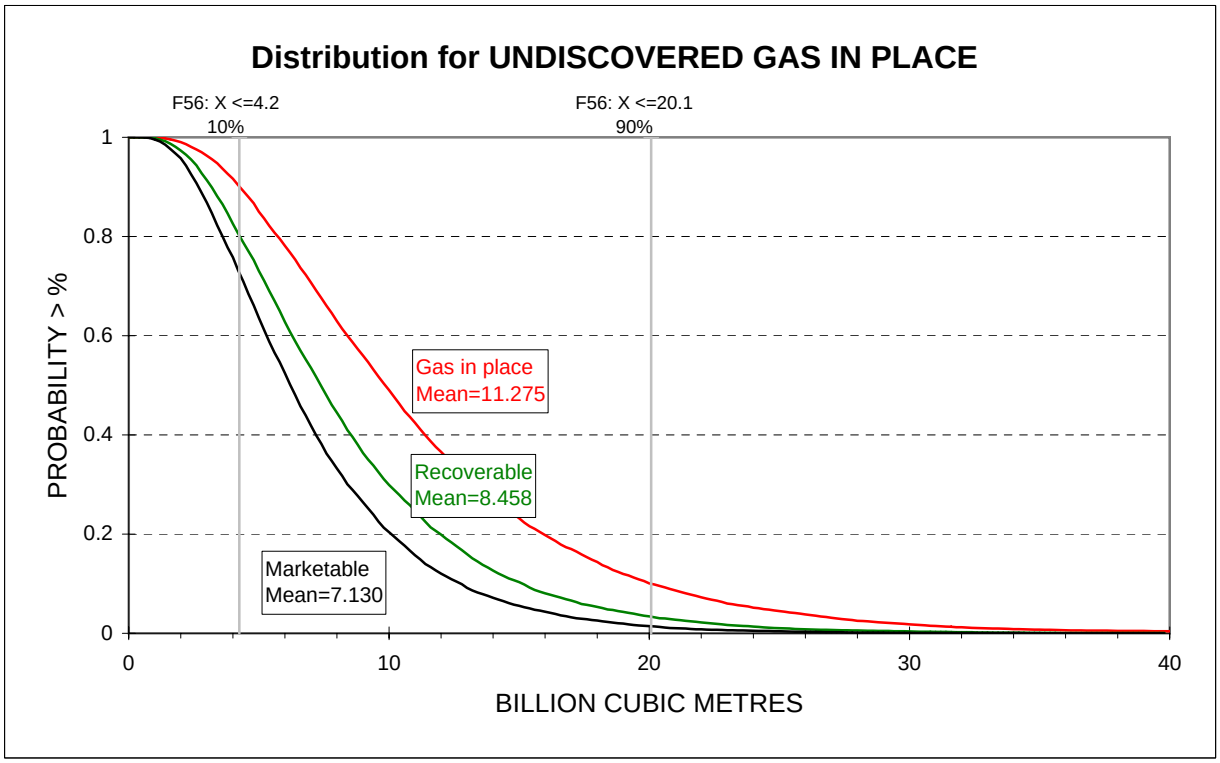
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	6
Play Name	Lonely Bay platform isolated reefs/Horn Plateau
References	Upper Keg River (Pine Point) isolated reefs-Yoyo/Sierra, part of Slave Point barrier and Isolated Reefs (Clarke Lake/Yoyo/Kotcho), Upper Keg River (Pine Point) isolated reefs-Horn Plateau, part of Slave Point isolated reefs-deep bank (NEB); Keg River Isolated Reef (Yoyo; GSC); F340, J347, also A348 (CGPC)
Reservoir Unit	Horn Plateau Fm and equivalents, isolated slope and platform pinnacle reefs on lower Keg River (Lonely Bay/Nahanni) platform, includes Slave Point buildups on pre-existing lower Keg River reefs
Distribution	Outboard of north and west margin of Middle Devonian carbonate barrier; east boundary is subcrop/outcrop limit at Canadian Shield; west boundary is Bovie fault
Source/Seal	Muskwa, Besa River, Horn River, Buffalo River fms/Muskwa, Besa River or tight Slave Point fms
Trap Style	Stratigraphic/diagenetic-isolated bioherms basinward of Slave Point edge; reservoirs should be dolomitized and fractured to be productive
Gas/Oil	gas (sour, non associated) in west; oil +/-gas(?) in east
Exploration Risks	Dolomite distribution, fracturing; if Slave Point reservoir then dependent on the development of a dolomitized conduit in the underlying Keg River Fm (in all cases, it is very difficult to differentiate Slave Point Fm reef from underlying Horn Plateau Fm reef)
Mapped Area	4.965 Miilion Ha (12.268 Million Acres)
Deh Cho significant fields/wells	Trout River D-14, Mink Lake I-38
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	8,458 Million cubic metres (300.20 Bcf)
Undiscovered Marketable Gas	7,130 Million cubic metres (253.07 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	87 Fields, Largest 1,015 million cubic feet (36.0 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
LONELY BAY/HORN PLATEAU REEFS (PLAY 6)

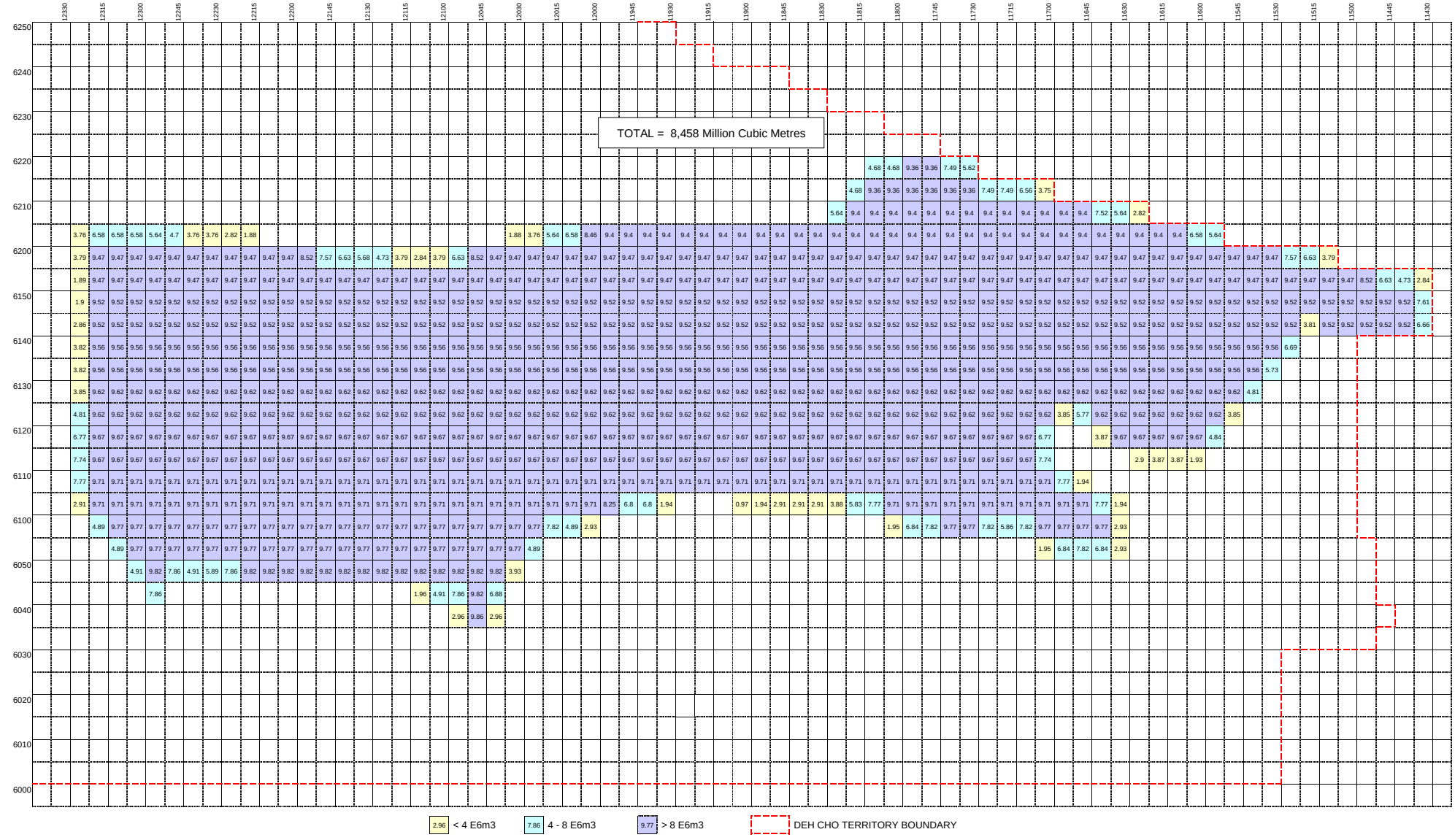




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 6 - LONELY BAY PLATFORM ISOLATED REEFS/HORN PLATEAU

(MILLION CUBIC METRES / QUARTER GRID)



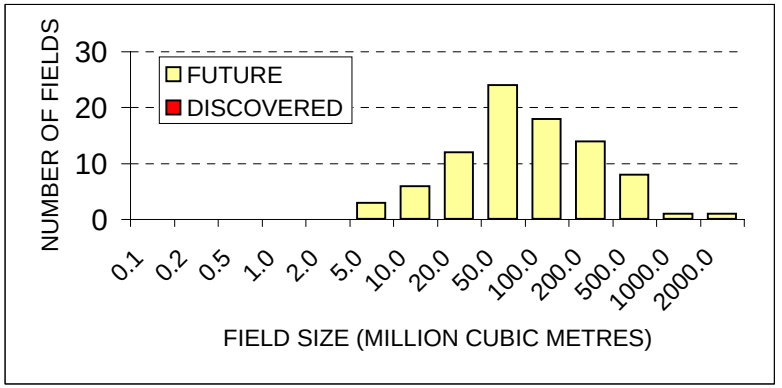
'LAY AREA 6 - LONELY BAY PLATFORM ISOLATED REEFS/HORN PLATEAU - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

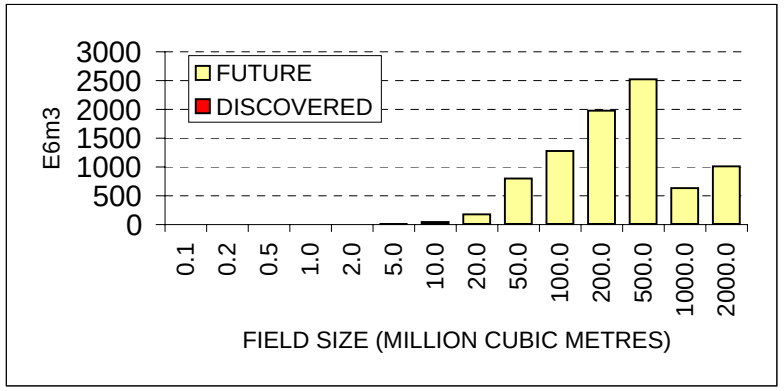
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	8457.8	0.0	8457.8
NUMBER OF FIELDS	87	0	87
AVERAGE SIZE (E6m3)	97.2		97.2
LARGEST FIELD (E6m3)	1015		1015
SMALLEST FIELD (E6m3)	2.15		2.15

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	3	10.3	0	0.0	3	10.3
10	6	46.1	0	0.0	6	46.1
20	12	179.7	0	0.0	12	179.7
50	24	801.3	0	0.0	24	801.3
100	18	1274.3	0	0.0	18	1274.3
200	14	1974.5	0	0.0	14	1974.5
500	8	2523.9	0	0.0	8	2523.9
1000	1	632.7	0	0.0	1	632.7
2000	1	1015.0	0	0.0	1	1015.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

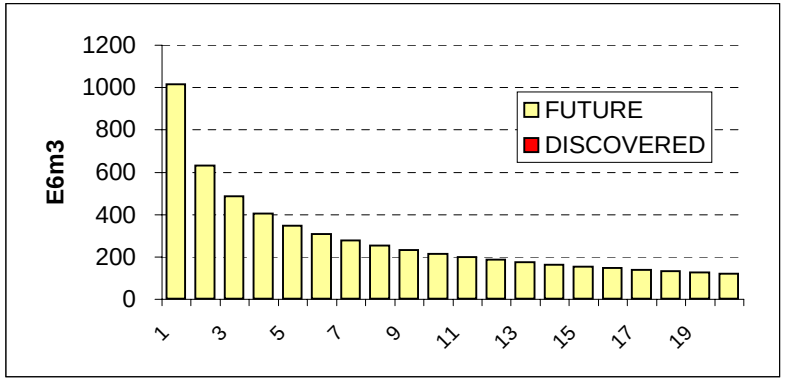
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20



FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	42	24	10	2
POTENTIAL (E6m3)	7420	6146	4172	1648
PROBABILITY (%)	48.3%	27.6%	11.5%	2.3%
AVERAGE SIZE (E6m3)	176.7	256.1	417.2	823.9

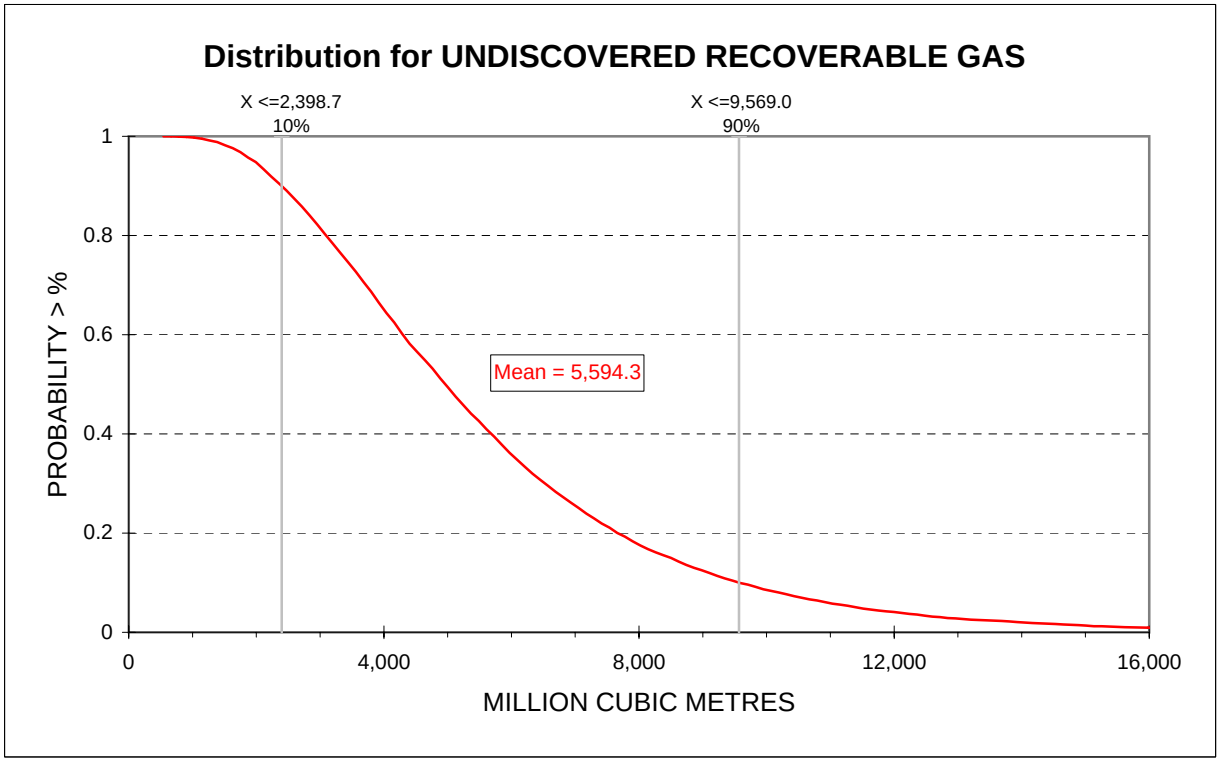
DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

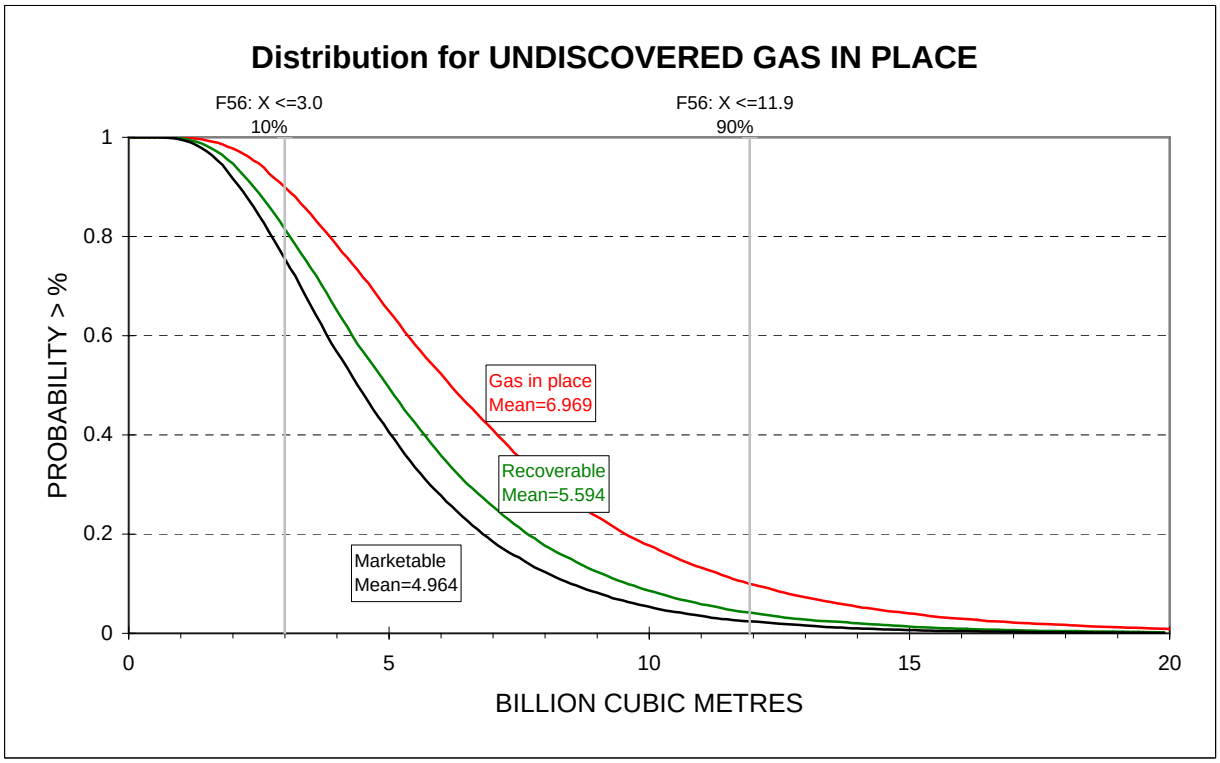
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

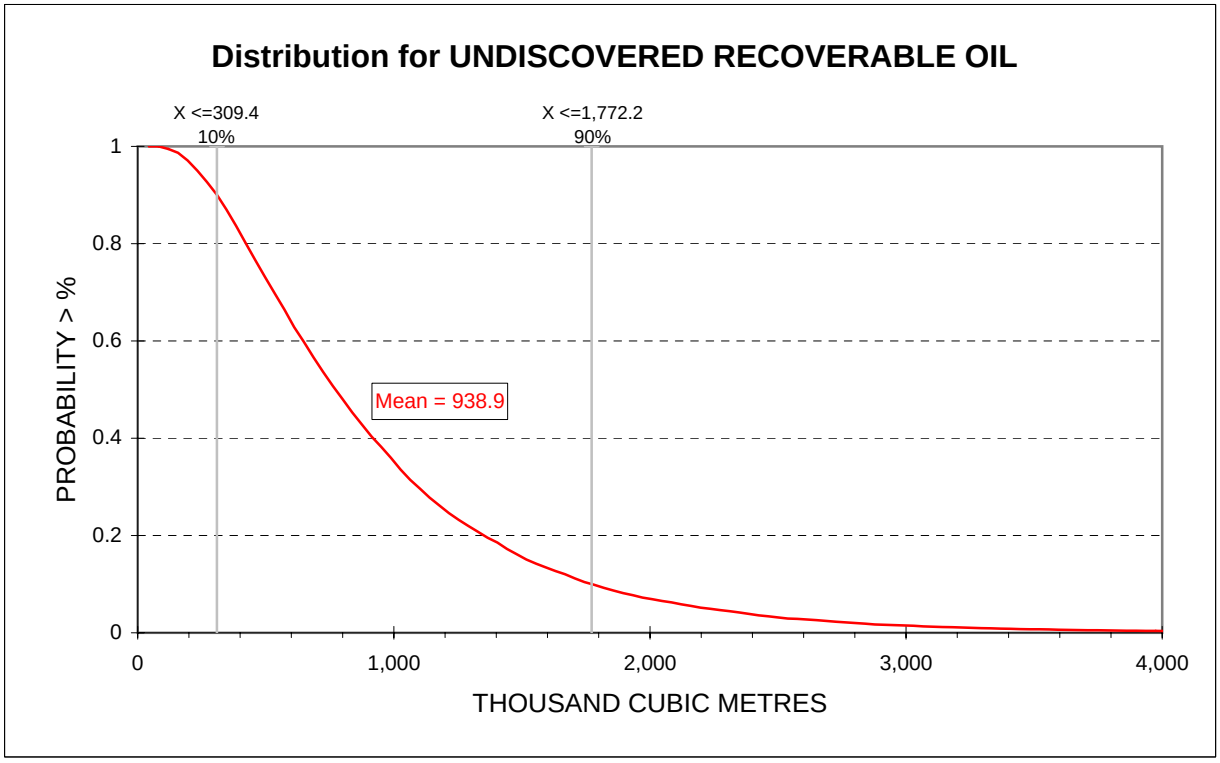
Play #	7
Play Name	Basal Cretaceous clastics
References	Basal Cretaceous clastics-Arrowhead (NEB)
Reservoir Unit	Lower Cretaceous fluvial and shallow marine clastics (Chinkeh, Scatter and Sikanni fms of Fort St. John Group)
Distribution	North, south and east boundaries are subcrop limits; west boundary is limit of Laramide deformation (Bovie fault)
Source/Seal	Fort St. John Group shales, possibly Toad-Grayling Fm/Fort St. John Group shales
Trap Style	Stratigraphic-valley fill, channel fill, near-shore sands on pre-Cretaceous unconformity
Gas/Oil	gas associated with oil
Exploration Risks	Breaching?; reservoir quality
Mapped Area	5.320 Miilion Ha (13.145 Million Acres)
Deh Cho significant fields/wells	Arrowhead B-41, Bovie Lake M-05
Discovered Resources	1 Gas Field - 248 million cubic metres (8.8Bcf) recoverable gas.
Undiscovered Recoverable Gas	5,594 Million cubic metres (198.56 Bcf)
Undiscovered Marketable Gas	4,964 Million cubic metres (176.20 Bcf)
Undiscovered Recoverable Oil	939 Thousand cubic metres (5.91 MB)
Undiscovered Gas Fields	51 Fields, Largest 1,100 million cubic feet (39.0 Bcf)
Undiscovered Oil Fields	32 Fields, Largest 190 thousand cubic feet (1.2 MMB)

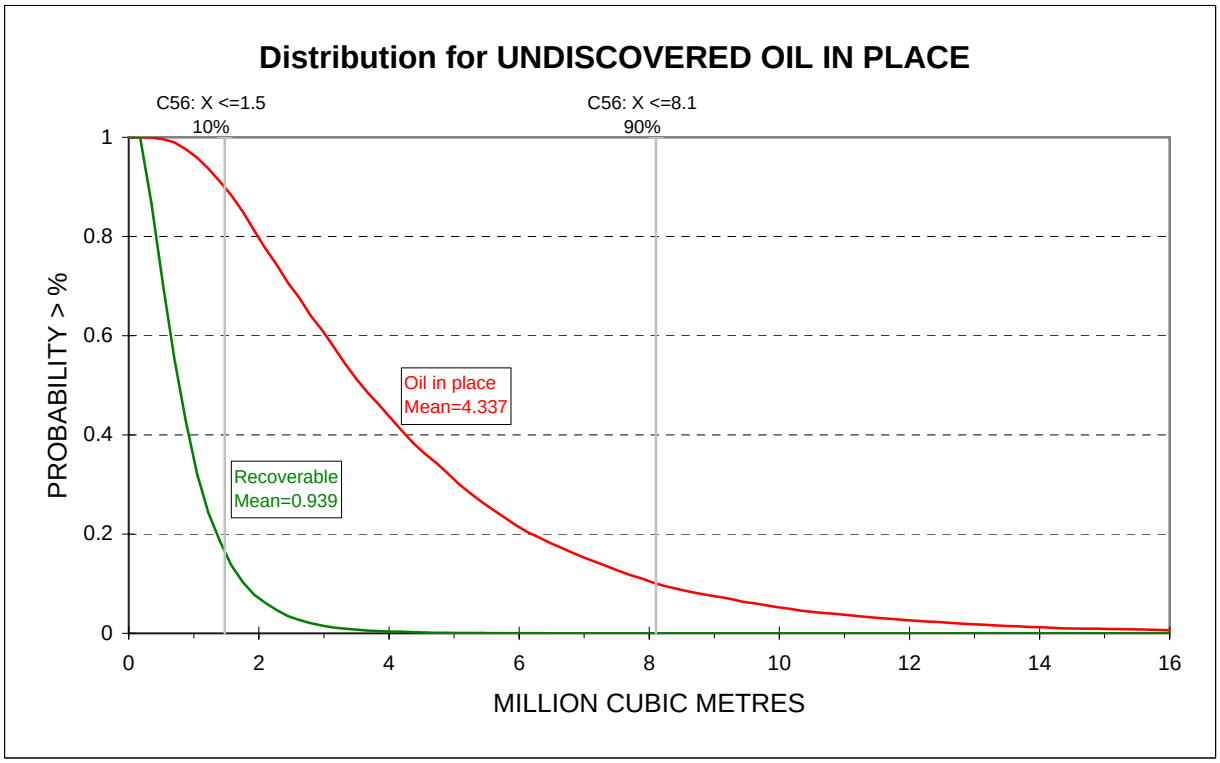
DEH CHO TERRITORY
BASAL CRETACEOUS - ARROWHEAD (PLAY 7)





DEH CHO TERRITORY
BASAL CRETACEOUS - ARROWHEAD (PLAY 7)





DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 7 - BASAL CRETACEOUS CLASTICS

(MILLION CUBIC METRES / QUARTER GRID)

DEH CHO TERRITORY

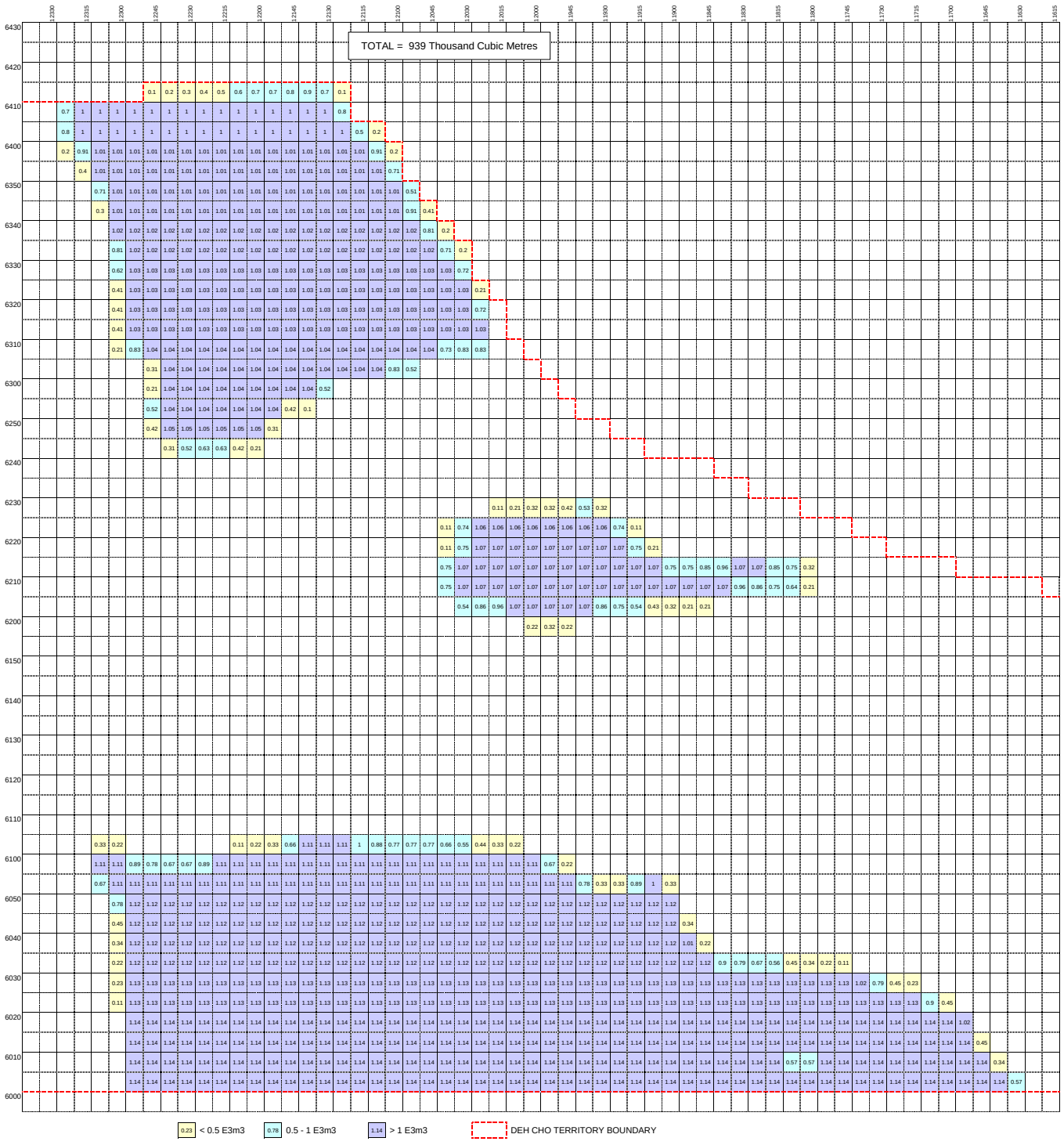
DISTRIBUTION OF ULTIMATE RECOVERABLE GAS PLAY 7 - BASAL CRETACEOUS CLASTICS

(MILLION CUBIC METRES / QUARTER GRID)

DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE OIL PLAY 7 - BASAL CRETACEOUS CLASTICS

(THOUSAND CUBIC METRES / QUARTER GRID)



PLAY AREA 7 - BASAL CRETACEOUS CLASTICS - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

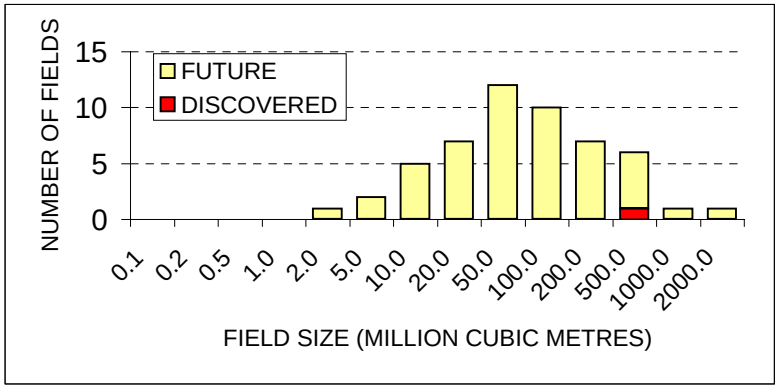
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	5842.3	248.0	5594.3
NUMBER OF FIELDS	52	1	51
AVERAGE SIZE (E6m3)	112.4	248.0	109.7
LARGEST FIELD (E6m3)	1100	248	1100
SMALLEST FIELD (E6m3)	1.59	247.99	1.59

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.6	0	0.0	1	1.6
5	2	7.2	0	0.0	2	7.2
10	5	37.8	0	0.0	5	37.8
20	7	105.7	0	0.0	7	105.7
50	12	391.9	0	0.0	12	391.9
100	10	712.5	0	0.0	10	712.5
200	7	1011.3	0	0.0	7	1011.3
500	6	1836.0	1	248.0	5	1588.0
1000	1	638.5	0	0.0	1	638.5
2000	1	1100.0	0	0.0	1	1100.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

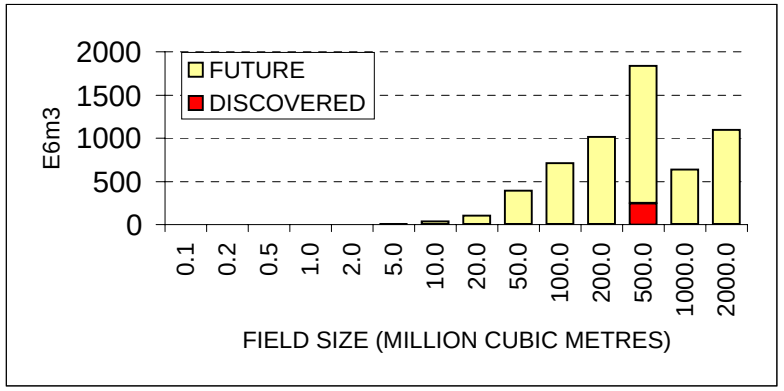
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	24	14	7	2
POTENTIAL (E6m3)	5050	4338	3326	1738
PROBABILITY (%)	47.1%	27.5%	13.7%	3.9%
AVERAGE SIZE (E6m3)	210.4	309.8	475.2	869.2

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	1	1	1	0
POTENTIAL (E6m3)	248	248	248	0
PROBABILITY (%)	100.0%	100.0%	100.0%	0.0%
AVERAGE SIZE (E6m3)	248.0	248.0	248.0	#DIV/0!

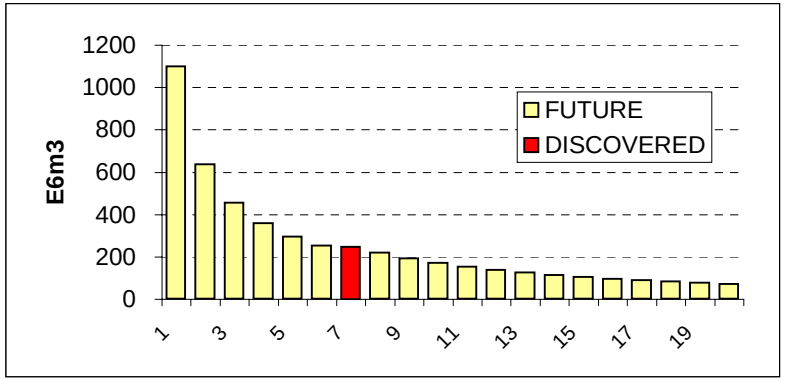
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20



DEH CHO TERRITORY PLAY 7 - BASAL CRETACEOUS CLASTICS - ULTIMATE OIL POTENTIAL

FIELD SIZE DISTRIBUTION

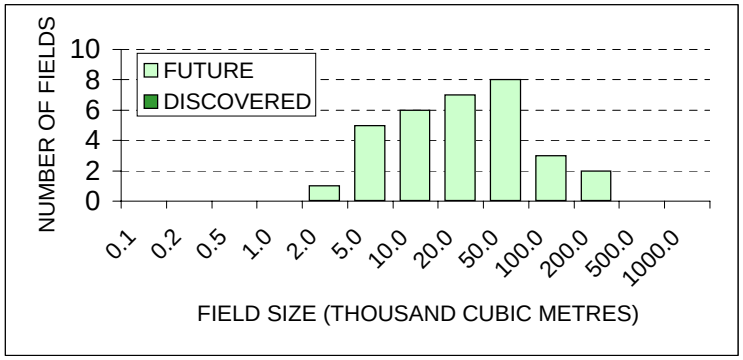
	ULTIMATE	DISCOVERED	FUTURE
OIL RESOURCES (E3m3)	938.9	0.0	938.9
NUMBER OF FIELDS	32	0	32
AVERAGE SIZE (E3m3)	29.3		29.3
LARGEST FIELD (E3m3)	190.00		190
SMALLEST FIELD (E3m3)	1.14		1.14

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.1	0	0.0	1	1.1
5	5	17.4	0	0.0	5	17.4
10	6	46.1	0	0.0	6	46.1
20	7	103.9	0	0.0	7	103.9
50	8	258.4	0	0.0	8	258.4
100	3	207.2	0	0.0	3	207.2
200	2	304.9	0	0.0	2	304.9
500	0	0.0	0	0.0	0	0.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

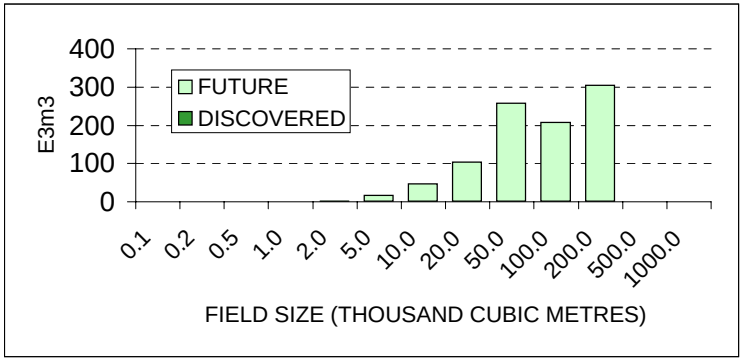
FUTURE FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	5	2	0	0
POTENTIAL (E3m3)	512	305	0	0
PROBABILITY (%)	15.6%	6.3%	0.0%	0.0%
AVERAGE SIZE (E3m3)	102.4	152.4	#DIV/0!	#DIV/0!

DISCOVERED FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	0	0	0	0
POTENTIAL (E3m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E3m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

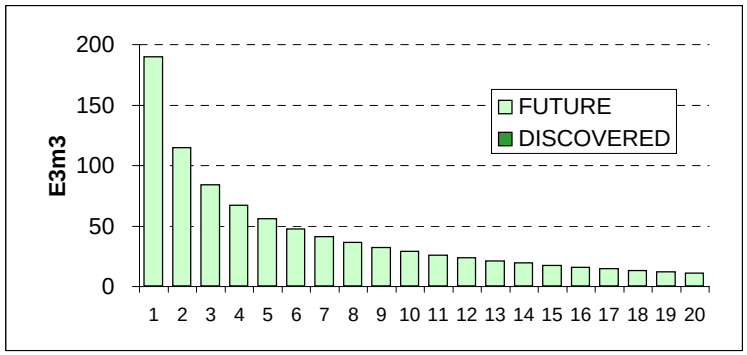
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

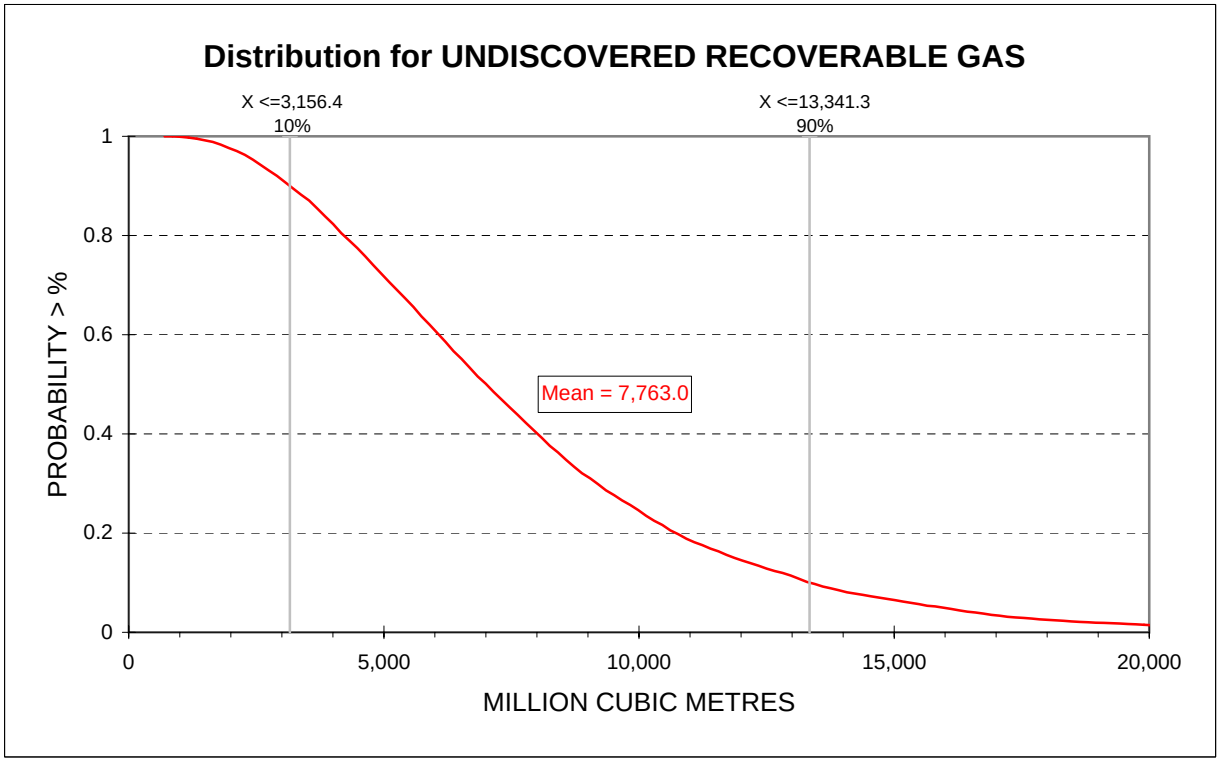


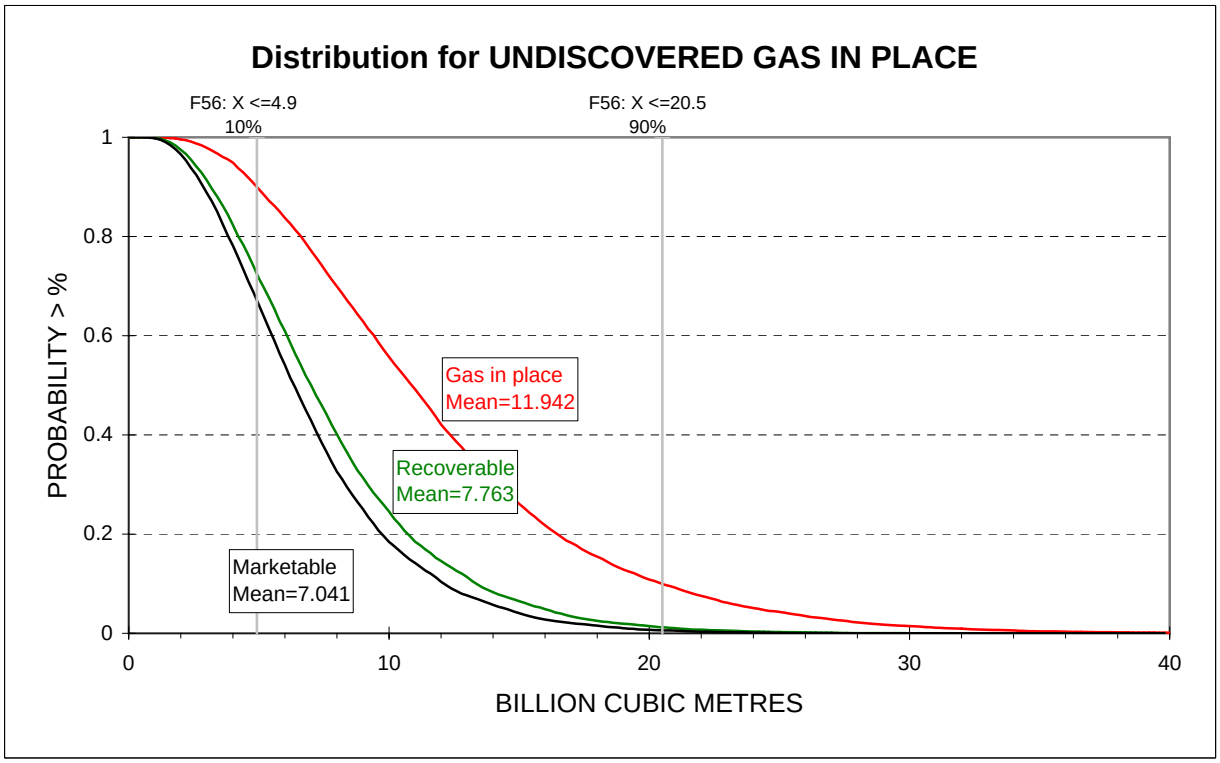
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	8
Play Name	Jean Marie Member
References	Jean Marie Platform/Barrier edge-Celibeta, Jean Marie stratigraphic-Helmet (NEB); Jean Marie Biostrome (Helmet North; GSC); F317 (CGPC)
Reservoir Unit	Jean Marie Mbr of Redknife Fm; silty to dolomitic biostromal shelf carbonates and dolomitized reef front carbonates; foreslope pinnacle reefs along margin of Jean Marie Mbr platform
Distribution	North margin is Jean Marie Mbr outcrop/subcrop; western boundary is Jean Marie Mbr platform edge; east boundary is east side Cordova embayment (but possibly continues further east)
Source/Seal	Horn River, Fort Simpson fms/tight limey facies or silty Redknife Fm is top seal; Fort Simpson Fm lateral seal
Trap Style	Stratigraphic (+/-diagenetic)-coral and stromatoporoid reservoir facies in limey mudstone-wackestones; structure for the trap-reservoir characteristics provided by localized differential compaction and drape over Slave Point Fm structure, and also over faulted Slave Point Fm and older traps; reservoirs enhanced by dolomitization (necessary), fracturing and dissolution
Gas/Oil	gas (sour) associated with oil in east
Exploration Risks	Reservoirs tend to be underpressured, prone to formation damage; generally thin pay needs large closures for worthwhile pools; secondary porosity and permeability important
Mapped Area	1.667 Miilion Ha (4.120 Million Acres)
Deh Cho significant fields/wells	Celibeta H-78
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	7,763 Million cubic metres (275.54 Bcf)
Undiscovered Marketable Gas	7,041 Million cubic metres (249.91 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	147 Fields, Largest 620 million cubic feet (22.0 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
JEAN MARIE (PLAY 8)

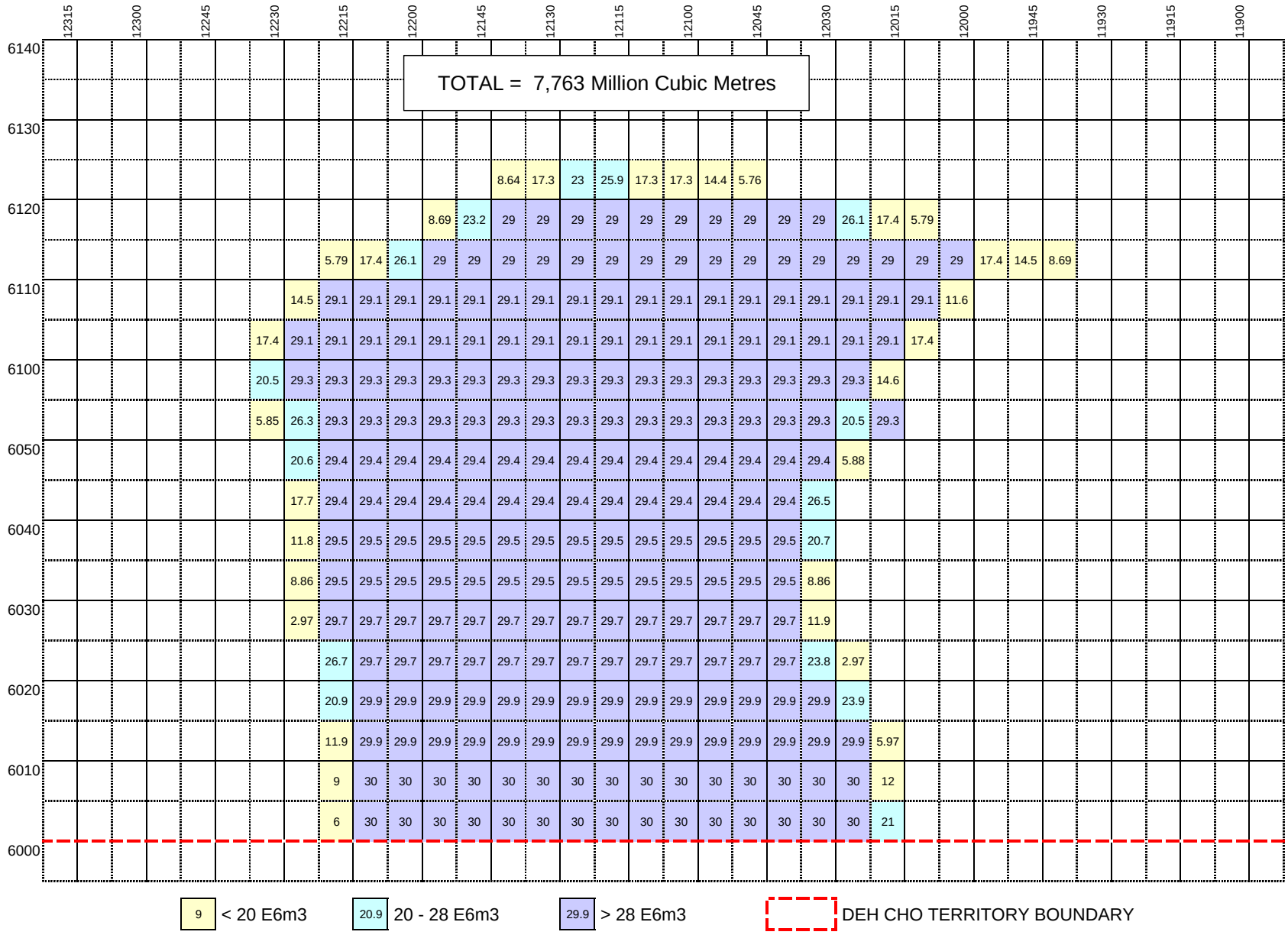




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 8 - JEAN MARIE MEMBER

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 8 - JEAN MARIE MEMBER - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

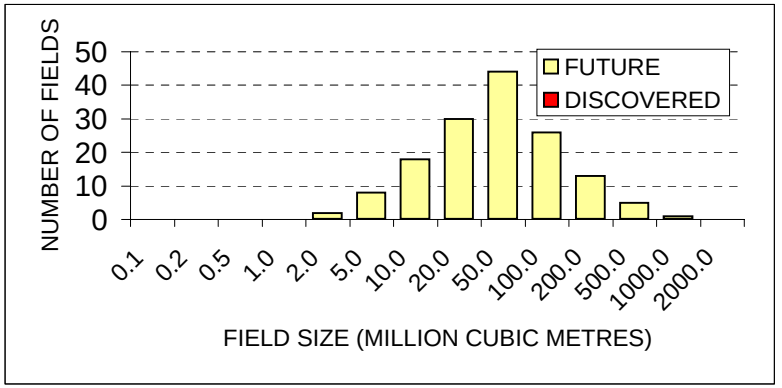
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	7763.0	0.0	7763.0
NUMBER OF FIELDS	147	0	147
AVERAGE SIZE (E6m3)	52.8		52.8
LARGEST FIELD (E6m3)	620		620
SMALLEST FIELD (E6m3)	1.20		1.20

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	2	3.1	0	0.0	2	3.1
5	8	29.0	0	0.0	8	29.0
10	18	133.9	0	0.0	18	133.9
20	30	443.1	0	0.0	30	443.1
50	44	1426.5	0	0.0	44	1426.5
100	26	1828.1	0	0.0	26	1828.1
200	13	1827.4	0	0.0	13	1827.4
500	5	1452.0	0	0.0	5	1452.0
1000	1	620.0	0	0.0	1	620.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

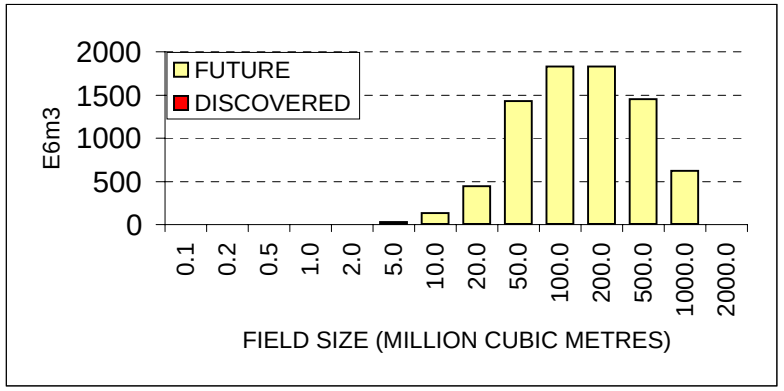
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	45	19	6	1
POTENTIAL (E6m3)	5727	3899	2072	620
PROBABILITY (%)	30.6%	12.9%	4.1%	0.7%
AVERAGE SIZE (E6m3)	127.3	205.2	345.3	620.0

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

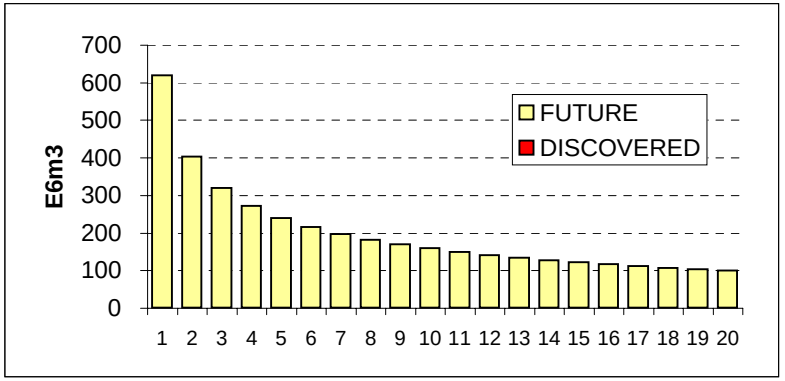
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

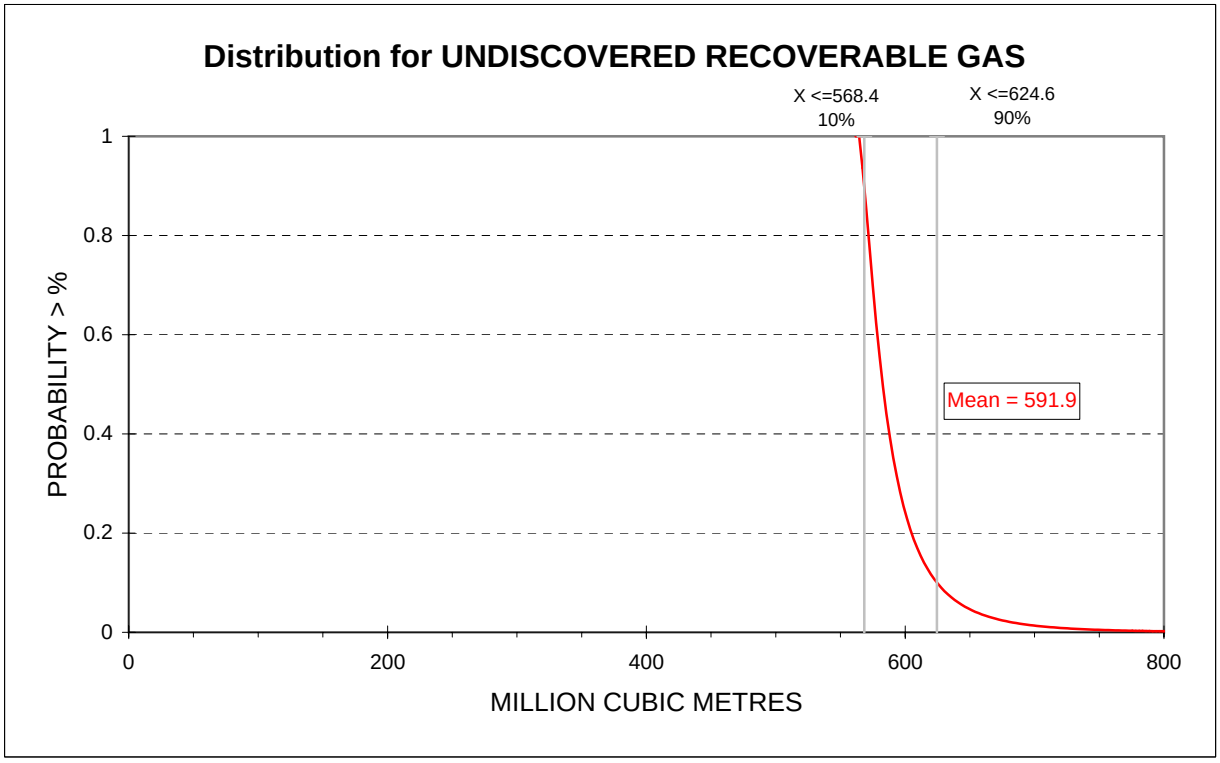


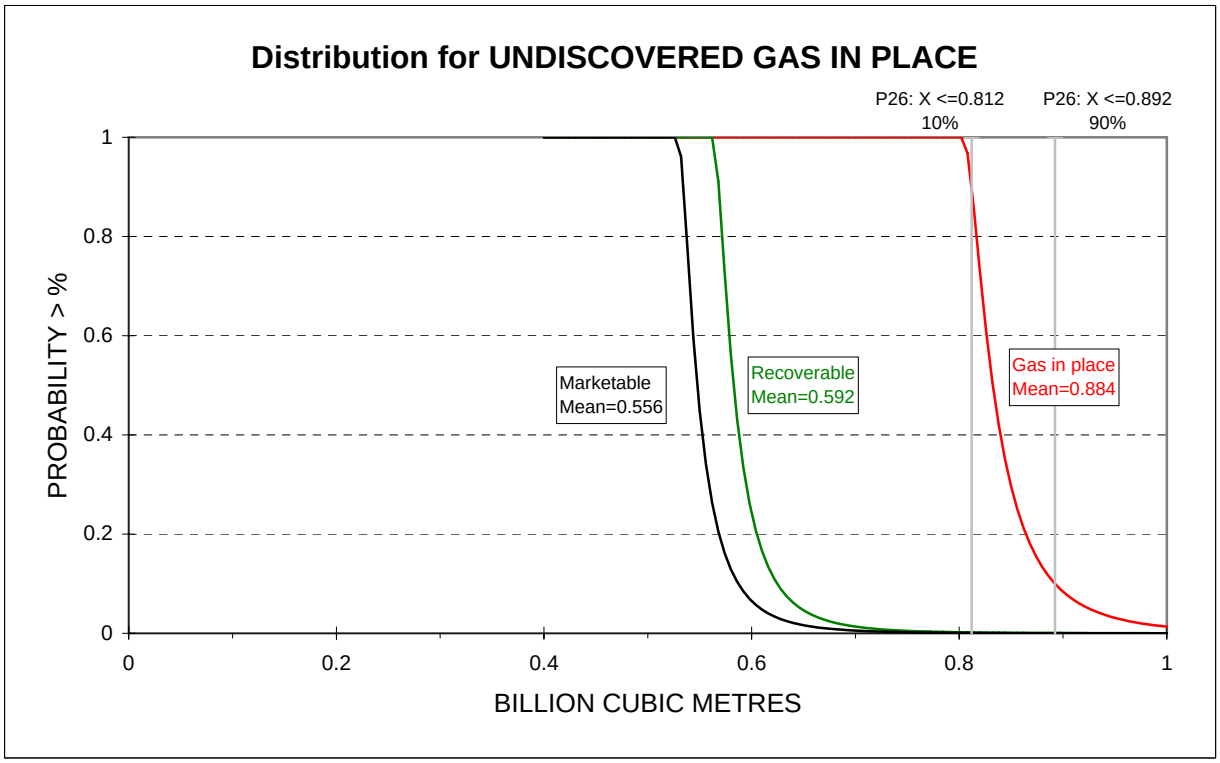
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	9
Play Name	Keg River/Cordova embayment
References	Keg River (Pine Point)-Cordova embayment (Helmet; NEB); Keg River Platform-July Lake (GSC); F340 (CGPC)
Reservoir Unit	Keg River Fm (Lonely Bay/Nahanni and Sulphur Point fms) dolomitized ramp and platform carbonates; related to play #13?
Distribution	Cordova embayment; northern boundary is 'neck' of embayment at 60°25'N
Source/Seal	Muskwa, Horn River fms/Horn River Fm
Trap Style	Stratigraphic/diagenetic-Presqu'ile dolomitization porosity; reservoirs must be dolomitized and fractured to be productive
Gas/Oil	gas (sour, non-associated); oil possible
Exploration Risks	Dolomite distribution; top seal (Sulphur Point Fm absent?)
Mapped Area	0.148 Miilion Ha (0.366 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	592 Million cubic metres (21.01 Bcf)
Undiscovered Marketable Gas	556 Million cubic metres (19.75 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	20 Fields, Largest 160 million cubic feet (5.7 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
KEG RIVER / CORDOVA EMBAYMENT (PLAY 9)

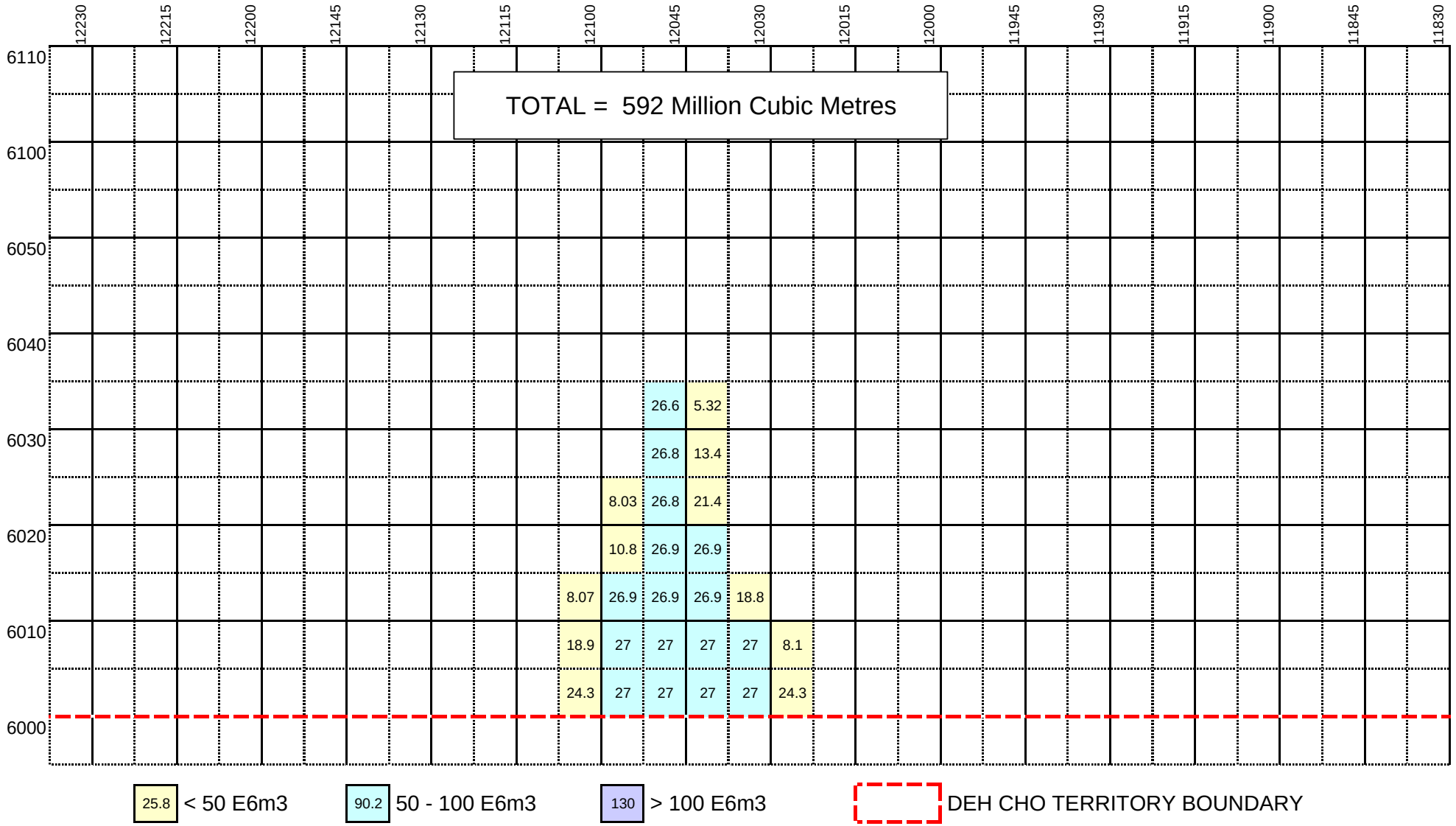




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 9 - KEG RIVER/CORDOVA EMBAYMENT

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 9 - KEG RIVER/CORDOVA EMBAYMENT - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

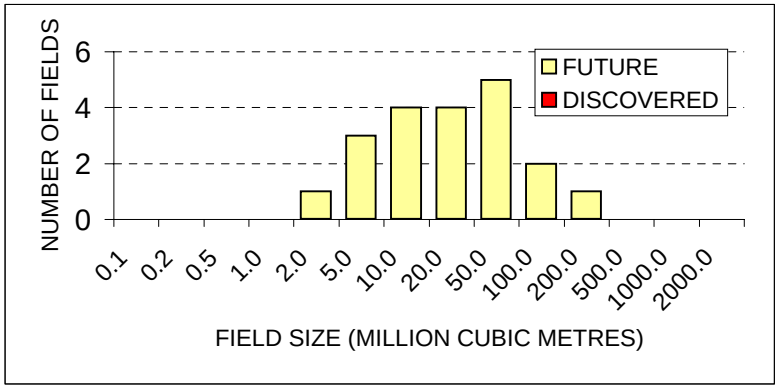
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	591.9	0.0	591.9
NUMBER OF FIELDS	20	0	20
AVERAGE SIZE (E6m3)	29.6		29.6
LARGEST FIELD (E6m3)	160		160
SMALLEST FIELD (E6m3)	1.22		1.22

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.2	0	0.0	1	1.2
5	3	10.3	0	0.0	3	10.3
10	4	31.0	0	0.0	4	31.0
20	4	60.7	0	0.0	4	60.7
50	5	169.7	0	0.0	5	169.7
100	2	158.9	0	0.0	2	158.9
200	1	160.0	0	0.0	1	160.0
500	0	0.0	0	0.0	0	0.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

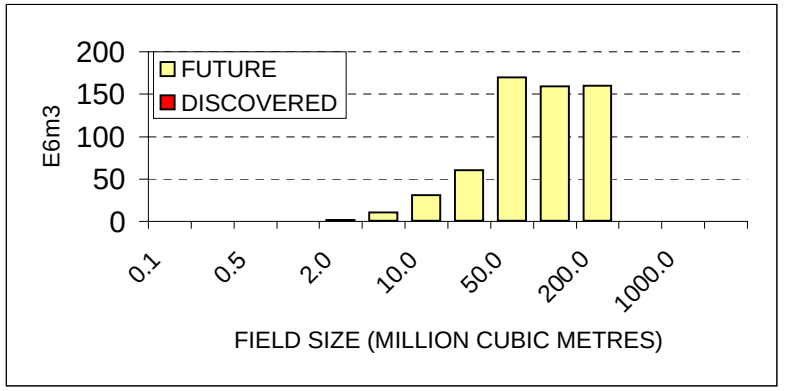
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	3	1	0	0
POTENTIAL (E6m3)	319	160	0	0
PROBABILITY (%)	15.0%	5.0%	0.0%	0.0%
AVERAGE SIZE (E6m3)	106.3	160.0	#DIV/0!	#DIV/0!

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

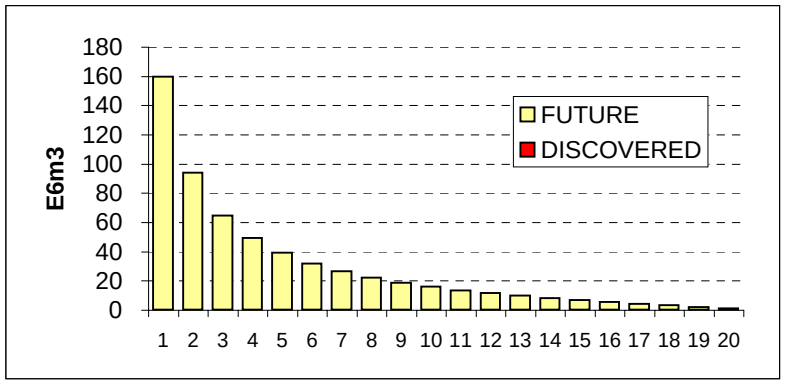
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

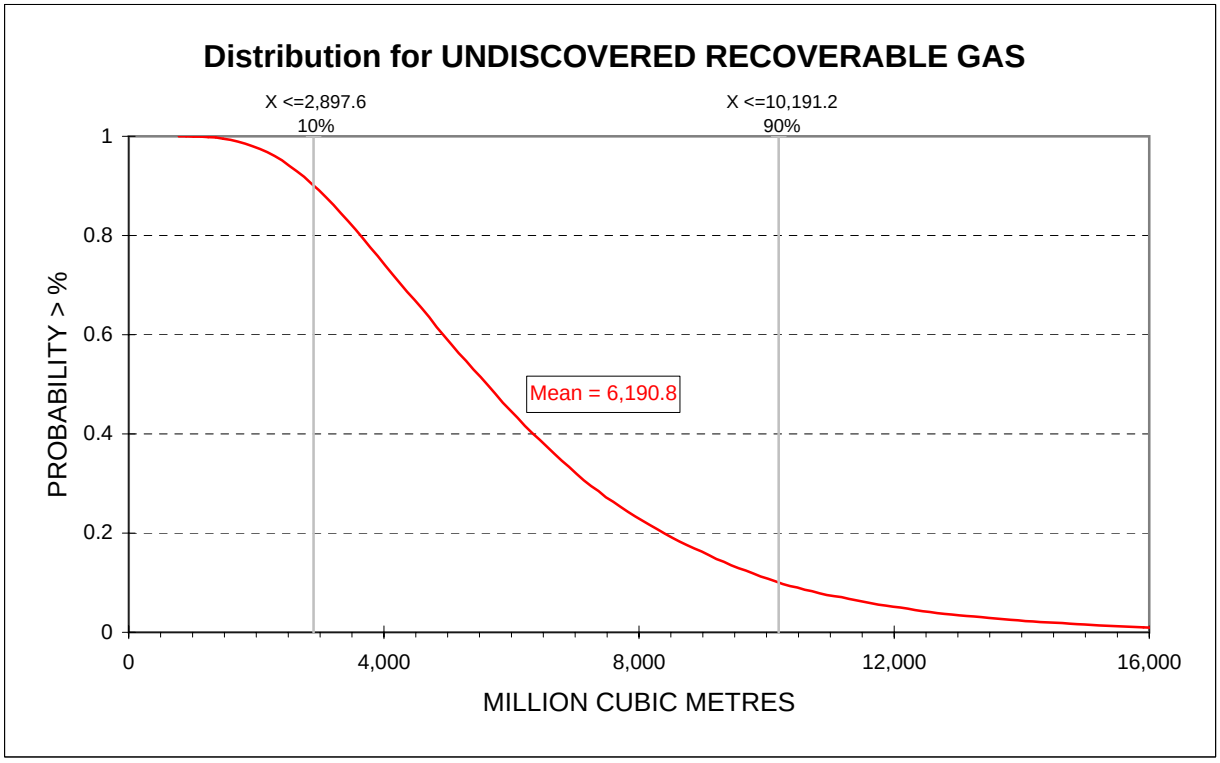


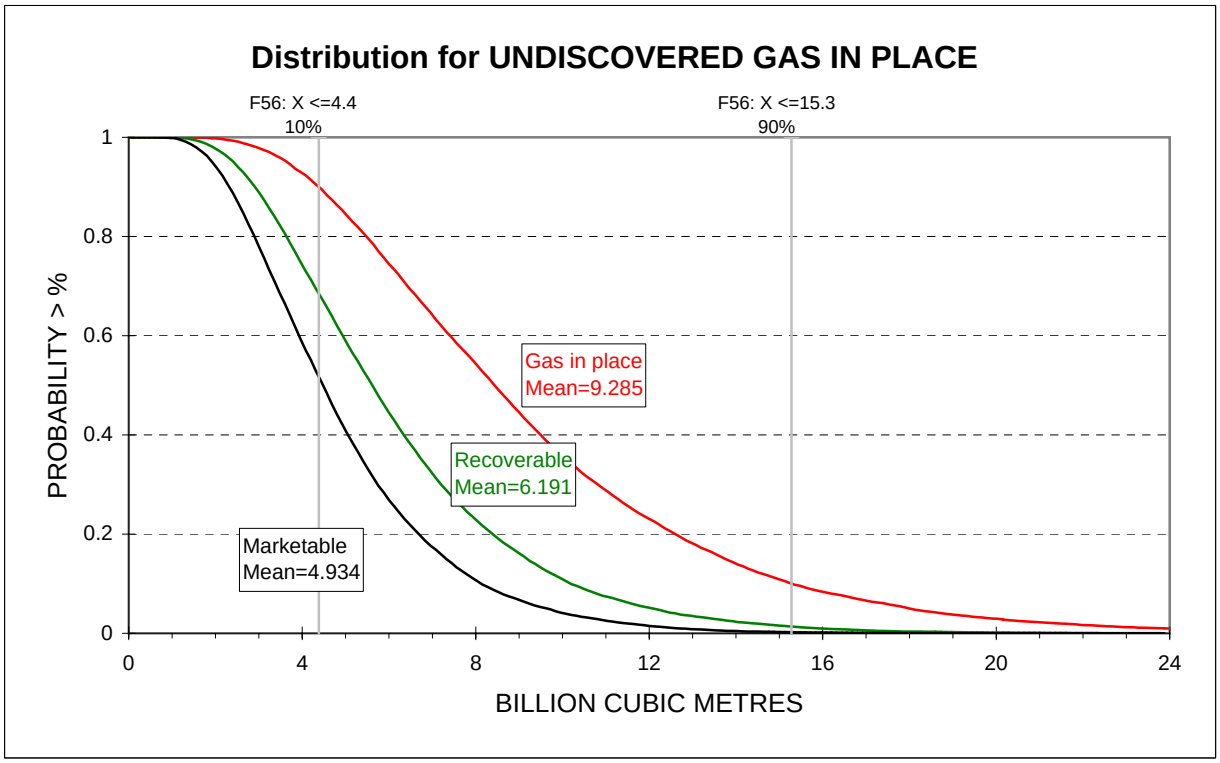
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	10
Play Name	Basal pre-Devonian Clastics (La Loche)
References	Basal Clastic (Devonian)-Mirage Point (NEB); Basal Clastics (Janicki, in prep. b)
Reservoir Unit	Transgressive basal pre-Devonian clastics (La Loche Fm)
Distribution	Delineated on all sides by facies changes and/or non-deposition
Source/Seal	Fort Norman, Mirage Point fms, middle Devonian shale/Fort Norman, Chinchaga fms, Mirage Point salt
Trap Style	Structural/stratigraphic-onlap and mantling (pinchouts) on basement (Tathlina High); isolated thickening of sands within basement grabens; fracturing may increase porosity and permeability
Gas/Oil	gas (sour, non-associated); oil possible
Exploration Risks	Moderate reservoir quality; isolation from hydrocarbon charge (source rocks); development of unit, porosity, top seal
Mapped Area	1.437 Miilion Ha (3.552 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	6,191 Million cubic metres (219.74 Bcf)
Undiscovered Marketable Gas	4,934 Million cubic metres (175.13 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	48 Fields, Largest 1,205 million cubic feet (42.8 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
PRE-DEVONIAN CLASTICS (PLAY 10)

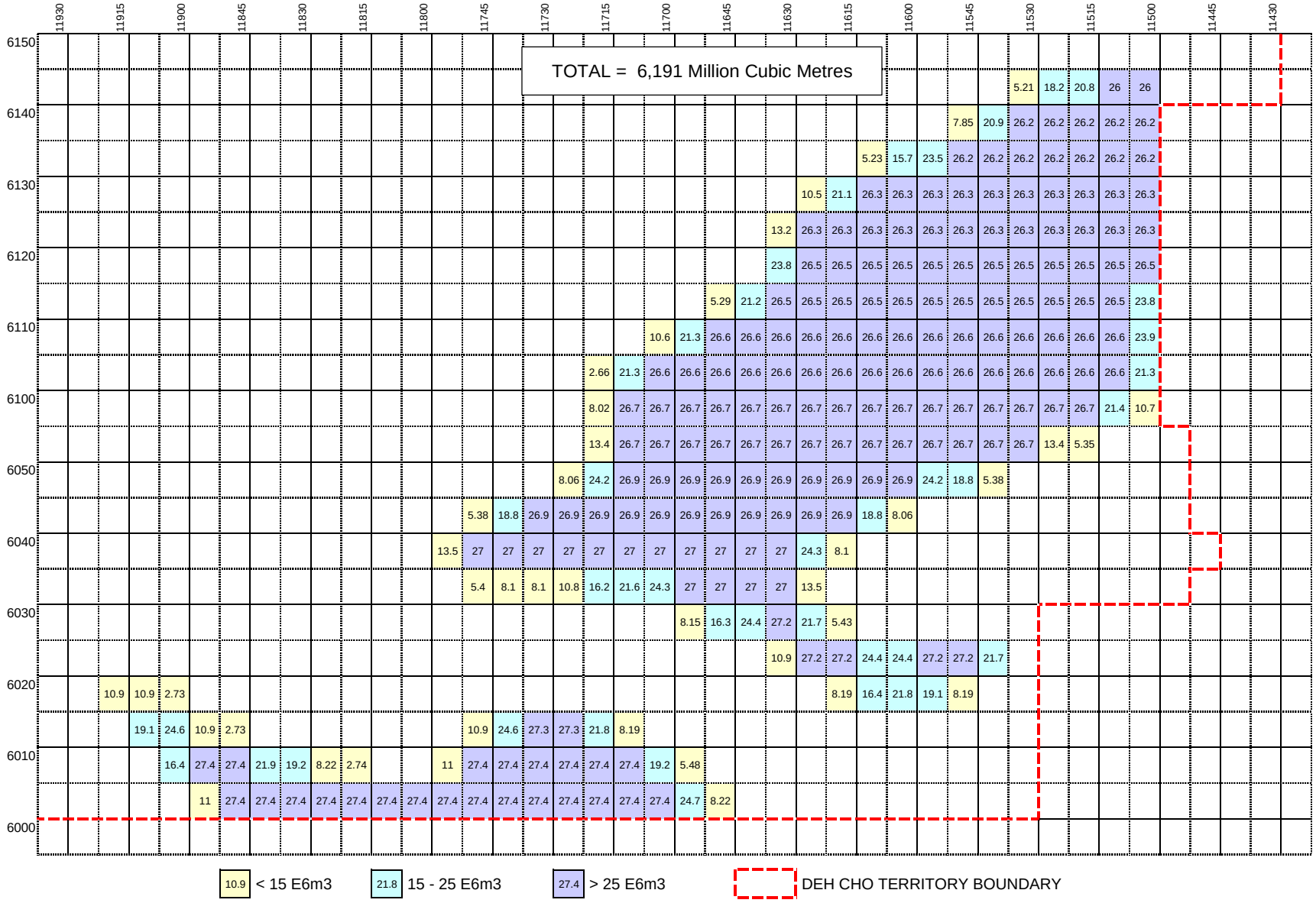




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 10 - BASAL PRE-DEVONIAN CLASTICS (LA LOCHE)

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 10 - BASAL PRE-DEVONIAN CLASTICS (LA LOCHE) - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

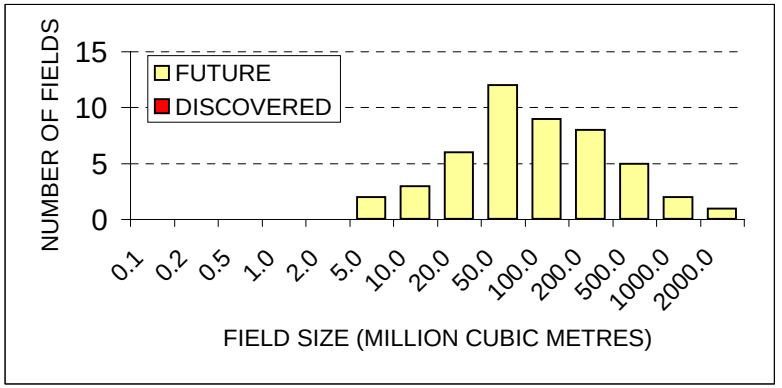
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	6190.8	0.0	6190.8
NUMBER OF FIELDS	48	0	48
AVERAGE SIZE (E6m3)	129.0		129.0
LARGEST FIELD (E6m3)	1205		1205
SMALLEST FIELD (E6m3)	2.25		2.25

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	6.4	0	0.0	2	6.4
10	3	21.9	0	0.0	3	21.9
20	6	86.3	0	0.0	6	86.3
50	12	398.6	0	0.0	12	398.6
100	9	641.2	0	0.0	9	641.2
200	8	1134.5	0	0.0	8	1134.5
500	5	1483.5	0	0.0	5	1483.5
1000	2	1213.3	0	0.0	2	1213.3
2000	1	1205.0	0	0.0	1	1205.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

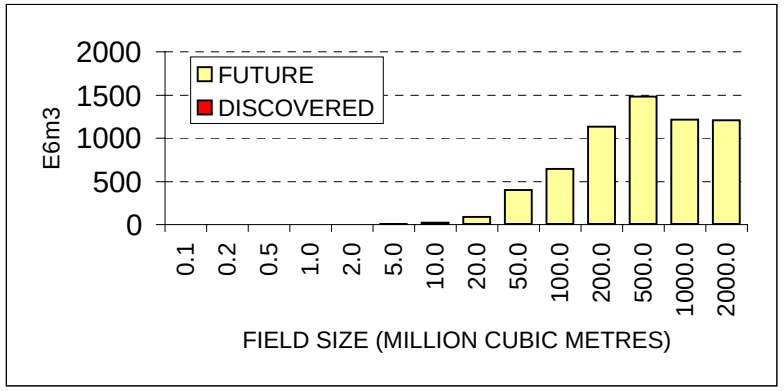
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	25	16	8	3
POTENTIAL (E6m3)	5678	5036	3902	2418
PROBABILITY (%)	52.1%	33.3%	16.7%	6.3%
AVERAGE SIZE (E6m3)	227.1	314.8	487.7	806.1

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

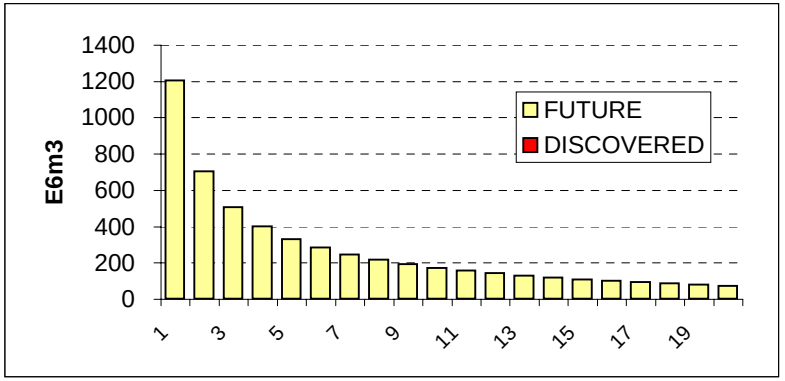
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

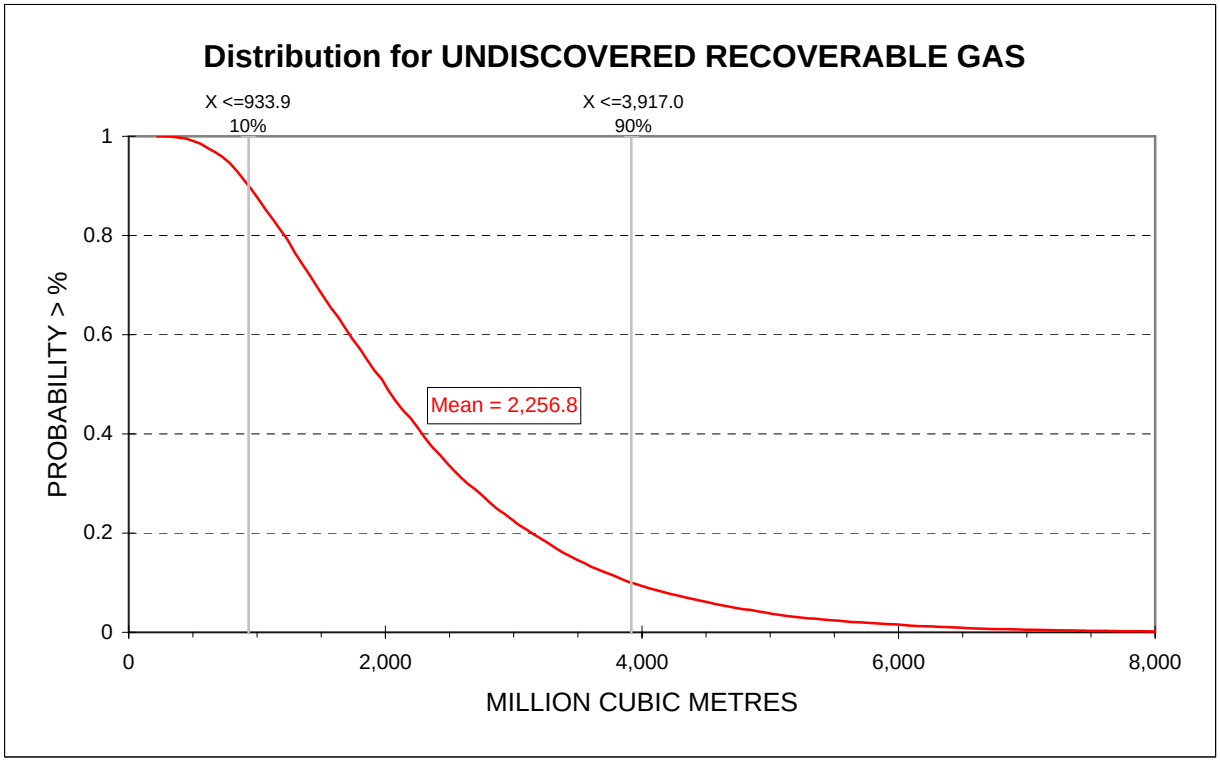


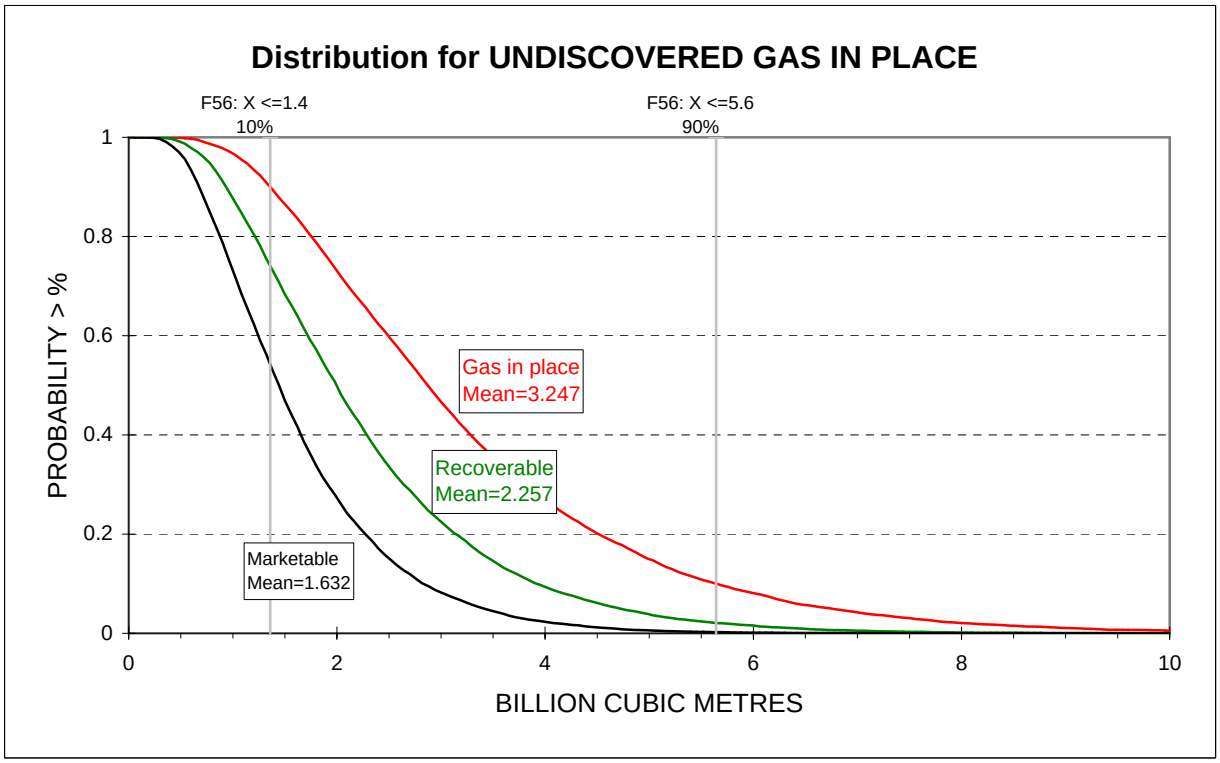
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

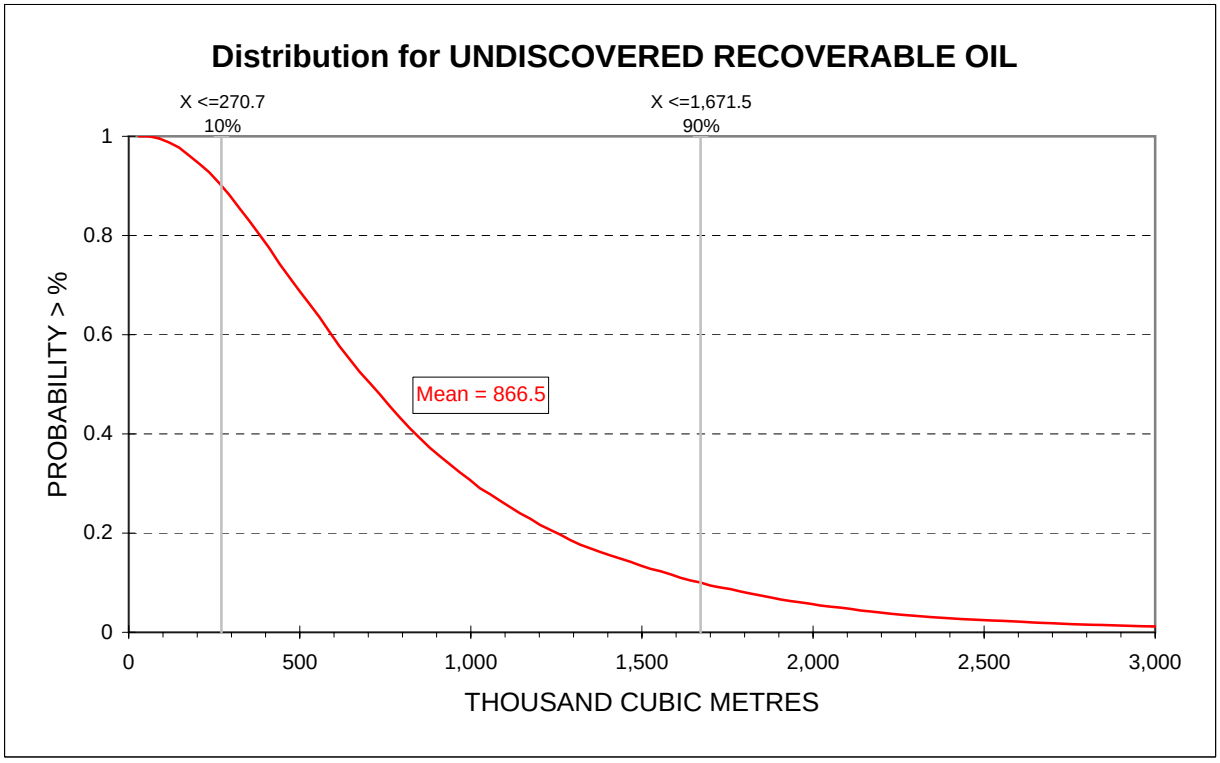
Play #	11
Play Name	Keg River reef (Rainbow)
References	Podruski et al. (1988)
Reservoir Unit	Keg River patch or pinnacle reefs (dolomitized); analogous to Play #6
Distribution	North and west boundary is southern Slave Point edge; east boundary is subcrop/outcrop limit, play continues southward
Source/Seal	Watt Mountain, Muskeg, possibly Muskwa fms/lateral seal is Muskeg Fm, top seals are Muskeg or Watt Mountain Fm
Trap Style	Stratigraphic/diagenetic-isolated bioherms in evaporite sub-basins back of middle Devonain carbonate barrier; reservoirs should be dolomitized to be productive
Gas/Oil	oil (with associated gas)
Exploration Risks	Host evaporite sub-basins (e.g., Rainbow, Zama, Shekilie) not yet recognized in NWT; dolomitization
Mapped Area	0.406 Miilion Ha (1.003 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	2,257 Million cubic metres (80.10 Bcf)
Undiscovered Marketable Gas	1,632 Million cubic metres (57.91 Bcf)
Undiscovered Recoverable Oil	866 Thousand cubic metres (5.45 MB)
Undiscovered Gas Fields	39 Fields, Largest 465 million cubic feet (16.5 Bcf)
Undiscovered Oil Fields	32 Fields, Largest 170 thousand cubic feet (1.1 MMB)

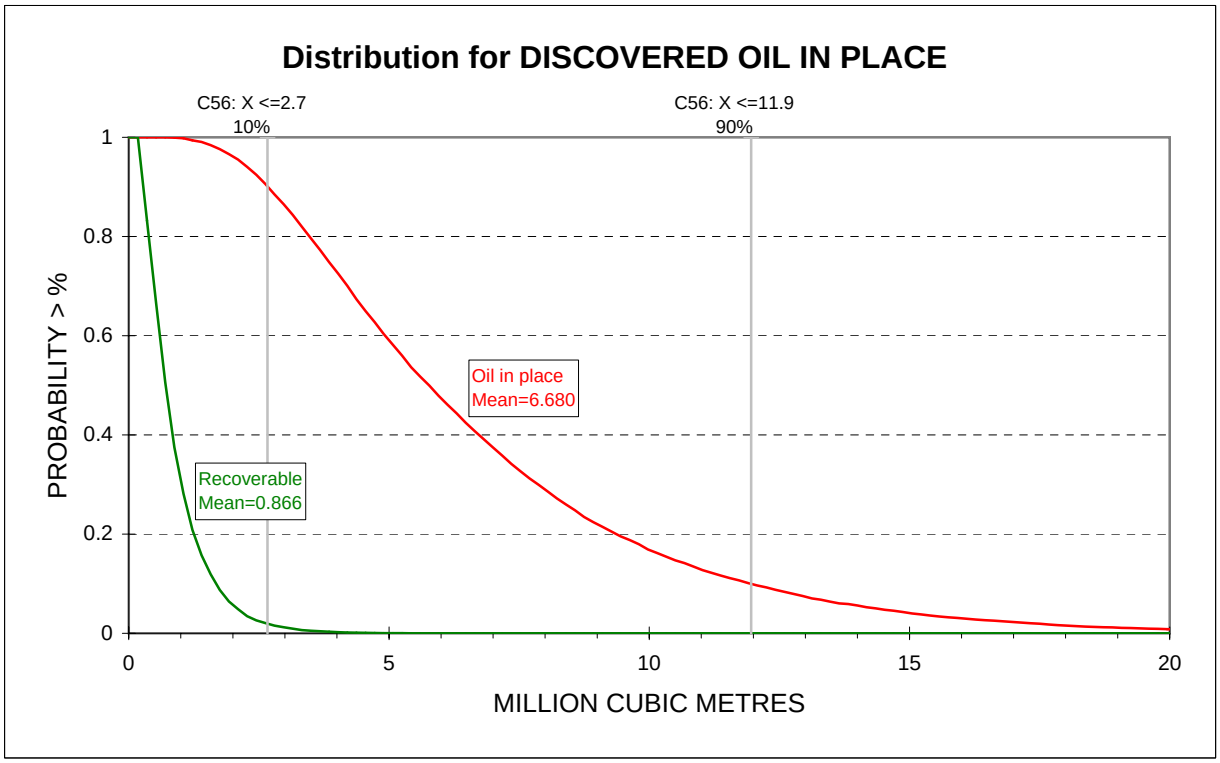
DEH CHO TERRITORY
KEG RIVER REEF (PLAY 11)





DEH CHO TERRITORY
KEG RIVER REEF (PLAY 11)

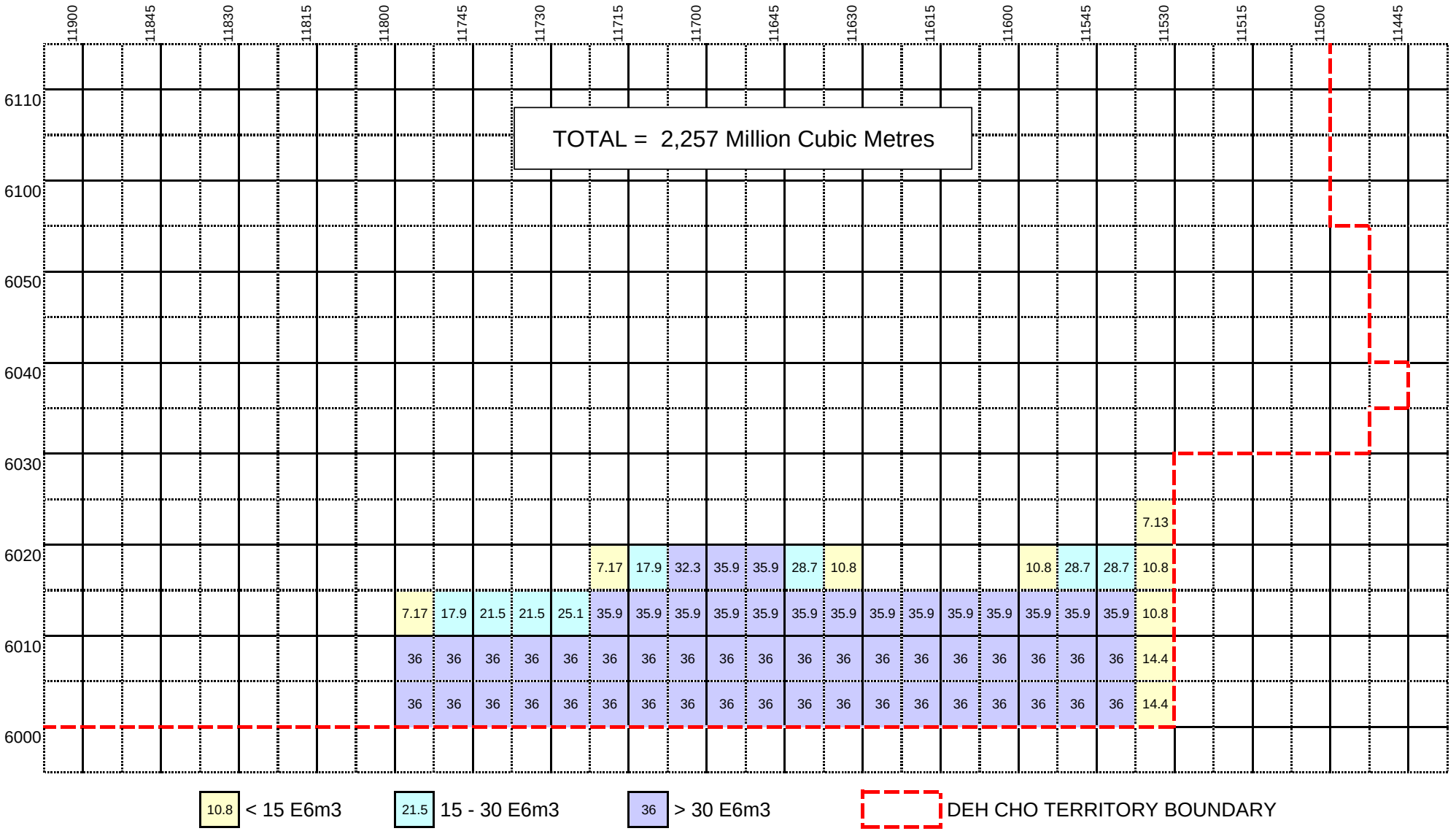




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 11 - KEG RIVER REEF (RAINBOW)

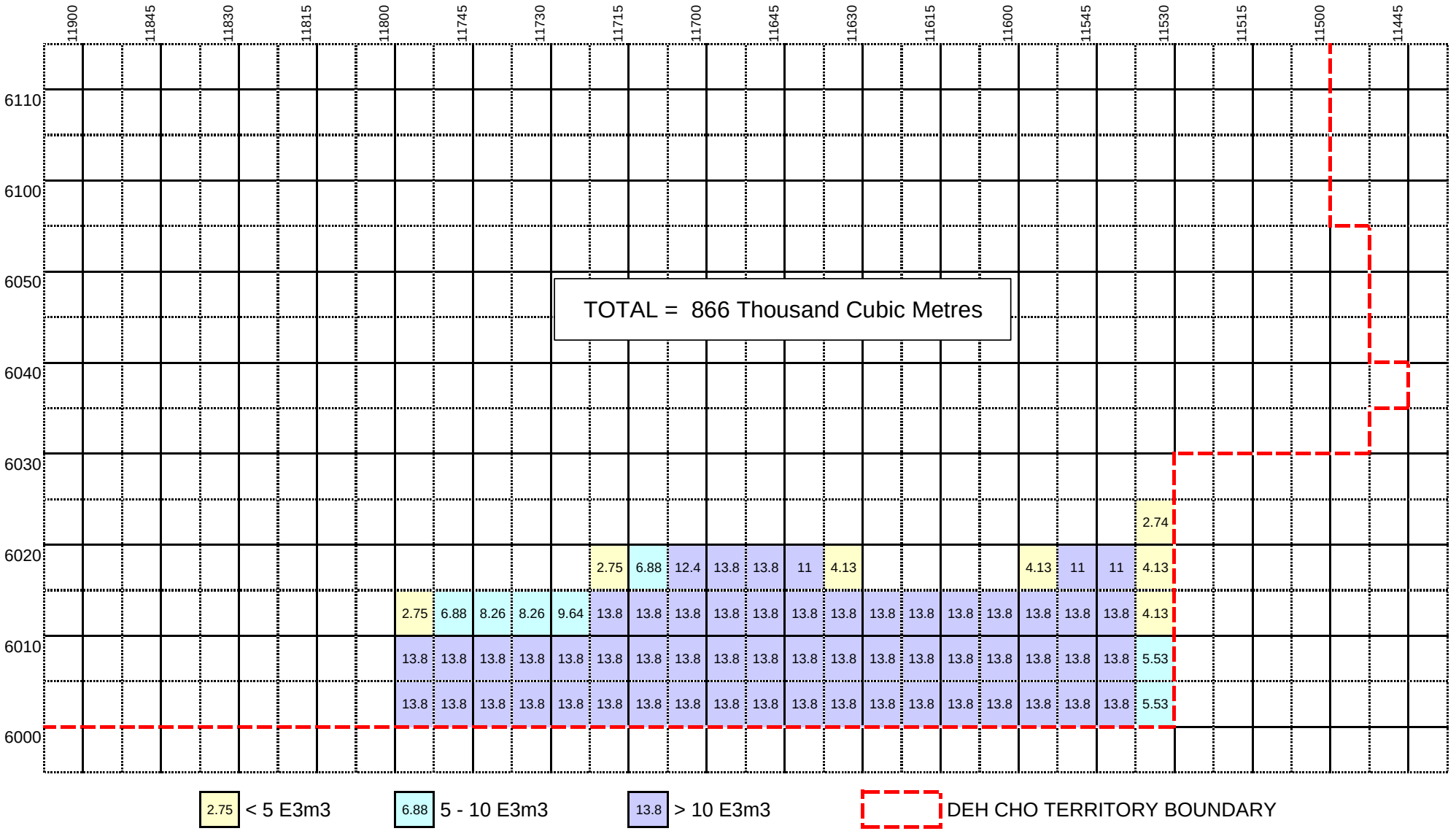
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE OIL PLAY 11 - KEG RIVER REEF (RAINBOW)

(THOUSAND CUBIC METRES / QUARTER GRID)



PLAY AREA 11 - KEG RIVER REEF (RAINBOW) - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

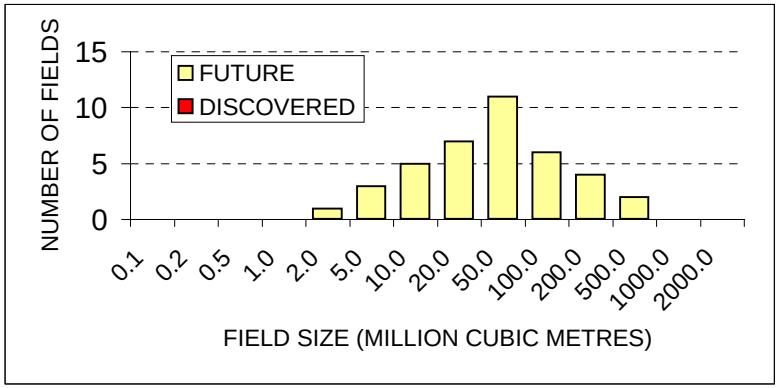
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	2256.8	0.0	2256.8
NUMBER OF FIELDS	39	0	39
AVERAGE SIZE (E6m3)	57.9		57.9
LARGEST FIELD (E6m3)	465		465
SMALLEST FIELD (E6m3)	1.34		1.34

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.3	0	0.0	1	1.3
5	3	10.3	0	0.0	3	10.3
10	5	36.1	0	0.0	5	36.1
20	7	99.1	0	0.0	7	99.1
50	11	354.2	0	0.0	11	354.2
100	6	428.1	0	0.0	6	428.1
200	4	589.0	0	0.0	4	589.0
500	2	738.7	0	0.0	2	738.7
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

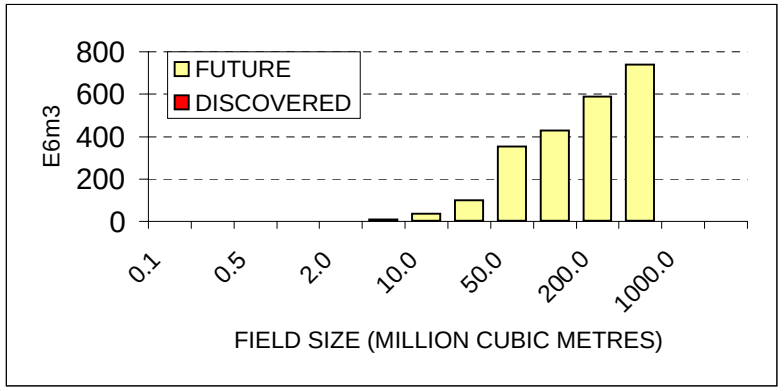
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	12	6	2	0
POTENTIAL (E6m3)	1756	1328	739	0
PROBABILITY (%)	30.8%	15.4%	5.1%	0.0%
AVERAGE SIZE (E6m3)	146.3	221.3	369.3	#DIV/0!

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

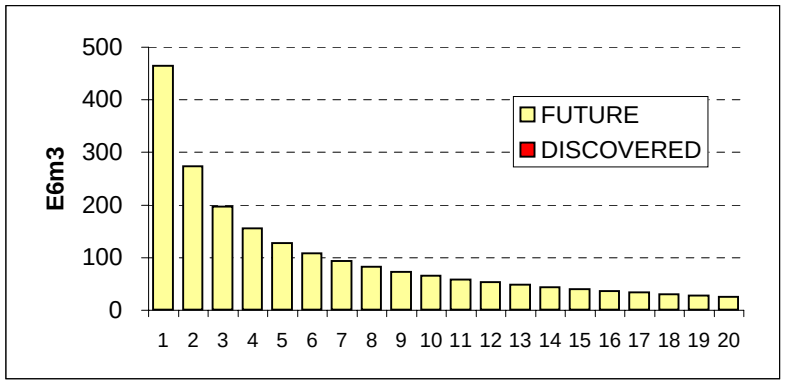
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20



DEH CHO TERRITORY PLAY 11 - KEG RIVER REEF (RAINBOW) - ULTIMATE OIL POTENTIAL

FIELD SIZE DISTRIBUTION

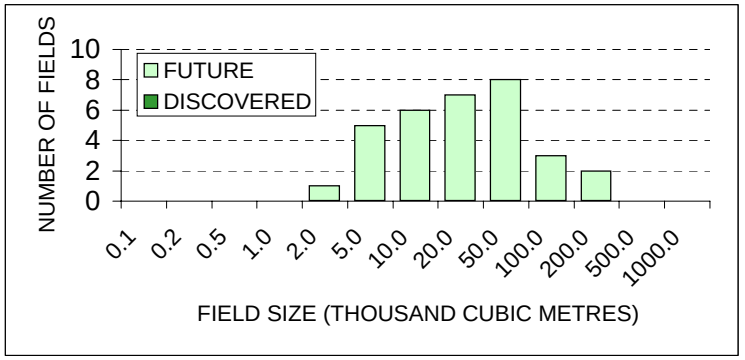
	ULTIMATE	DISCOVERED	FUTURE
OIL RESOURCES (E3m3)	866.5	0.0	866.5
NUMBER OF FIELDS	32	0	32
AVERAGE SIZE (E3m3)	27.1		27.1
LARGEST FIELD (E3m3)	170.00		170
SMALLEST FIELD (E3m3)	1.17		1.17

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.2	0	0.0	1	1.2
5	5	17.2	0	0.0	5	17.2
10	6	44.7	0	0.0	6	44.7
20	7	99.0	0	0.0	7	99.0
50	8	241.1	0	0.0	8	241.1
100	3	189.6	0	0.0	3	189.6
200	2	273.7	0	0.0	2	273.7
500	0	0.0	0	0.0	0	0.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

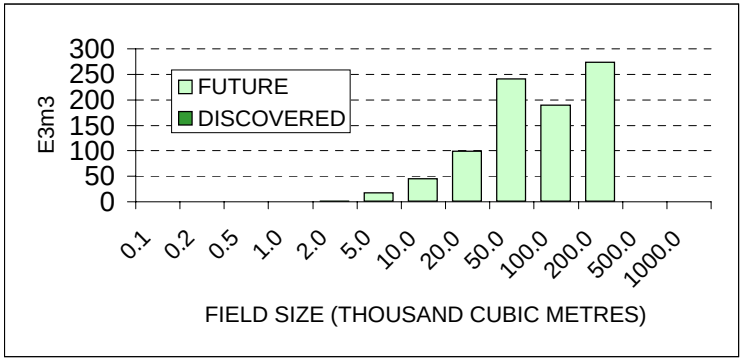
FUTURE FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	5	2	0	0
POTENTIAL (E3m3)	463	274	0	0
PROBABILITY (%)	15.6%	6.3%	0.0%	0.0%
AVERAGE SIZE (E3m3)	92.7	136.9	#DIV/0!	#DIV/0!

DISCOVERED FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	0	0	0	0
POTENTIAL (E3m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E3m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

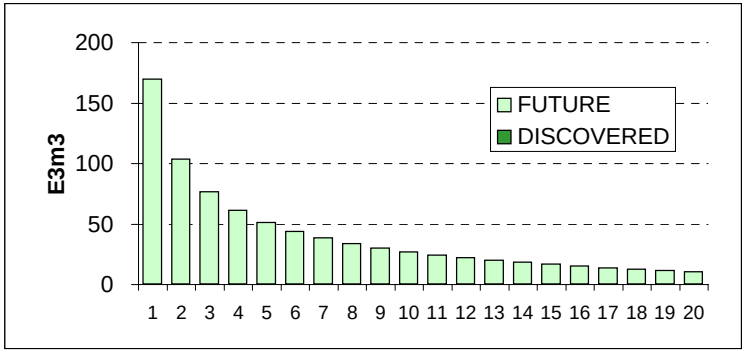
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

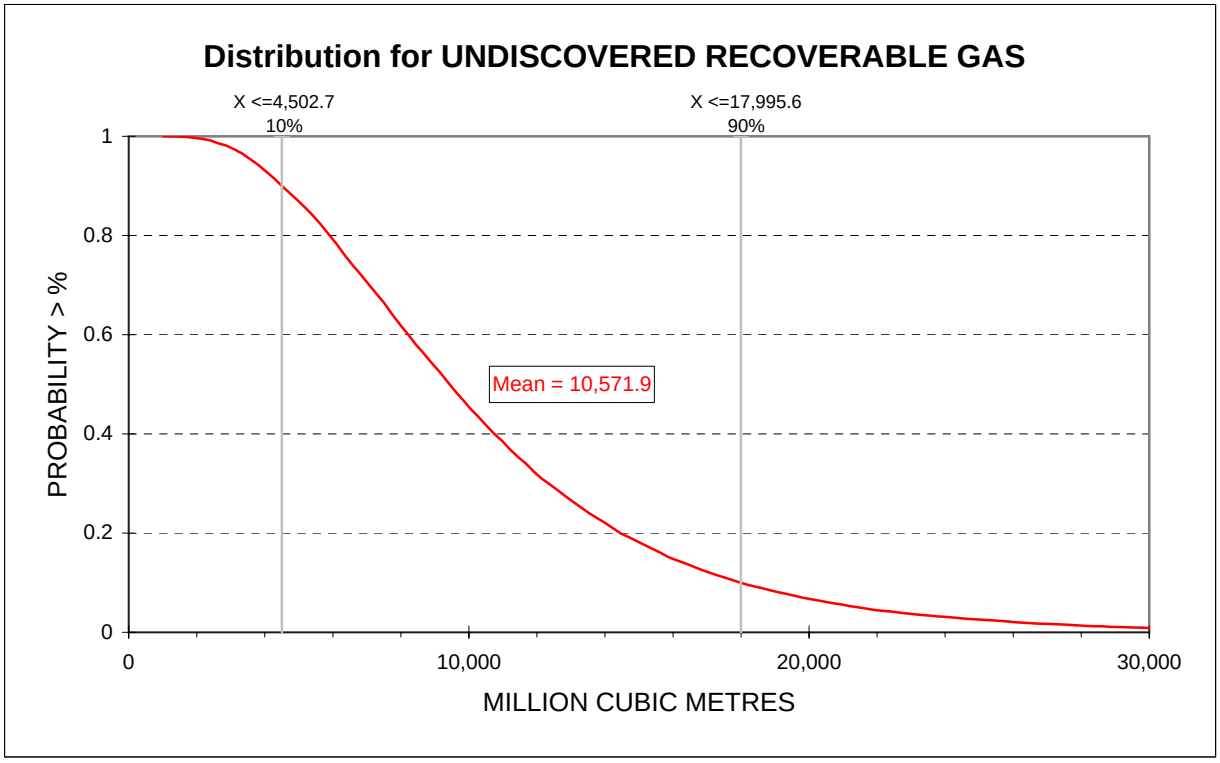


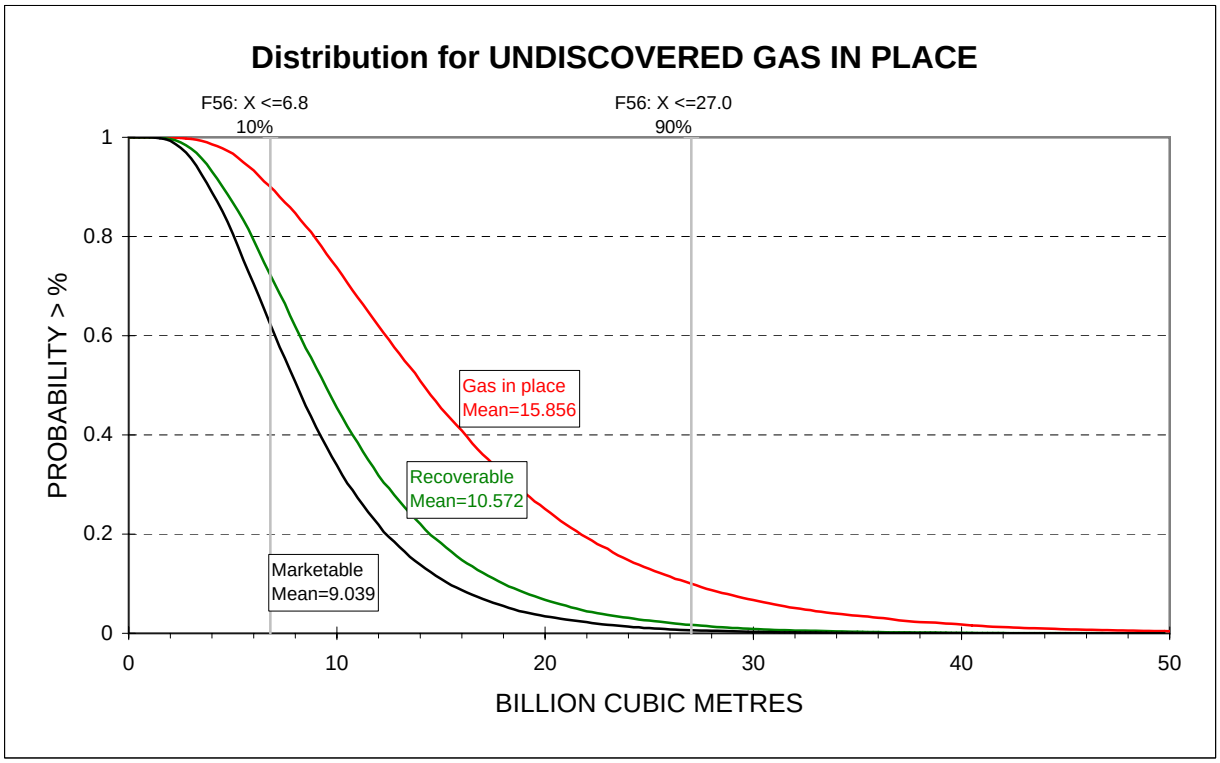
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	12
Play Name	Arnica/Landry platform
References	Arnica/Landry shelf stratigraphic (NEB)
Reservoir Unit	Dolomitic Arnica/Landry fms
Distribution	Eastern boundary is outcrop/subcrop limit and/or facies change; south boundary is limit of deposition or alteration to Manetoe or Presqu'ile facies (lack of seal); west boundary is alteration to Manetoe facies (lack of seal), and/or outcrop limit
Source/Seal	Fort Norman Fm, possibly Road River, Headless and Funeral fms/ Headless Fm top seal, lateral seal Chinchaga Fm
Trap Style	Stratigraphic/diagenetic-post depositional leaching (sub-aerial exposure) has improved/created reservoir characteristics for Landry; local primary and secondary porosity in Arnica; possible minor buildups in platform; fracturing may also enhance reservoir characteristics
Gas/Oil	gas (non-associated, sour)
Exploration Risks	Top seals very risky (fractured and/or Manetoe facies); moderate reservoir quality; isolation from hydrocarbon charge
Mapped Area	4.843 Miilion Ha (11.967 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	10,572 Million cubic metres (375.24 Bcf)
Undiscovered Marketable Gas	9,039 Million cubic metres (320.83 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	103 Fields, Largest 1,005 million cubic feet (35.7 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
ARNICA/LANDRY PLATFORM (PLAY 12)

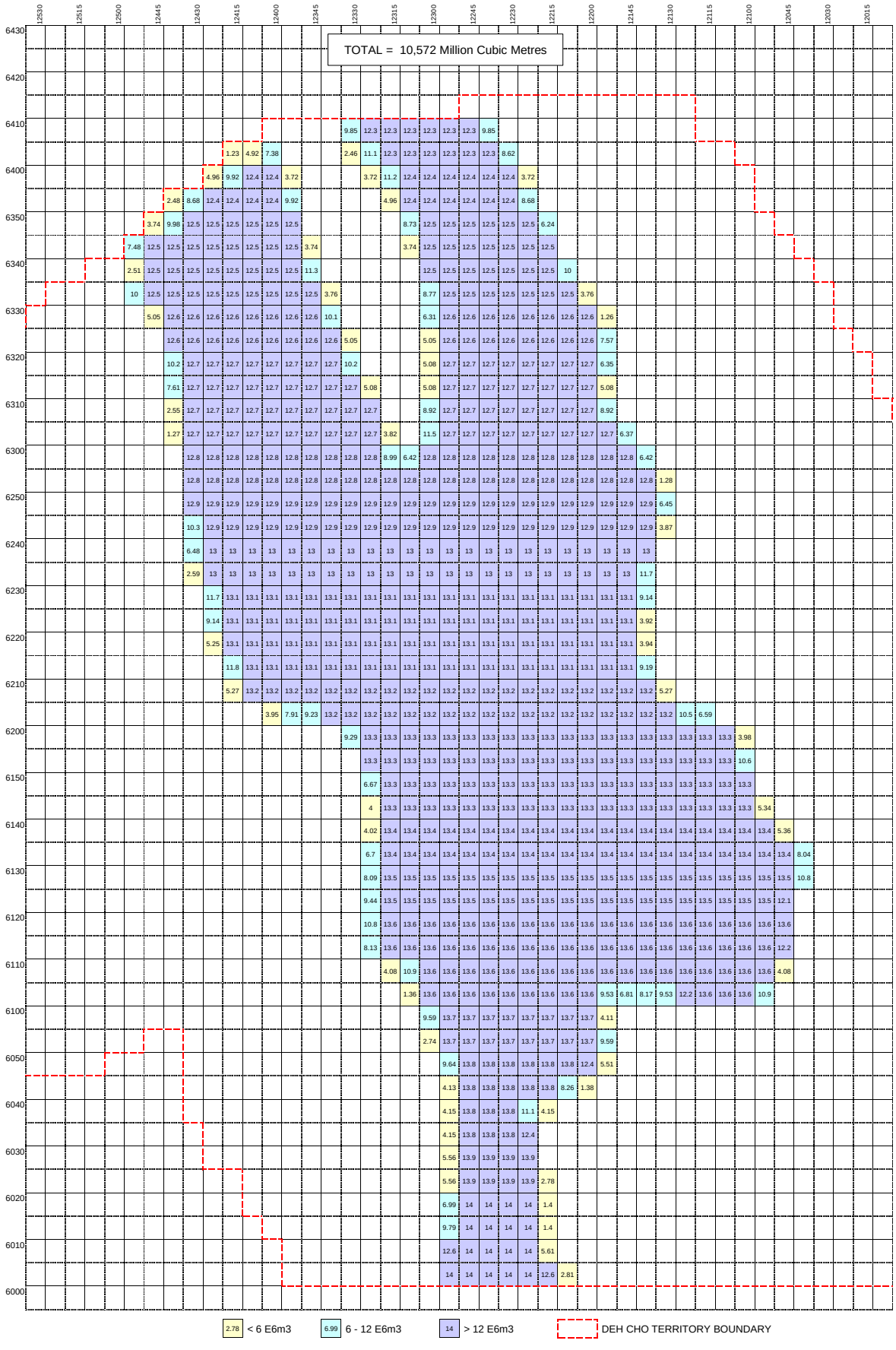




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 12 - ARNICA/LANDRY PLATFORM

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 12 - ARNICA/LANDRY PLATFORM - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

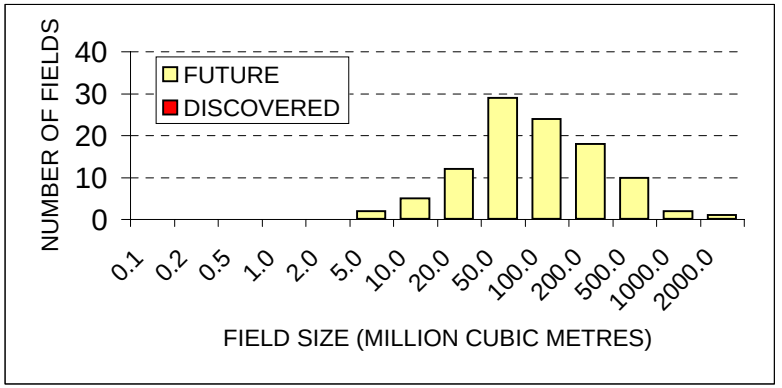
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	10571.9	0.0	10571.9
NUMBER OF FIELDS	103	0	103
AVERAGE SIZE (E6m3)	102.6		102.6
LARGEST FIELD (E6m3)	1005		1005
SMALLEST FIELD (E6m3)	3.00		3.00

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	7.7	0	0.0	2	7.7
10	5	40.0	0	0.0	5	40.0
20	12	183.0	0	0.0	12	183.0
50	29	984.1	0	0.0	29	984.1
100	24	1723.7	0	0.0	24	1723.7
200	18	2532.3	0	0.0	18	2532.3
500	10	2931.3	0	0.0	10	2931.3
1000	2	1164.8	0	0.0	2	1164.8
2000	1	1005.0	0	0.0	1	1005.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

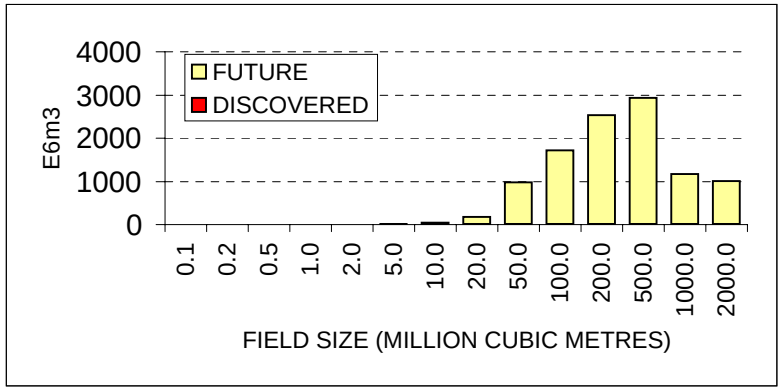
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	55	31	13	3
POTENTIAL (E6m3)	9357	7633	5101	2170
PROBABILITY (%)	53.4%	30.1%	12.6%	2.9%
AVERAGE SIZE (E6m3)	170.1	246.2	392.4	723.3

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

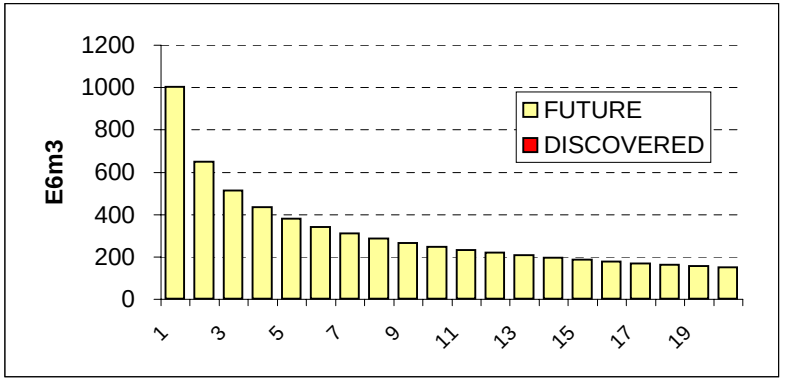
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

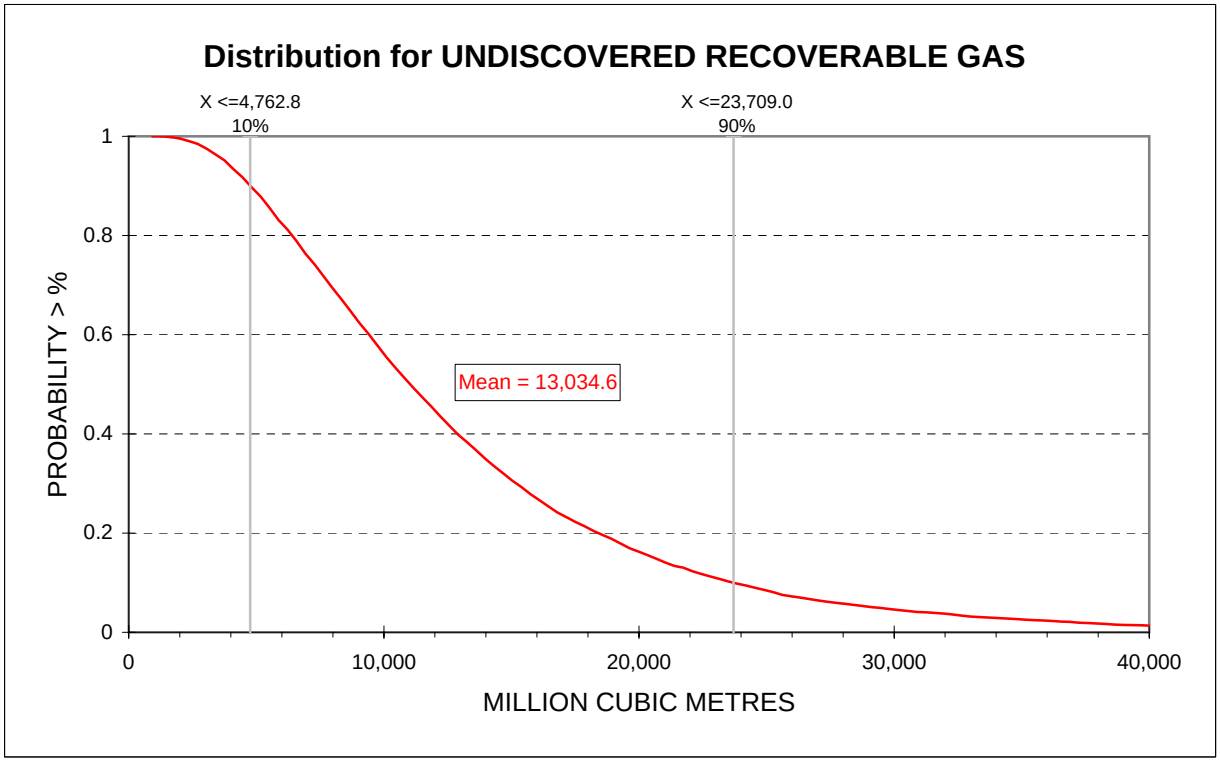


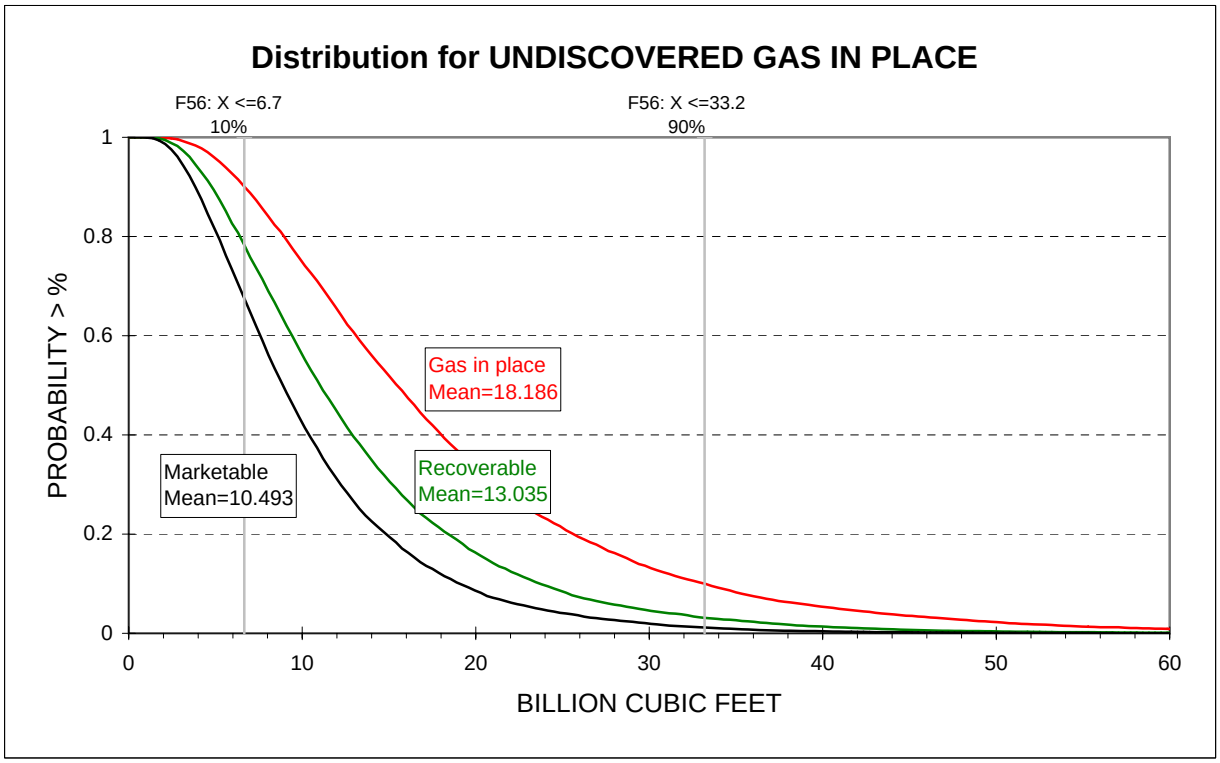
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	13
Play Name	Lonely Bay/Nahanni platform
References	Lonely Bay (Lower Keg River) platform (NEB)
Reservoir Unit	Dolomitized lower Keg River (Lonely Bay/Nahanni fms)
Distribution	Outboard of north margin of Devonian carbonate barrier (forms south boundary); west boundary is edge of disturbed belt; east boundary is subcrop-outcrop edge of Canadian Shield
Source/Seal	Buffalo River, Muskwa, Horn River fms/Buffalo River, Horn River fms
Trap Style	Stratigraphic (+/-structural)-local dolomitization and fracturing (must be present for productive reservoir) likely related to reactivated basement faults; structural traps particularly around Tathlina High; basal member of Lonely Bay Fm (upper Chinchaga Fm equivalent) is dolostone (Willow Lake Mbr)
Gas/Oil	gas (non-associated, sour); oil possible
Exploration Risks	Reservoir quality; restricted to lower dolostone member?
Mapped Area	14.898 Miilion Ha (36.815 Million Acres)
Deh Cho significant fields/wells	NWT Province No.1 (K-31)?
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	13,035 Million cubic metres (462.65 Bcf)
Undiscovered Marketable Gas	10,493 Million cubic metres (372.43 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	103 Fields, Largest 1,395 million cubic feet (49.5 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
LONELY BAY/NAHANNI PLATFORM (PLAY 13)

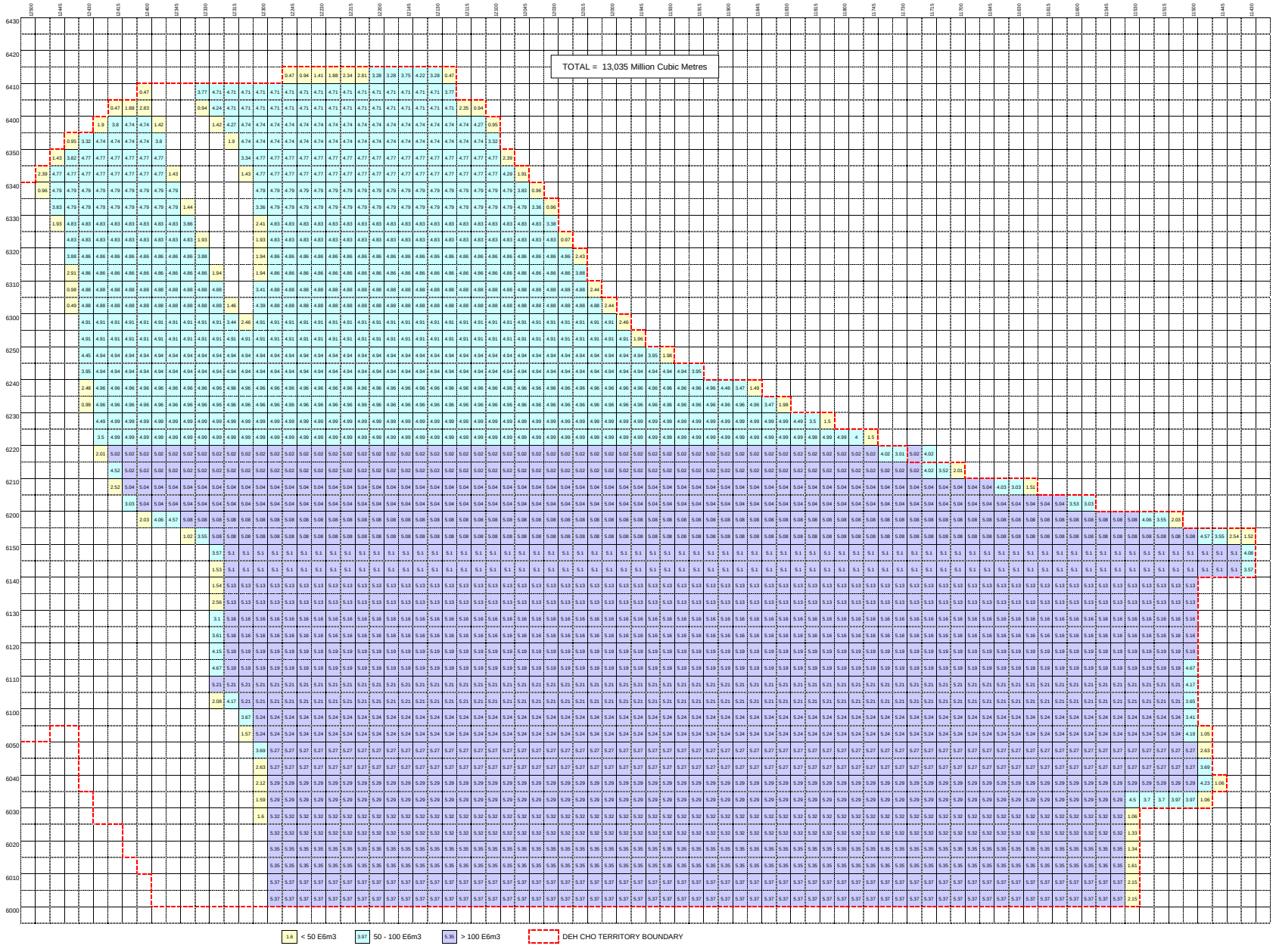




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 13 - LONELY BAY/NAHANNI PLATFORM

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 13 - LONELY BAY/NAHANNI PLATFORM - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

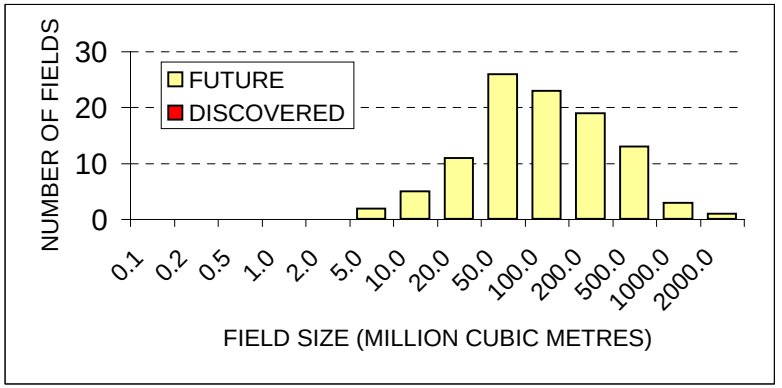
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	13034.6	0.0	13034.6
NUMBER OF FIELDS	103	0	103
AVERAGE SIZE (E6m3)	126.5		126.5
LARGEST FIELD (E6m3)	1395		1395
SMALLEST FIELD (E6m3)	2.72		2.72

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	7.1	0	0.0	2	7.1
10	5	39.0	0	0.0	5	39.0
20	11	166.7	0	0.0	11	166.7
50	26	878.3	0	0.0	26	878.3
100	23	1650.4	0	0.0	23	1650.4
200	19	2698.0	0	0.0	19	2698.0
500	13	4068.8	0	0.0	13	4068.8
1000	3	2131.3	0	0.0	3	2131.3
2000	1	1395.0	0	0.0	1	1395.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

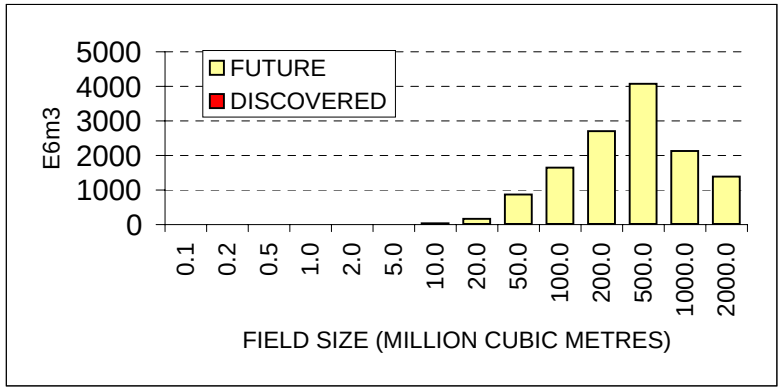
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	59	36	17	4
POTENTIAL (E6m3)	11943	10293	7595	3526
PROBABILITY (%)	57.3%	35.0%	16.5%	3.9%
AVERAGE SIZE (E6m3)	202.4	285.9	446.8	881.6

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

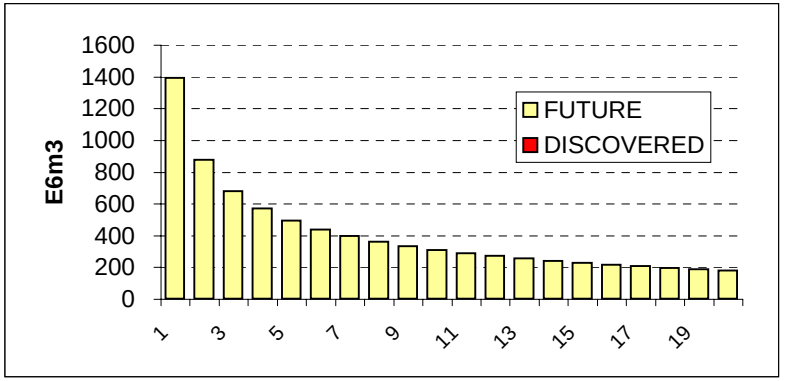
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

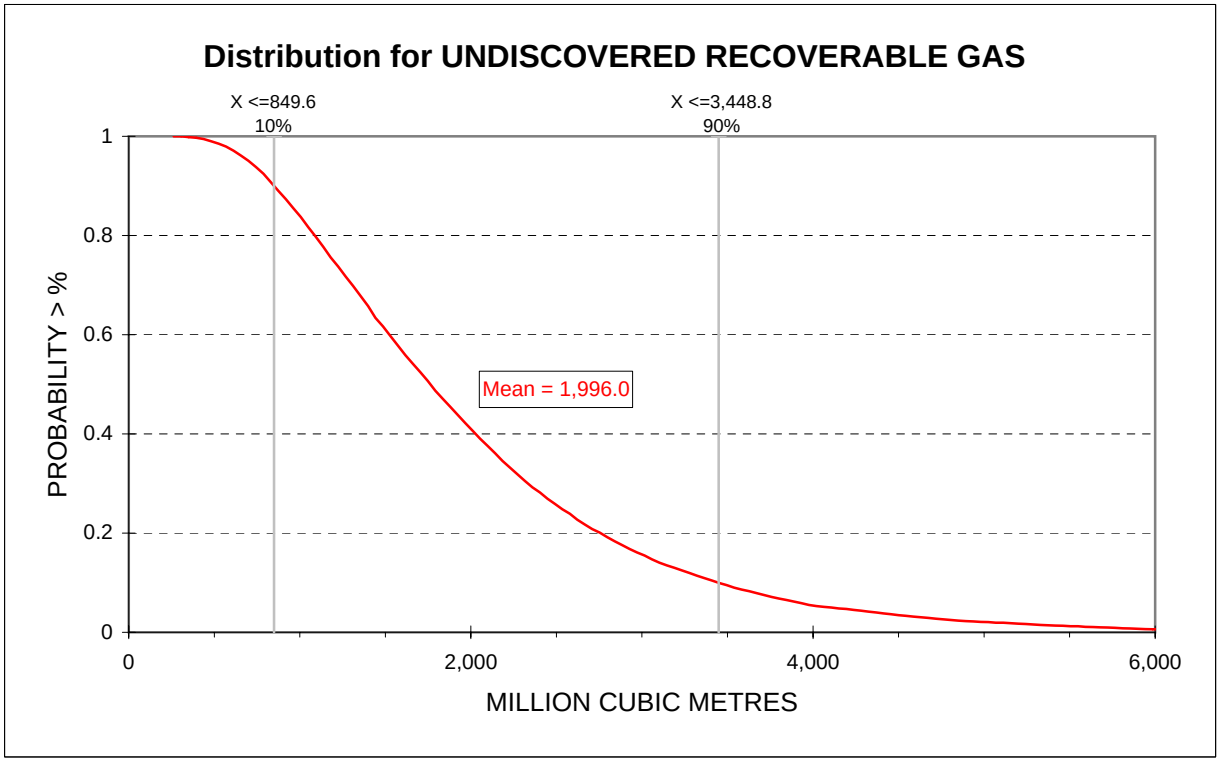


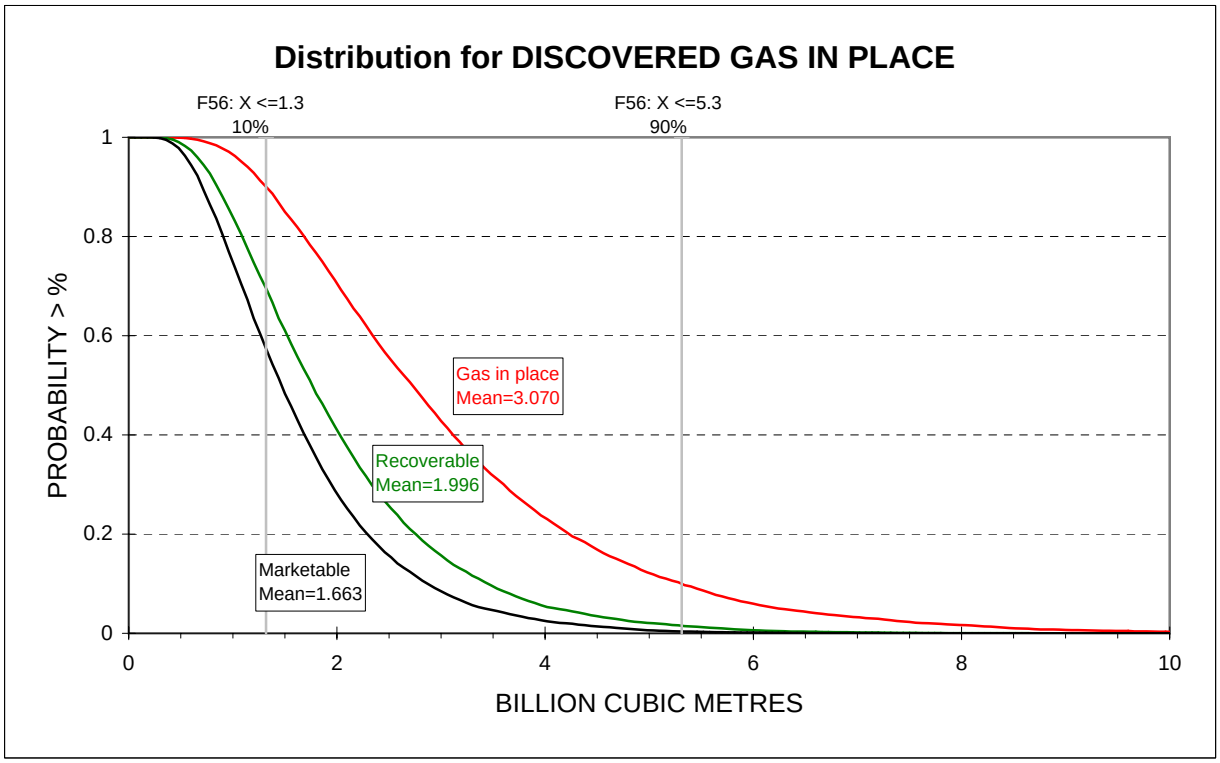
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	14
Play Name	Kakisa/Redknife platform
References	Kakisa stratigraphic-Redknife (NEB)
Reservoir Unit	Dolomitized shelf-edge shoals, biohermal buildups and subcrop traps in Kakisa Mbr; analogous to Play #8
Distribution	North and east margins are subcrop edge; western boundary is platform margin/transition to basinal shale s
Source/Seal	Fort Simpson, Horn River fms/Trout River Mbr top seal, Fort Simpson Fm lateral seal
Trap Style	Stratigraphic-basinward shale-out of reefal facies, biohermal buildups on platform and subcrop traps beneath Cretaceous unconformity; must be dolomitized to be productive, local fracturing enhances reservoir characteristics; Kakisa Mbr pools may overlie fault-bounded Keg River or Slave Point fms accumulations
Gas/Oil	gas (non-associated?); oil possible in east
Exploration Risks	Dolomitization; reservoir properties (Kakisa Mbr generally tight)
Mapped Area	3.159 Miilion Ha (7.806 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	1,996 Million cubic metres (70.84 Bcf)
Undiscovered Marketable Gas	1,663 Million cubic metres (59.01 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	29 Fields, Largest 450 million cubic feet (16.0 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
KAKISA REDKNIFE (PLAY 14)

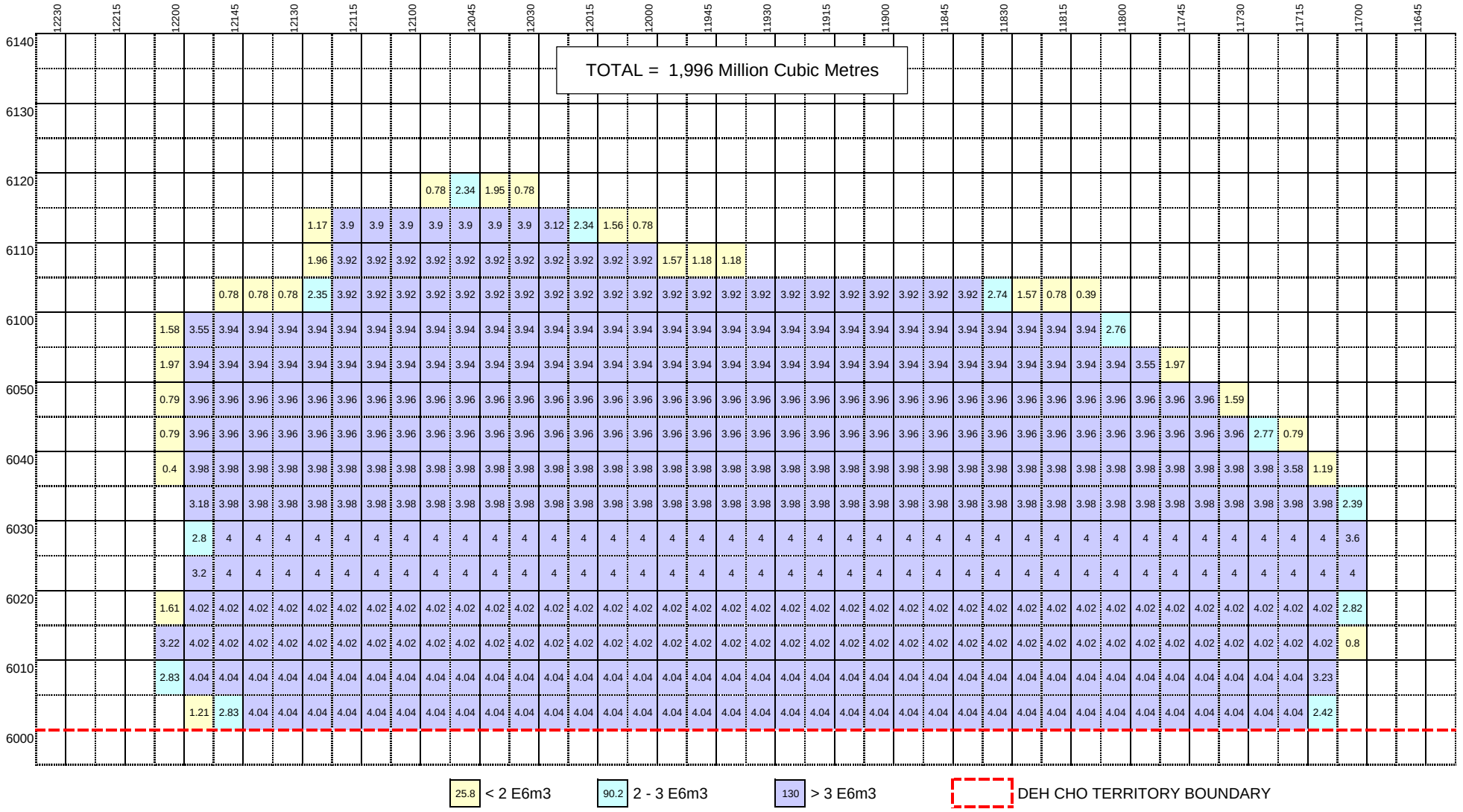




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 14 - KAKISA/REDKNIFE PLATFORM

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 14 - KAKISA/REDKNIFE PLATFORM - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

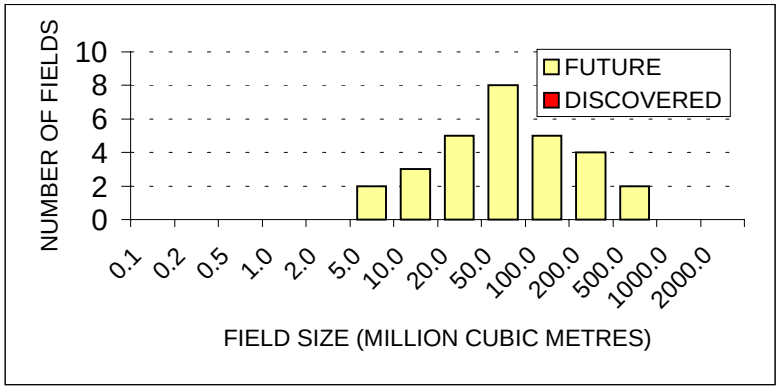
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	1996.0	0.0	1996.0
NUMBER OF FIELDS	29	0	29
AVERAGE SIZE (E6m3)	68.8		68.8
LARGEST FIELD (E6m3)	450		450
SMALLEST FIELD (E6m3)	2.31		2.31

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	6.6	0	0.0	2	6.6
10	3	23.0	0	0.0	3	23.0
20	5	75.0	0	0.0	5	75.0
50	8	264.0	0	0.0	8	264.0
100	5	345.1	0	0.0	5	345.1
200	4	565.7	0	0.0	4	565.7
500	2	716.7	0	0.0	2	716.7
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

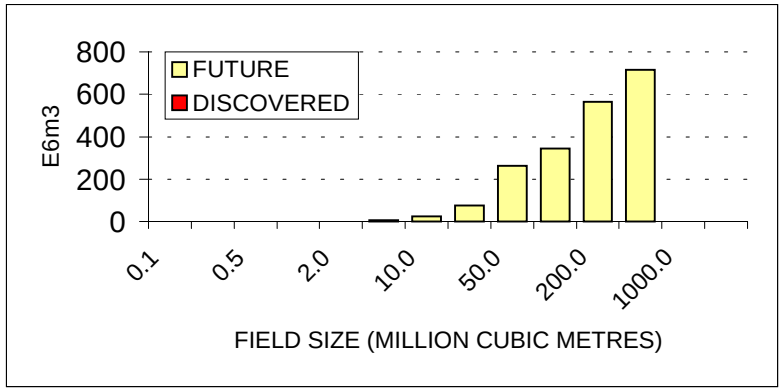
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	11	6	2	0
POTENTIAL (E6m3)	1627	1282	717	0
PROBABILITY (%)	37.9%	20.7%	6.9%	0.0%
AVERAGE SIZE (E6m3)	148.0	213.7	358.3	#DIV/0!

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

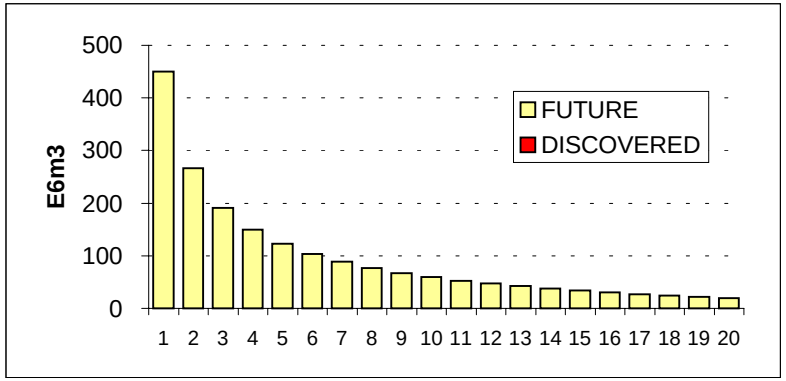
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

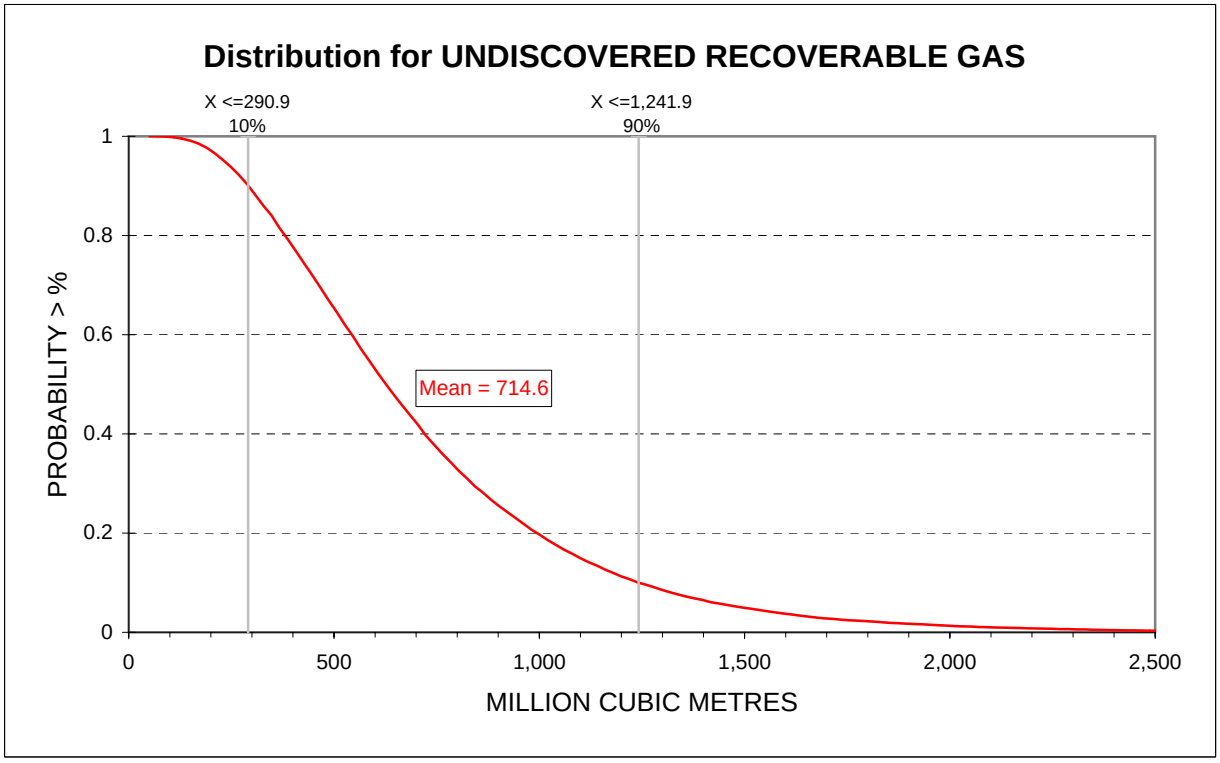


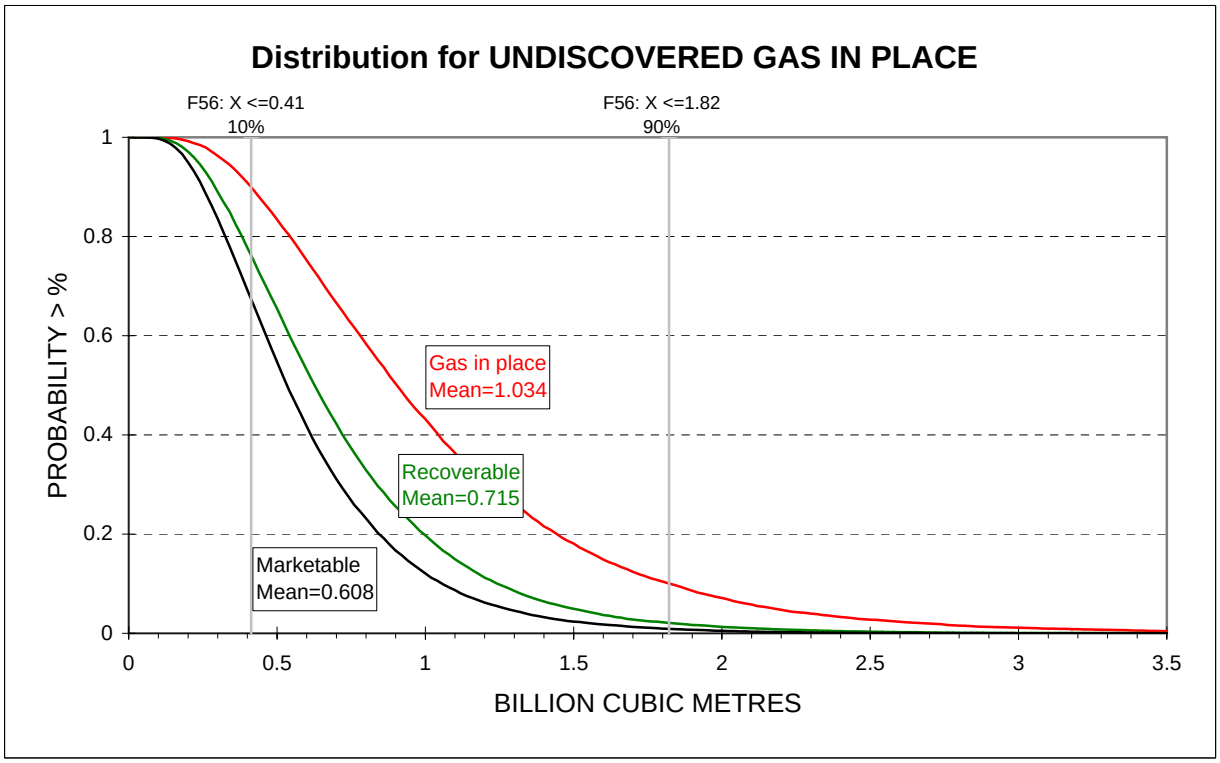
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

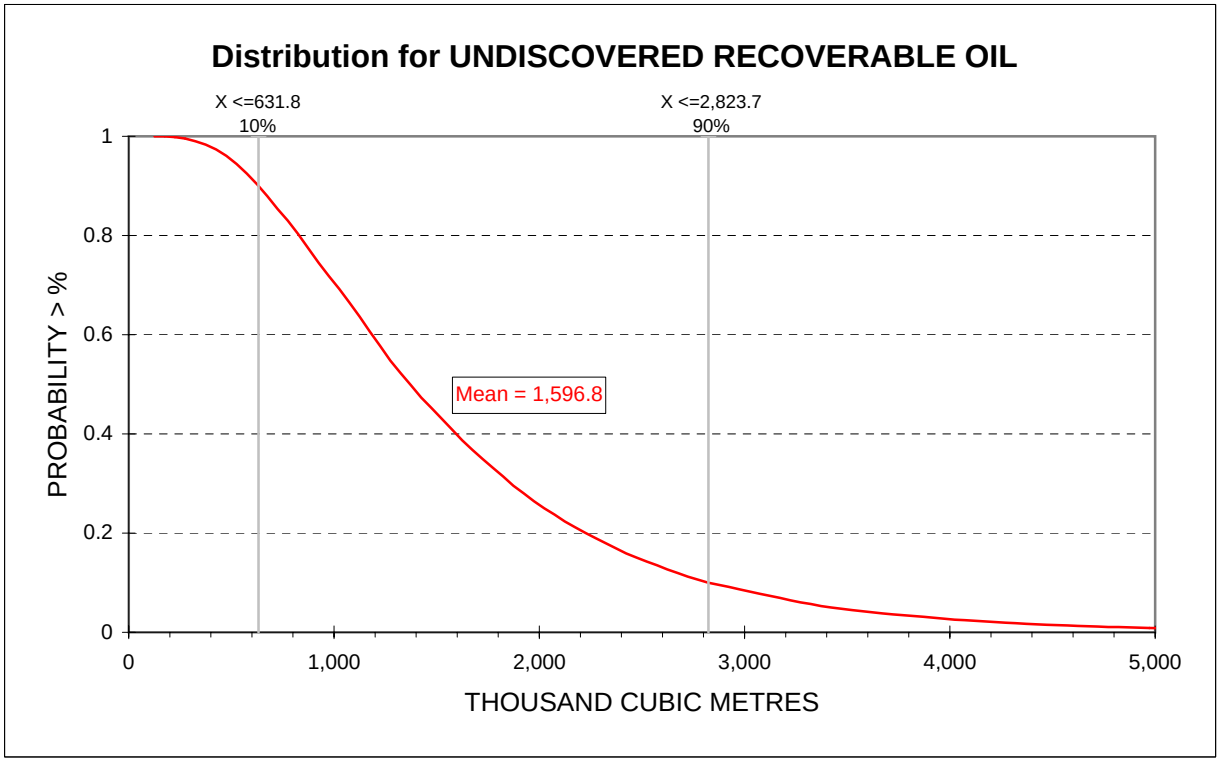
Play #	15
Play Name	Upper Paleozoic (sub-Cretaceous) subcrop
References	Elkton-Debolt; Pekisko; Flett/Fantasque Subcrop (NEB); D255, D254 (CGPC)
Reservoir Unit	Dolomitized Pekisko, Flett Fm limestones, Mattson Fm sandstone, Fantasque Fm chert
Distribution	North and east boundaries are subcrop limits, west margin is Bovie structure
Source/Seal	Exshaw Fm, minor Fort St. John Group/Fort St. John Group, Prophet Fm (seal for Pekisko Fm)
Trap Style	Stratigraphic/structural-porosity development along Cretaceous unconformity subcrop and fault bounded traps; carbonate reservoirs must be dolomitized and vuggy; down dip facies changes and porosity development; related to play #2 Stratigraphic-erosional truncation at subcrop edge; distal sand turbidite
Gas/Oil	gas associated with oil
Exploration Risks	Top seal (basal Cretaceous sand); dolomitization, fracturing, diagenetic porosity (needed for favourable reservoir)
Mapped Area	1.953 Miilion Ha (4.825 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	715 Million cubic metres (25.37 Bcf)
Undiscovered Marketable Gas	608 Million cubic metres (21.60 Bcf)
Undiscovered Recoverable Oil	1,597 Thousand cubic metres (10.05 MB)
Undiscovered Gas Fields	17 Fields, Largest 225 million cubic feet (8.0 Bcf)
Undiscovered Oil Fields	39 Fields, Largest 300 thousand cubic feet (1.9 MMB)

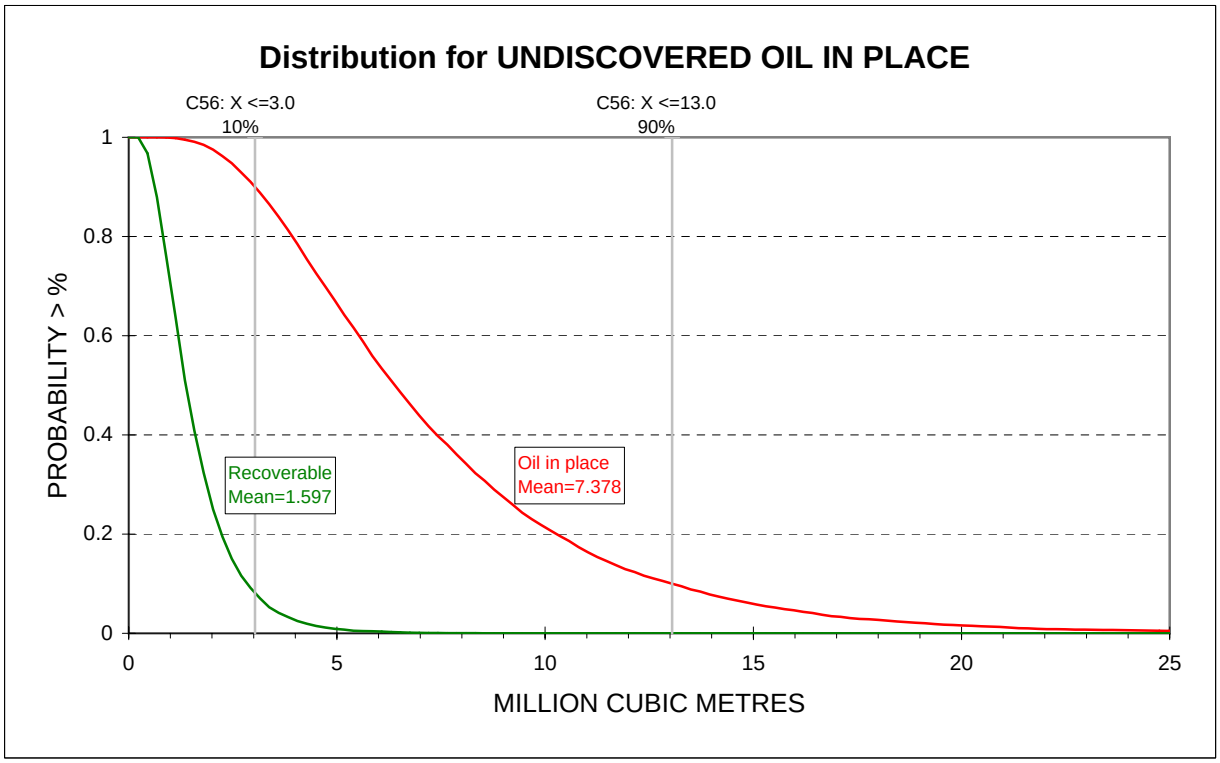
DEH CHO TERRITORY
UPPER PALEOZOIC SUBCROP (PLAY 15)





DEH CHO TERRITORY
UPPER PALEOZOIC SUBCROP (PLAY 15)

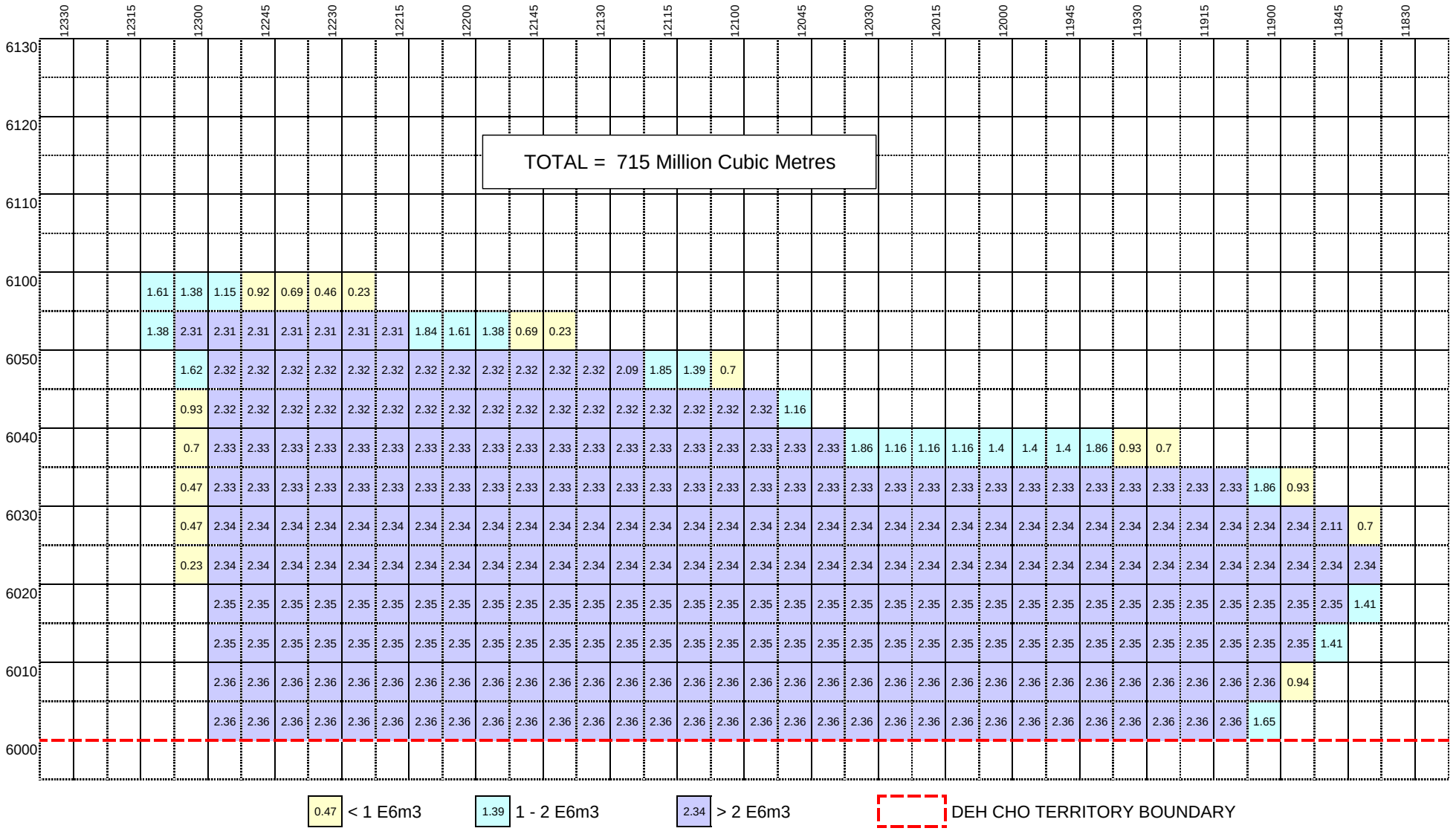




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 15 - UPPER PALEOZOIC (SUB-CRETACEOUS) SUBCROP

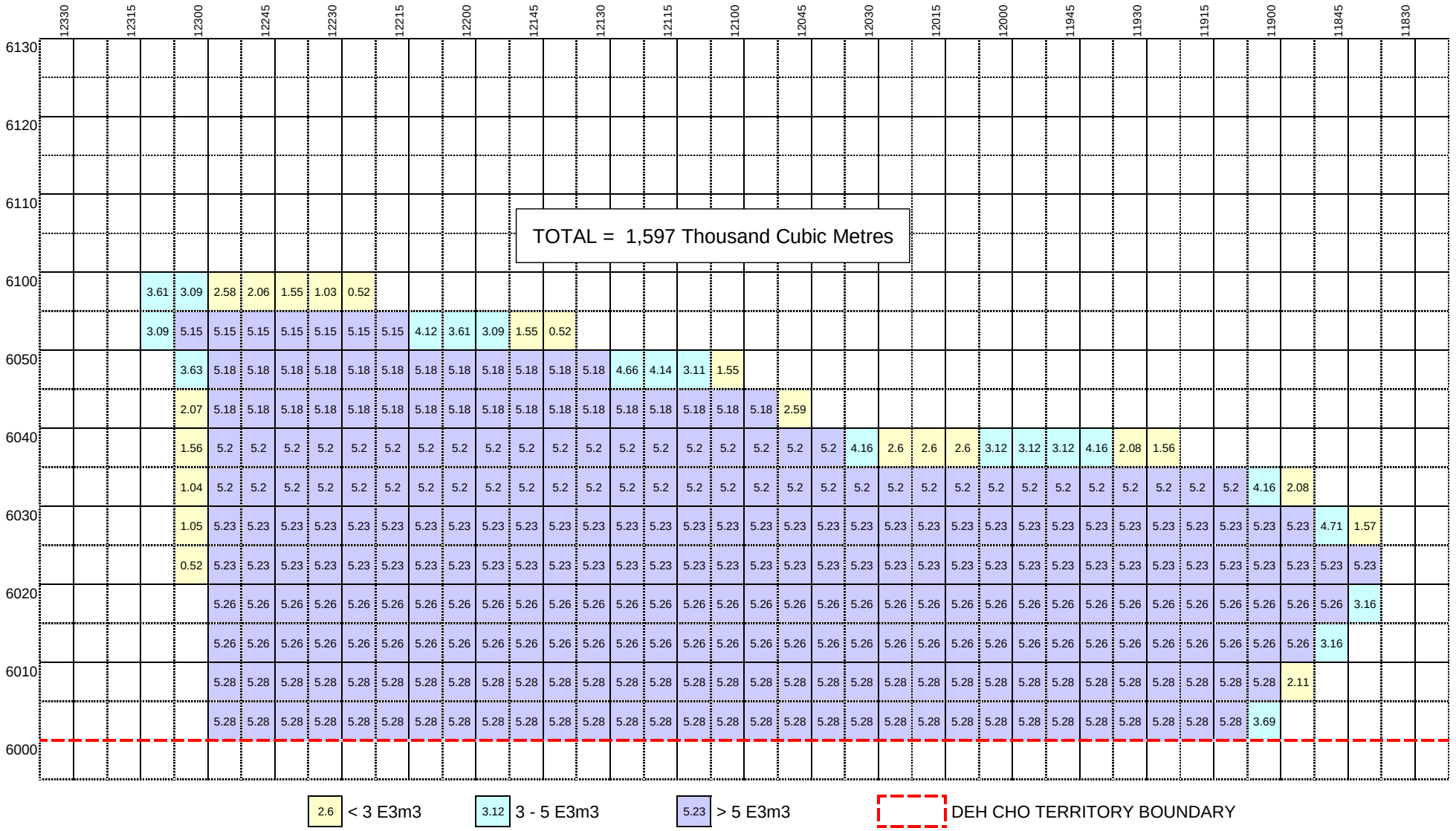
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE OIL PLAY 15 - UPPER PALEOZOIC (SUB-CRETACEOUS) SUBCROP

(THOUSAND CUBIC METRES / QUARTER GRID)



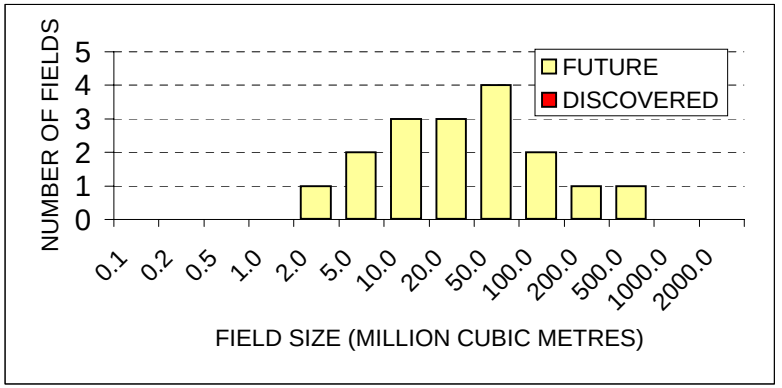
PLAY AREA 15 - UPPER PALEOZOIC (SUB-CRETACEOUS) SUBCROP - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

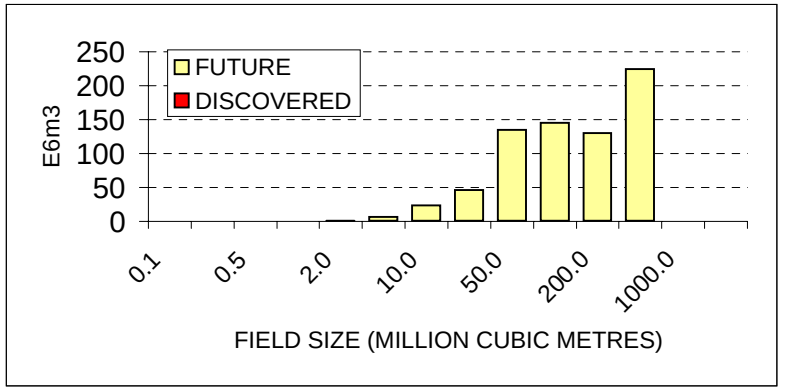
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	714.6	0.0	714.6
NUMBER OF FIELDS	17	0	17
AVERAGE SIZE (E6m3)	42.0		42.0
LARGEST FIELD (E6m3)	225		225
SMALLEST FIELD (E6m3)	1.28		1.28

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.3	0	0.0	1	1.3
5	2	7.0	0	0.0	2	7.0
10	3	23.5	0	0.0	3	23.5
20	3	46.7	0	0.0	3	46.7
50	4	135.3	0	0.0	4	135.3
100	2	145.7	0	0.0	2	145.7
200	1	130.2	0	0.0	1	130.2
500	1	225.0	0	0.0	1	225.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

ULTIMATE FIELD SIZE DISTRIBUTION



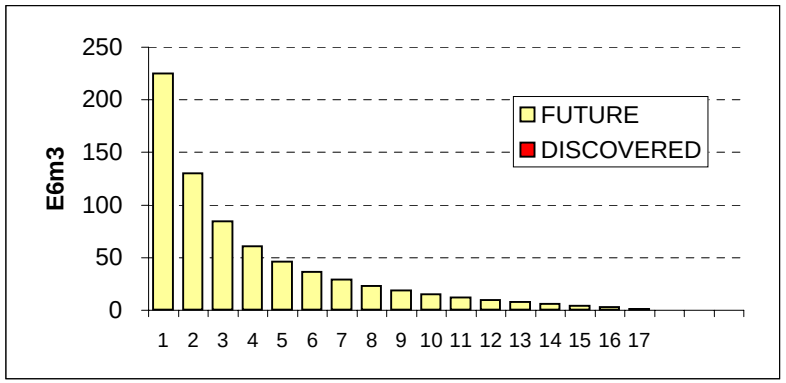
ULTIMATE RESOURCE DISTRIBUTION



FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	4	2	1	0
POTENTIAL (E6m3)	501	355	225	0
PROBABILITY (%)	23.5%	11.8%	5.9%	0.0%
AVERAGE SIZE (E6m3)	125.2	177.6	225.0	#DIV/0!

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

ULTIMATE FIELD RANK PLOT - TOP 20



DEH CHO TERRITORY PLAY 15 - UPPER PALEOZOIC (SUB-CRETACEOUS) SUBCROP - ULTIMATE OIL POTENTIAL

FIELD SIZE DISTRIBUTION

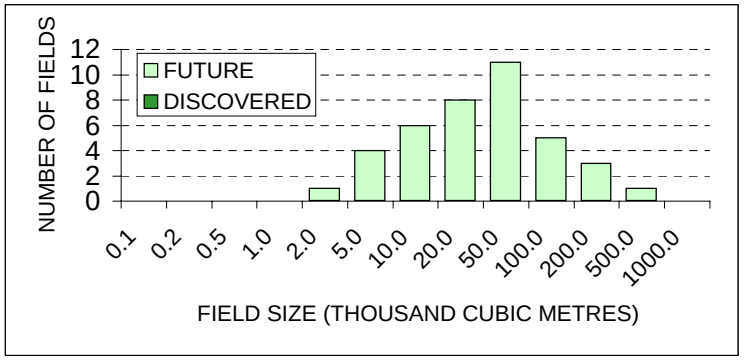
	ULTIMATE	DISCOVERED	FUTURE
OIL RESOURCES (E3m3)	1596.8	0.0	1596.8
NUMBER OF FIELDS	39	0	39
AVERAGE SIZE (E3m3)	40.9		40.9
LARGEST FIELD (E3m3)	300.00		300
SMALLEST FIELD (E3m3)	1.31		1.31

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)	NO.OF FIELDS	POTENTIAL (E3m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	1	1.3	0	0.0	1	1.3
5	4	14.0	0	0.0	4	14.0
10	6	44.7	0	0.0	6	44.7
20	8	115.5	0	0.0	8	115.5
50	11	352.5	0	0.0	11	352.5
100	5	347.2	0	0.0	5	347.2
200	3	421.5	0	0.0	3	421.5
500	1	300.0	0	0.0	1	300.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

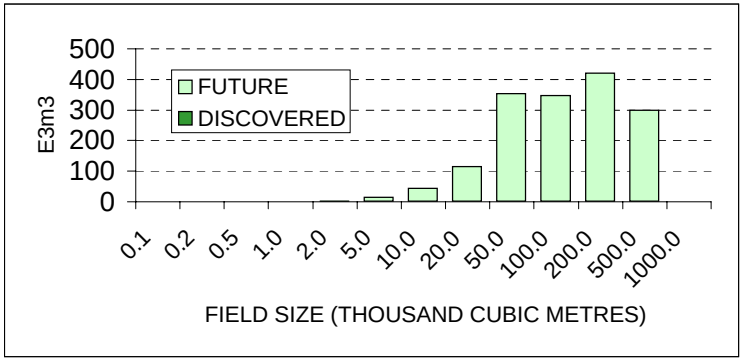
FUTURE FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	9	4	1	0
POTENTIAL (E3m3)	1069	722	300	0
PROBABILITY (%)	23.1%	10.3%	2.6%	0.0%
AVERAGE SIZE (E3m3)	118.7	180.4	300.0	#DIV/0!

DISCOVERED FIELDS	>50 E3m3	>100 E3m3	>200 E3m3	>500 E3m3
NUMBER	0	0	0	0
POTENTIAL (E3m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E3m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

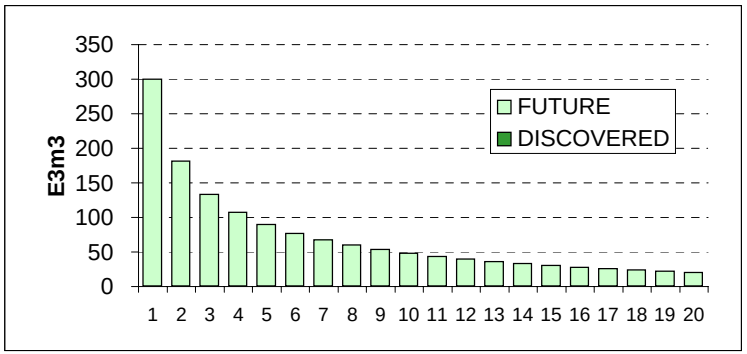
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

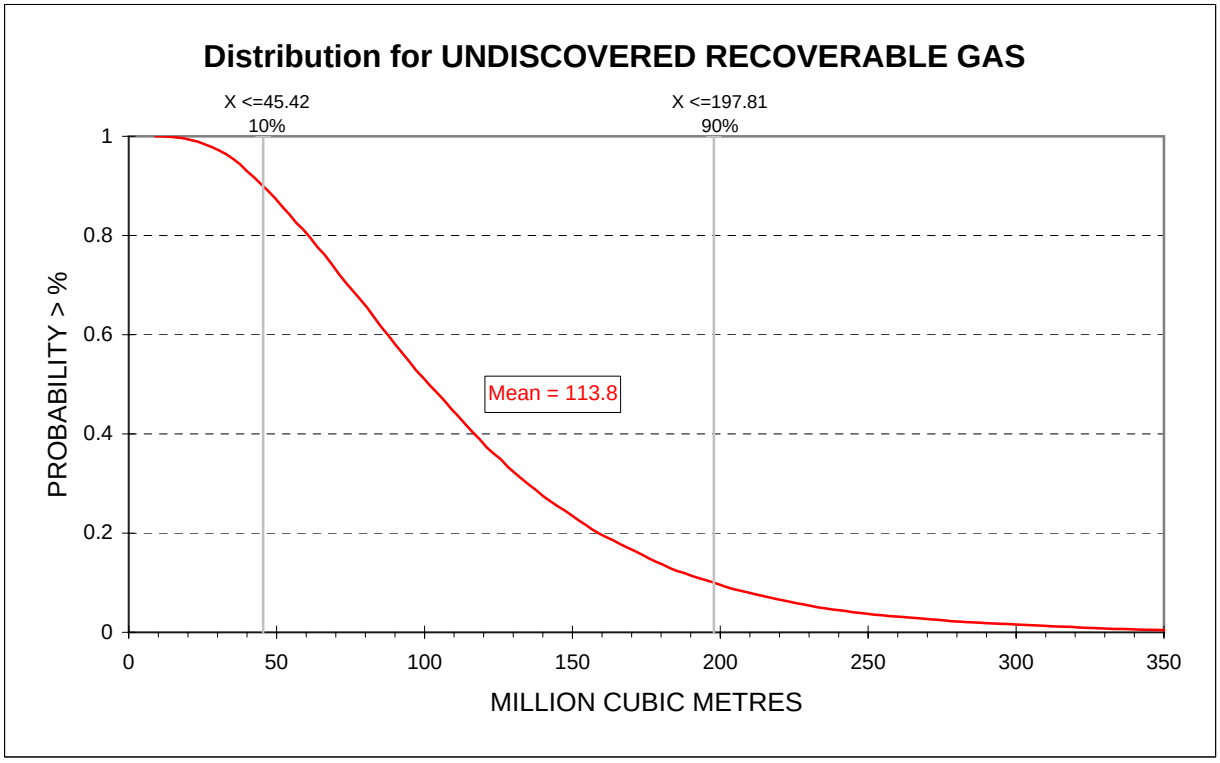


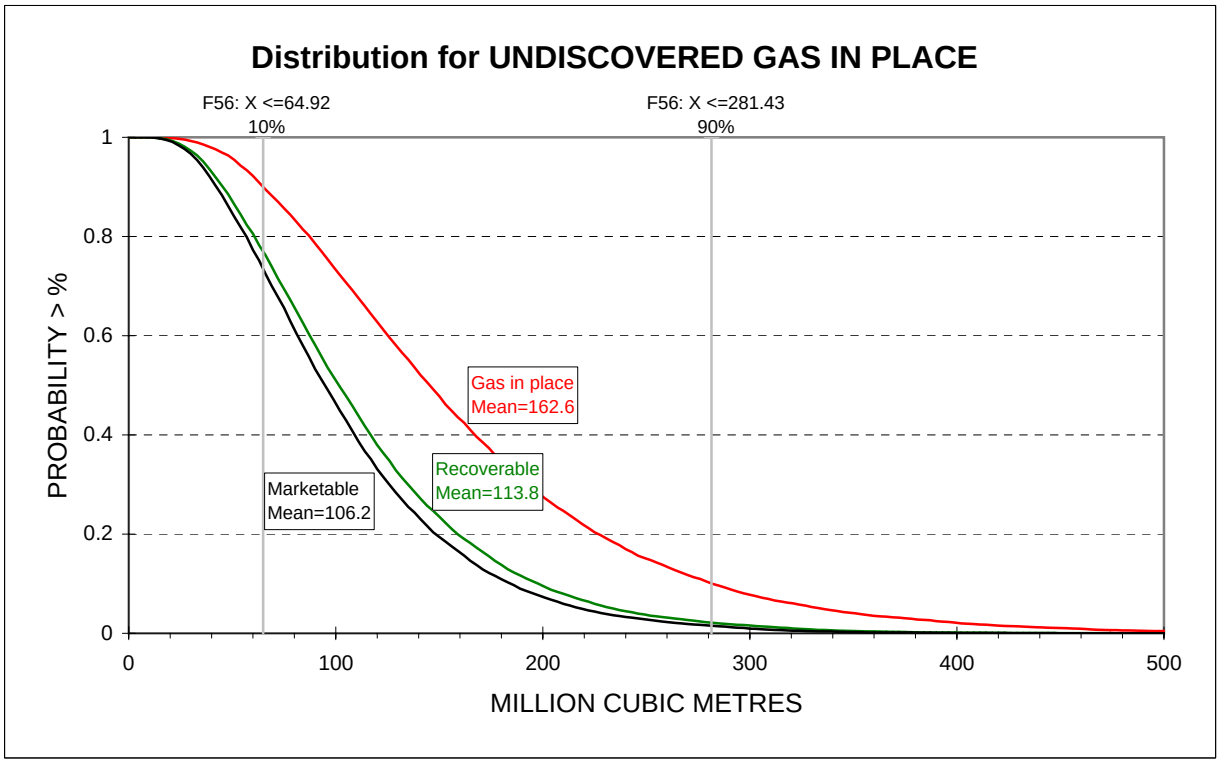
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	16
Play Name	Triassic subcrop
References	this study; Bird et al. (1994)
Reservoir Unit	Turbidites, distal siltstones and sandstones in Toad-Grayling Fm
Distribution	North and east boundaries are sucbcrop edges; west boundary is outcrop/Laramide deformation front (restricted to Liard Basin)
Source/Seal	Toad-Grayling, Exshaw fms, Middle Devonian shale/Triassic shale, Cretaceous?
Trap Style	Stratigraphic-erosional truncation at subcrop edge; distal sand turbidite facies; structural-possible drape over Paleozoic structure
Gas/Oil	gas
Exploration Risks	Top seal very risky (basal Cretaceous sand); suitable reservoir
Mapped Area	0.136 Miilion Ha (0.336 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	114 Million cubic metres (4.04 Bcf)
Undiscovered Marketable Gas	106 Million cubic metres (3.77 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	13 Fields, Largest 30 million cubic feet (1.1 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
TRIASSIC SUBCROP (PLAY 16)

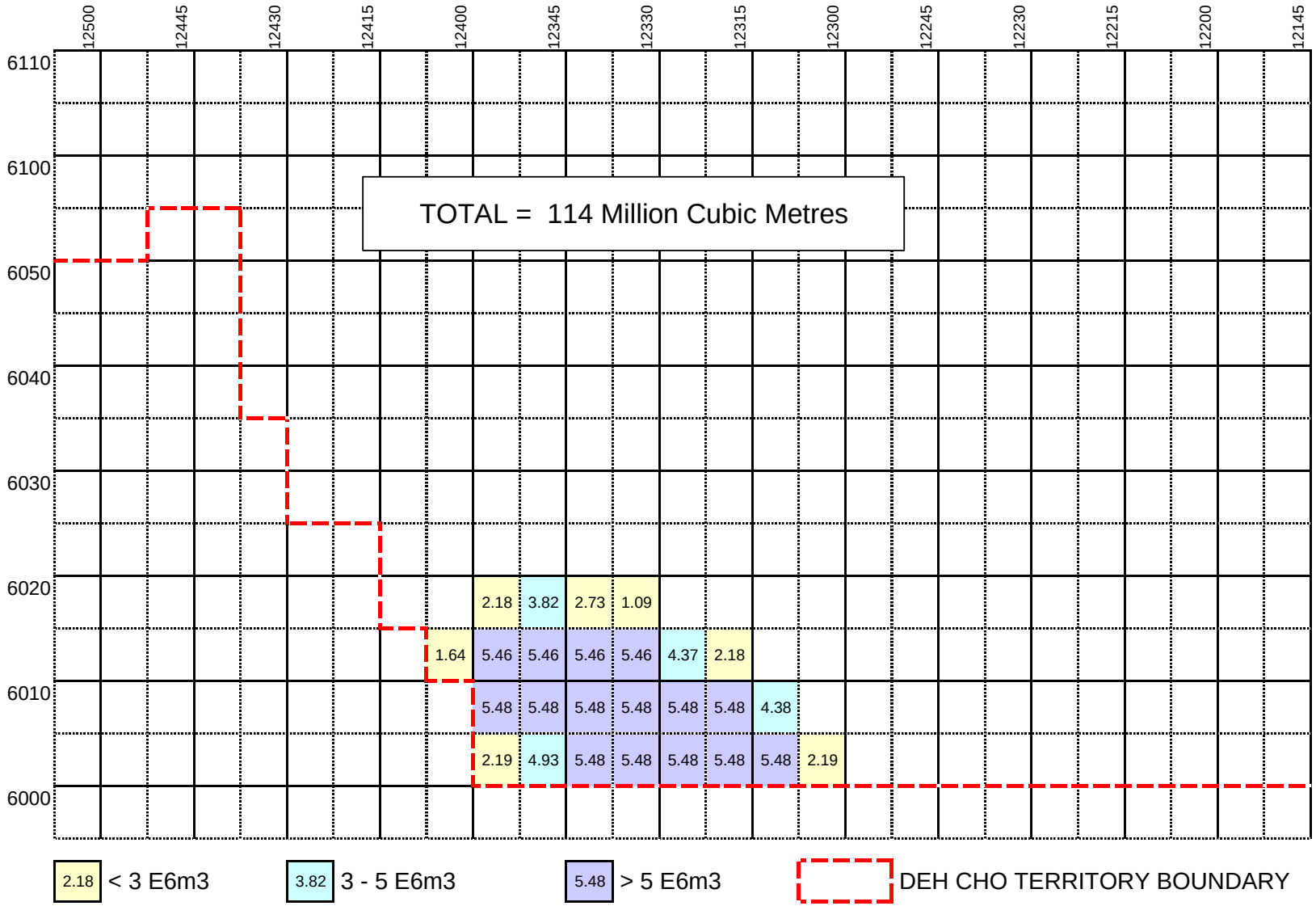




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 16 - TRIASSIC SUBCROP

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 16 - TRIASSIC SUBCROP - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

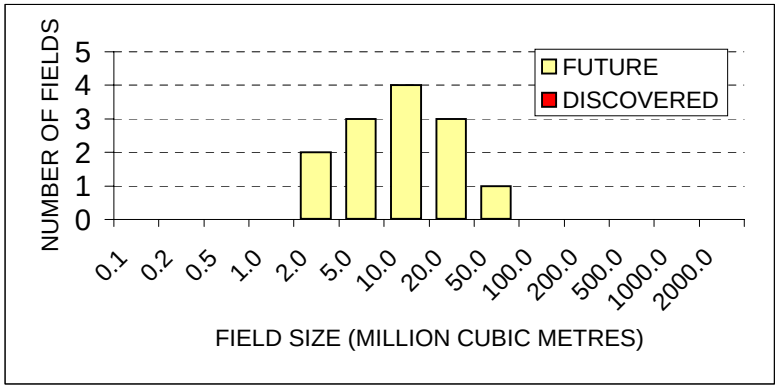
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	113.8	0.0	113.8
NUMBER OF FIELDS	13	0	13
AVERAGE SIZE (E6m3)	8.8		8.8
LARGEST FIELD (E6m3)	30		30
SMALLEST FIELD (E6m3)	1.12		1.12

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	2	3.0	0	0.0	2	3.0
5	3	10.1	0	0.0	3	10.1
10	4	27.1	0	0.0	4	27.1
20	3	43.5	0	0.0	3	43.5
50	1	30.0	0	0.0	1	30.0
100	0	0.0	0	0.0	0	0.0
200	0	0.0	0	0.0	0	0.0
500	0	0.0	0	0.0	0	0.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

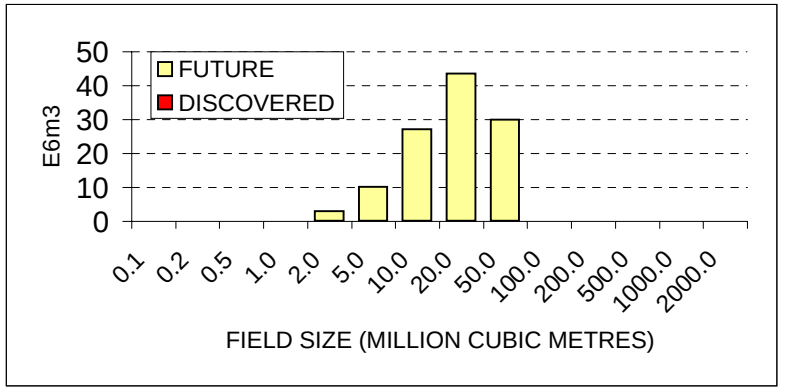
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	0.0%	0.0%	0.0%	0.0%
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

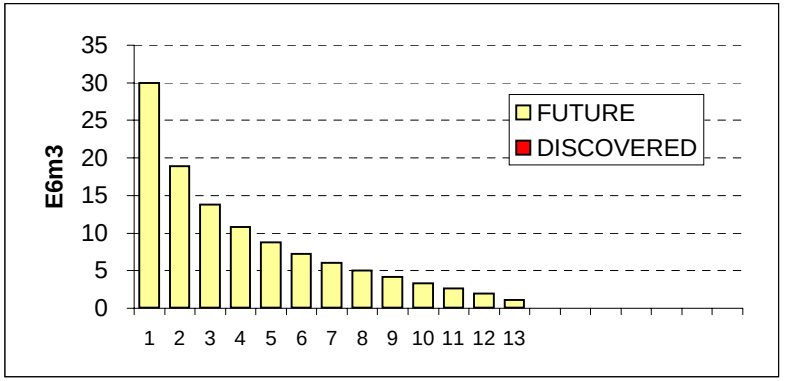
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

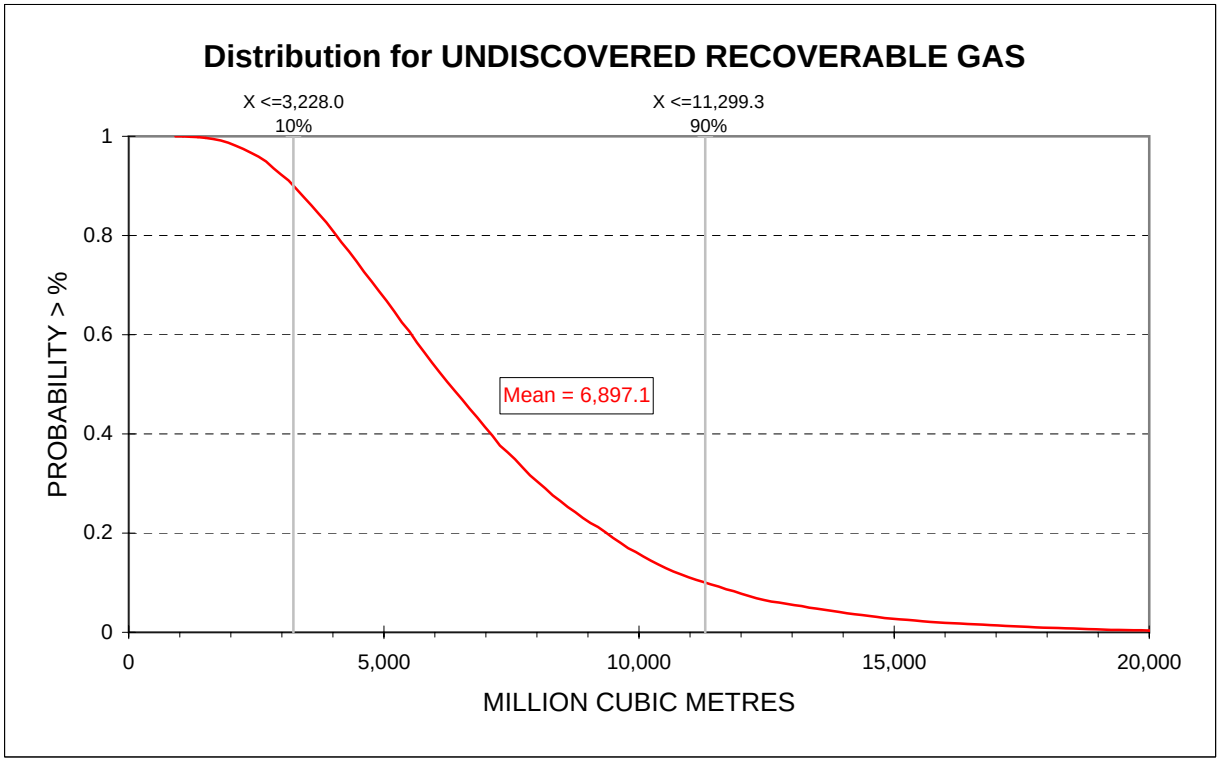


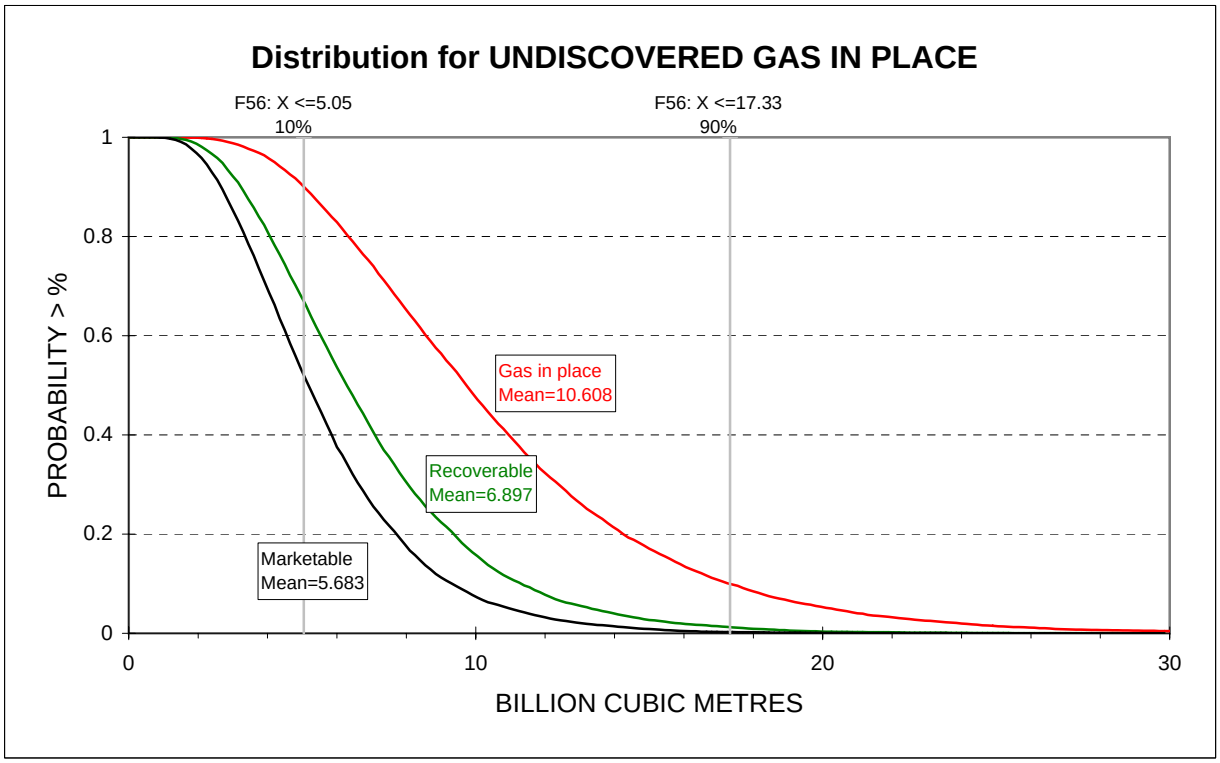
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	17
Play Name	Bovie structure
References	this study; MacLean (2002)
Reservoir Unit	Middle Devonian carbonates or Carboniferous Mattson Fm
Distribution	Footwall of Bovie fault
Source/Seal	Devonian shales (Besa River, Horn River fms)/Besa River, Horn River fms, fault seal?
Trap Style	Structural-footwall structures and juxtaposition against faults
Gas/Oil	gas (sour)
Exploration Risks	Timing of hydrocarbon production; migration with respect to trap (latest pre-Cretaceous)
Mapped Area	0.102 Miilion Ha (0.252 Million Acres)
Deh Cho significant fields/wells	Bovie Lake J-72
Discovered Resources	1 Gas Field - 177 million cubic metres (6.3Bcf) recoverable gas.
Undiscovered Recoverable Gas	6,897 Million cubic metres (244.80 Bcf)
Undiscovered Marketable Gas	5,683 Million cubic metres (201.72 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	34 Fields, Largest 1,750 million cubic feet (62.1 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
BOVIE STRUCTURE (PLAY 17)

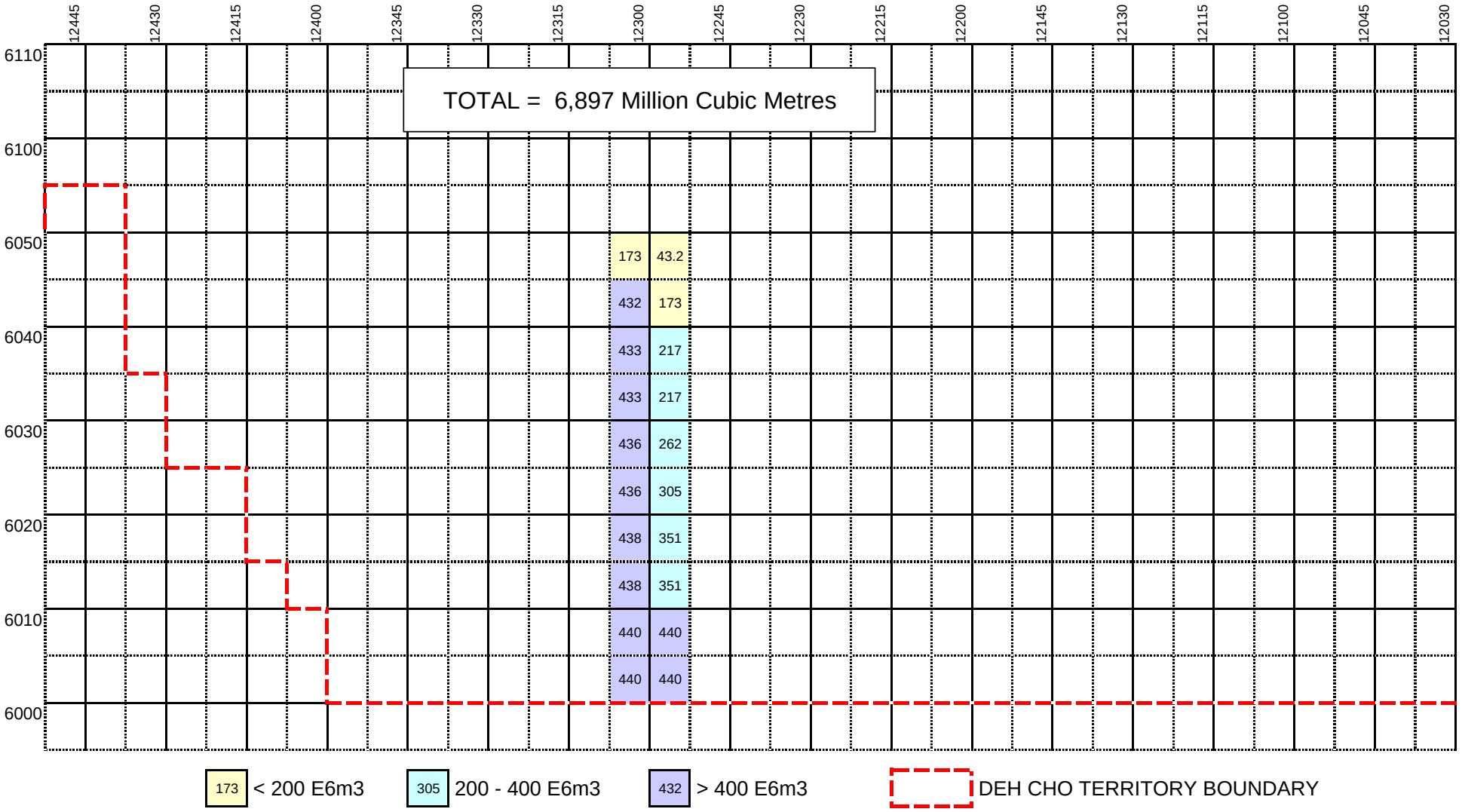




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 17 - BOVIE STRUCTURE

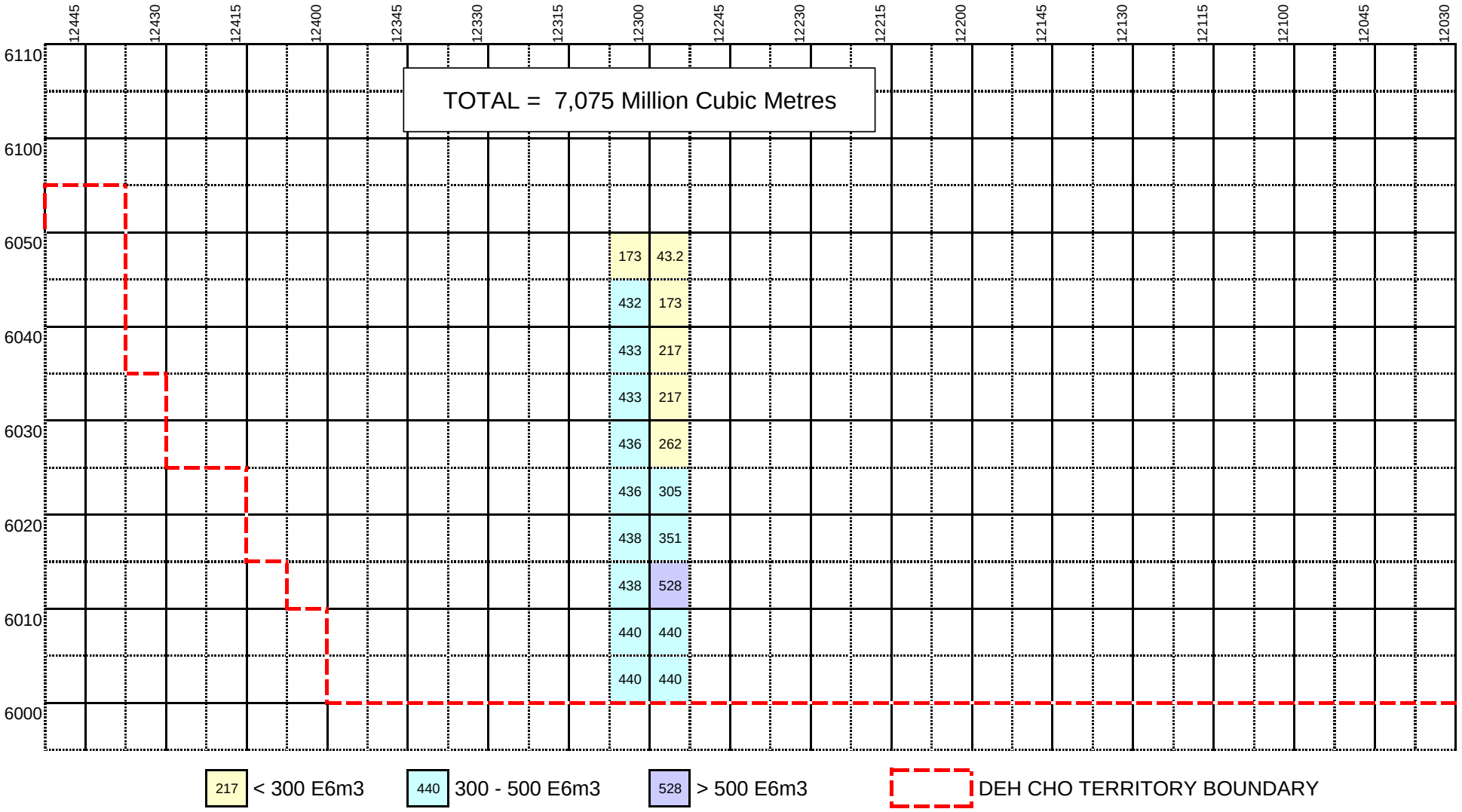
(MILLION CUBIC METRES / QUARTER GRID)



DEH CHO TERRITORY

DISTRIBUTION OF ULTIMATE RECOVERABLE GAS PLAY 17 - BOVIE STRUCTURE

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 17 - BOVIE STRUCTURE - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

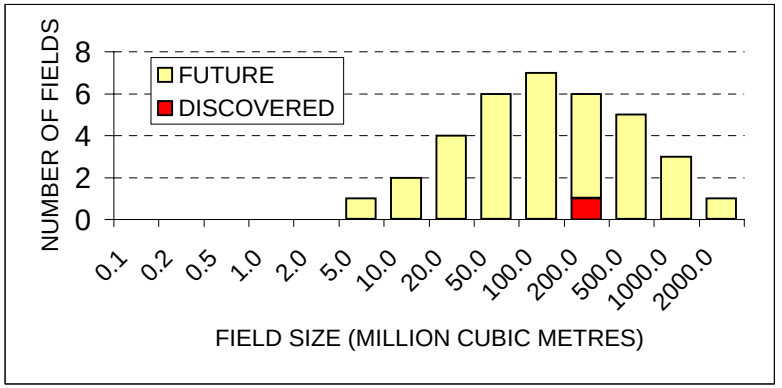
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	7074.6	177.5	6897.1
NUMBER OF FIELDS	35	1	34
AVERAGE SIZE (E6m3)	202.1	177.5	202.9
LARGEST FIELD (E6m3)	1750	177	1750
SMALLEST FIELD (E6m3)	2.72	177.50	2.72

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	1	2.7	0	0.0	1	2.7
10	2	13.8	0	0.0	2	13.8
20	4	61.0	0	0.0	4	61.0
50	6	199.6	0	0.0	6	199.6
100	7	505.7	0	0.0	7	505.7
200	6	893.9	1	177.5	5	716.4
500	5	1469.2	0	0.0	5	1469.2
1000	3	2178.6	0	0.0	3	2178.6
2000	1	1750.0	0	0.0	1	1750.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

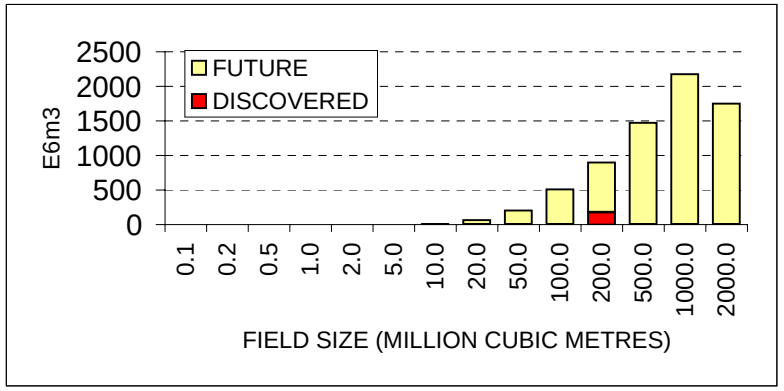
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	21	14	9	4
POTENTIAL (E6m3)	6620	6114	5398	3929
PROBABILITY (%)	61.8%	41.2%	26.5%	11.8%
AVERAGE SIZE (E6m3)	315.2	436.7	599.8	982.1

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	1	1	0	0
POTENTIAL (E6m3)	177	177	0	0
PROBABILITY (%)	100.0%	100.0%	0.0%	0.0%
AVERAGE SIZE (E6m3)	177.5	177.5	#DIV/0!	#DIV/0!

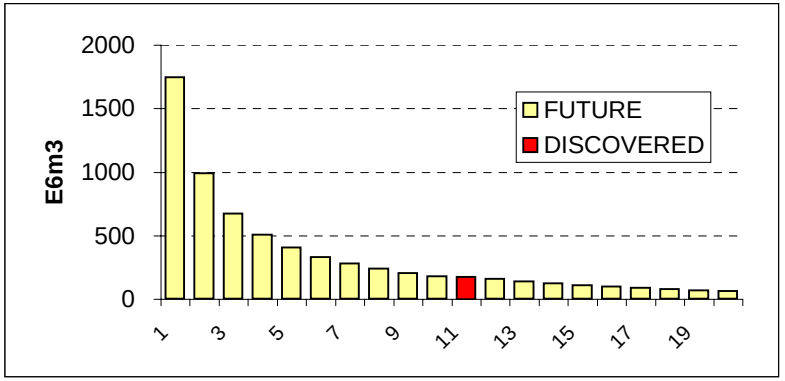
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

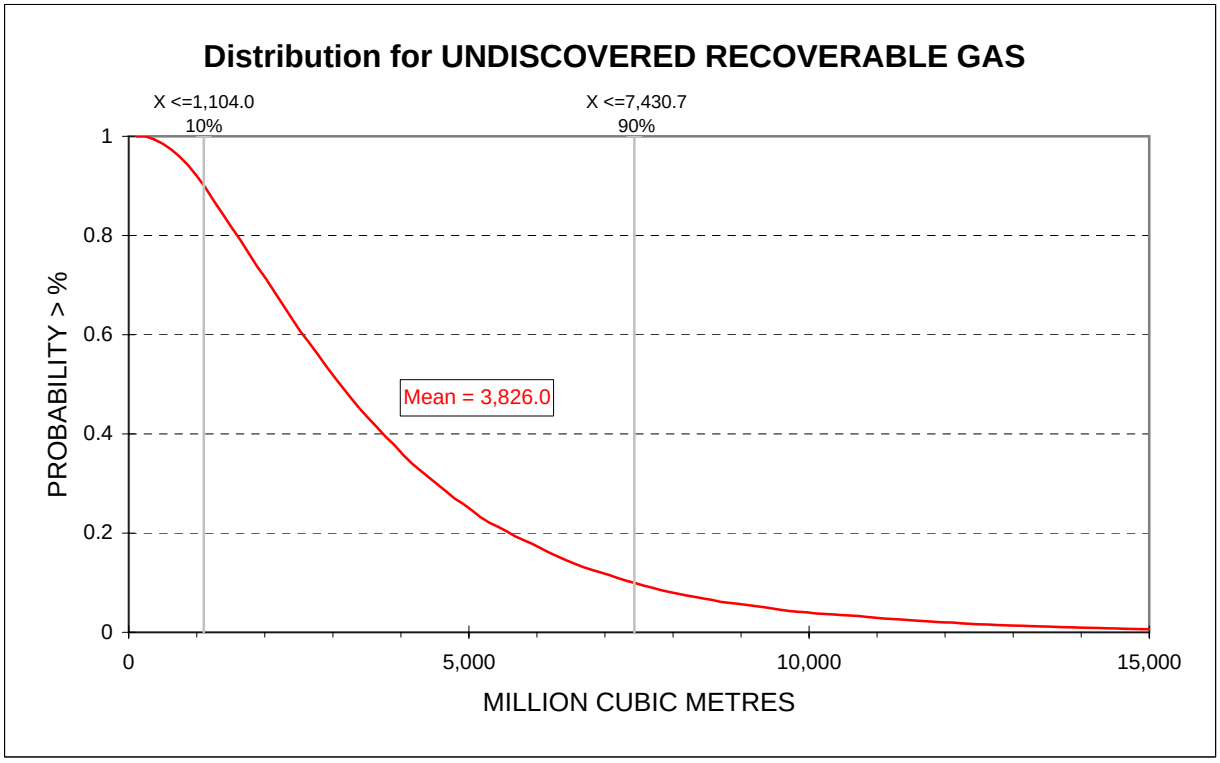


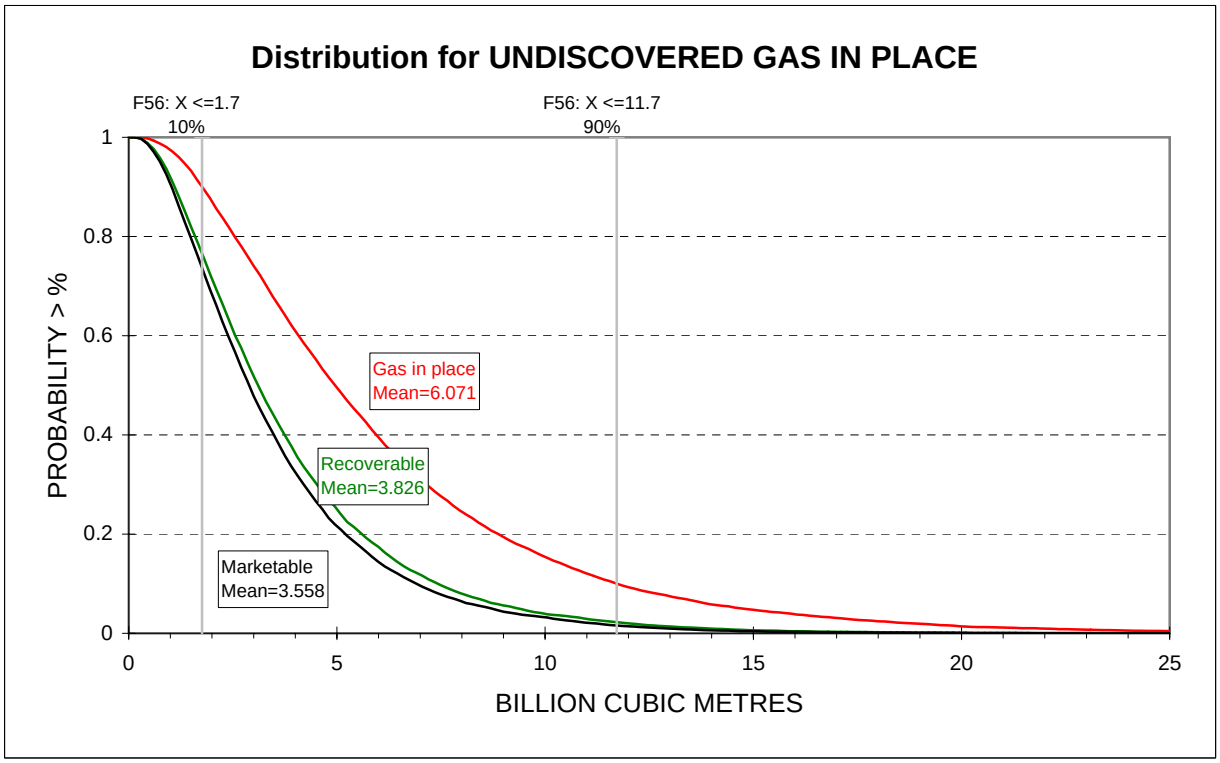
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	18
Play Name	Silurian-Ordovician platform
References	this study, CGPC
Reservoir Unit	Mount Kindle and Franklin Mountain fms, basal Little Doctor Mbr of Mount Kindle Fm
Distribution	South limit is outcrop edge; west limit is outcrop/Laramide deformation at Mackenzie Mountains front; east boundary is subcrop edge at Canadian Shield
Source/Seal	Devonian?/lower Devonian evaporites (Bear Rock, Chinchaga fms), tight Mount Kindle Fm seal for Little Doctor Mbr
Trap Style	Structural-highs, folds, fault bounded; fracture porosity; porosity enhanced through pre-Devonian erosion; stratigraphic-pinchouts and facies changes in Little Doctor Mbr sandstones
Gas/Oil	gas
Exploration Risks	Suitable source rock; breaching during hiatus (unconformities in sequence); suitable reservoir
Mapped Area	7.022 Miilion Ha (17.352 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	3,826 Million cubic metres (135.80 Bcf)
Undiscovered Marketable Gas	3,558 Million cubic metres (126.29 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	31 Fields, Largest 960 million cubic feet (34.1 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
SILURIAN ORDOVICIAN PLATFORM (PLAY 18)

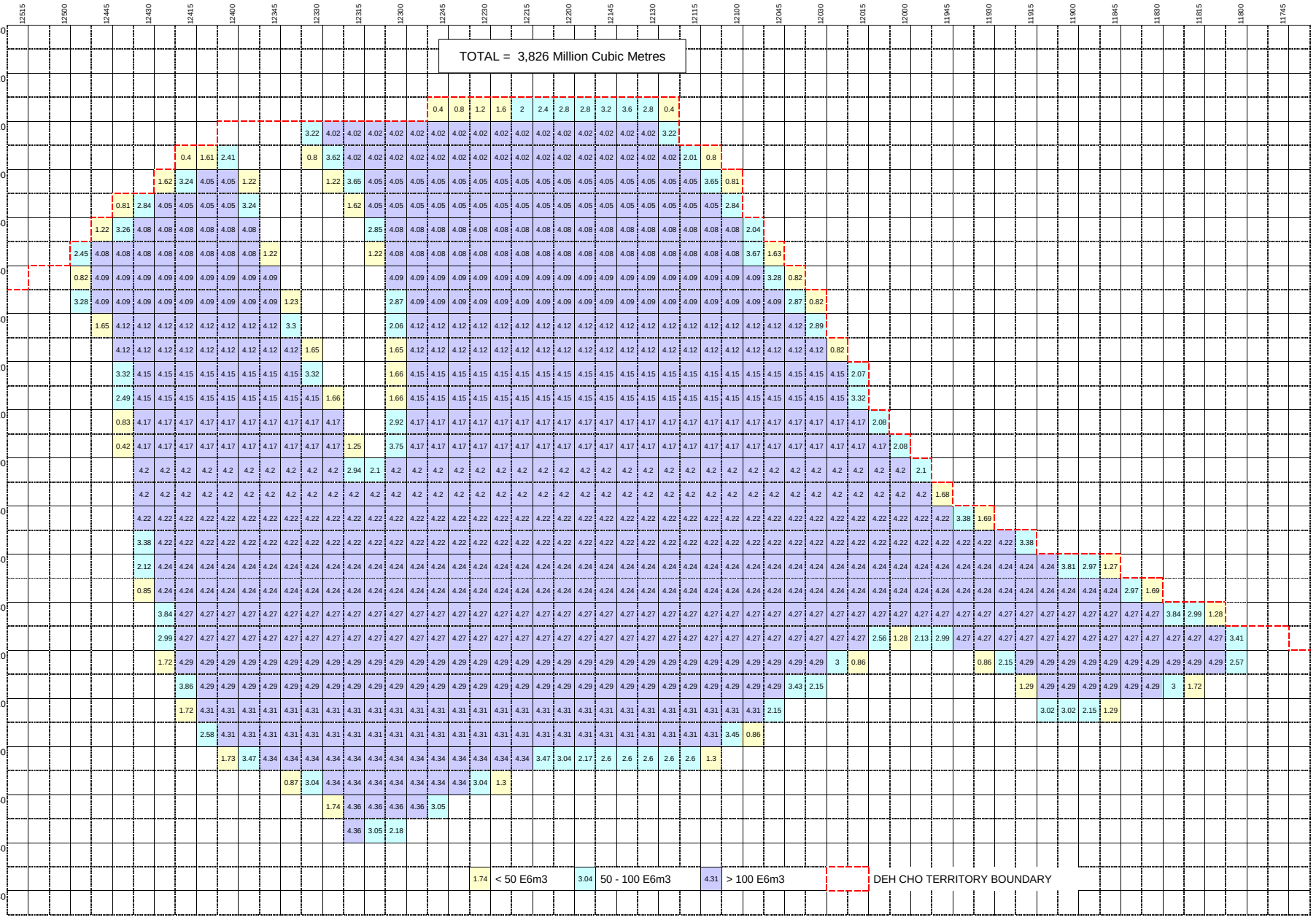




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 18 - SILURIAN-ORDOVICIAN PLATFORM

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 18 - SILURIAN-ORDOVICIAN PLATFORM - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

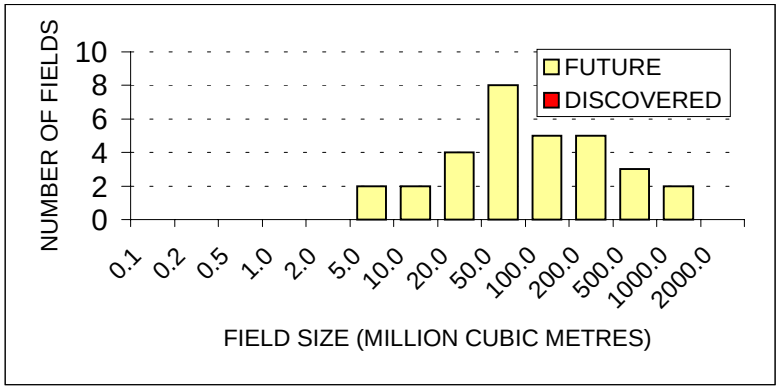
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	3826.0	0.0	3826.0
NUMBER OF FIELDS	31	0	31
AVERAGE SIZE (E6m3)	123.4		123.4
LARGEST FIELD (E6m3)	960		960
SMALLEST FIELD (E6m3)	2.25		2.25

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	6.7	0	0.0	2	6.7
10	2	15.2	0	0.0	2	15.2
20	4	57.4	0	0.0	4	57.4
50	8	271.3	0	0.0	8	271.3
100	5	360.9	0	0.0	5	360.9
200	5	709.2	0	0.0	5	709.2
500	3	894.9	0	0.0	3	894.9
1000	2	1510.3	0	0.0	2	1510.3
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

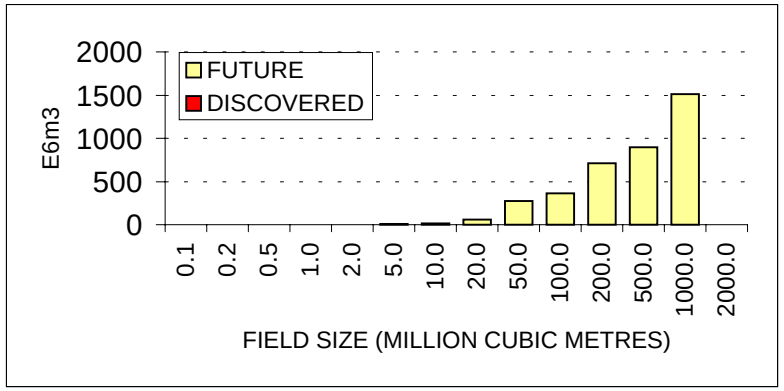
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	15	10	5	2
POTENTIAL (E6m3)	3475	3114	2405	1510
PROBABILITY (%)	48.4%	32.3%	16.1%	6.5%
AVERAGE SIZE (E6m3)	231.7	311.4	481.1	755.2

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

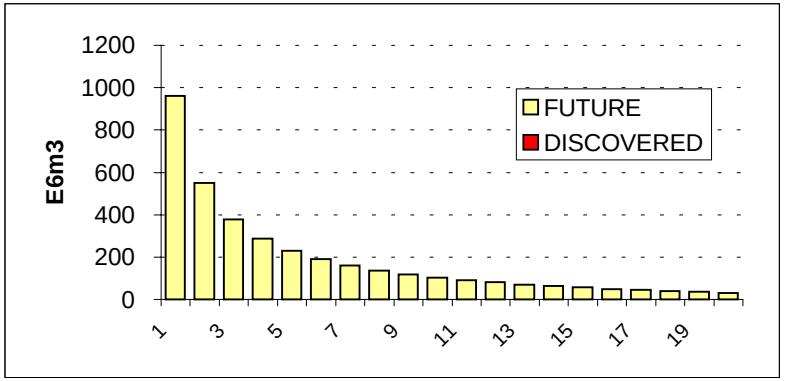
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

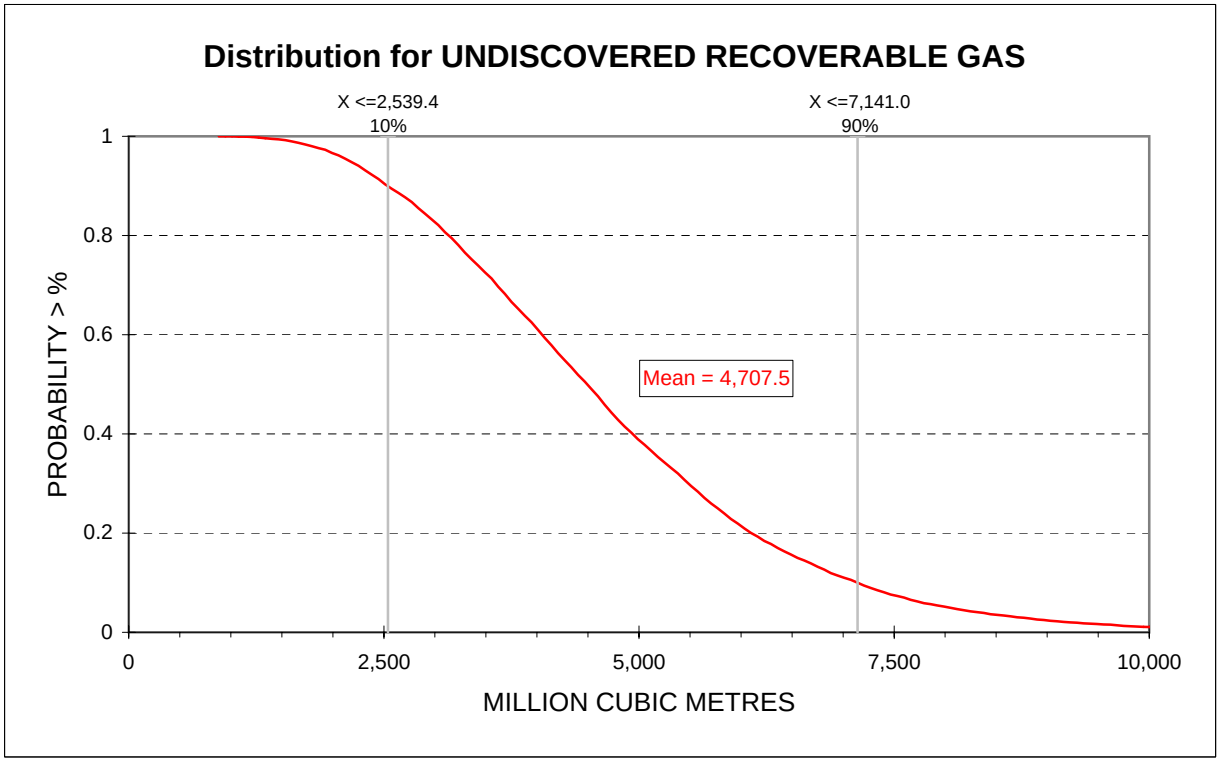


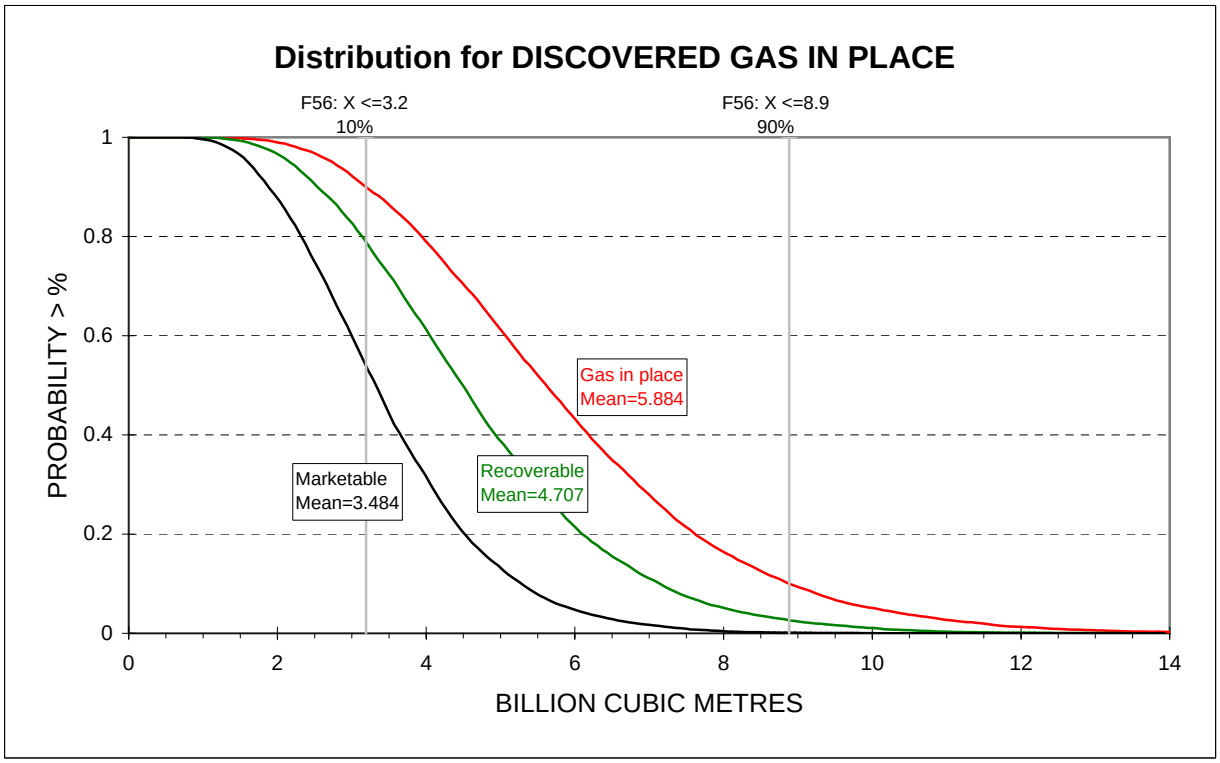
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	19
Play Name	Basal Cambrian clastics
References	this study, CGPC
Reservoir Unit	Mount Clark/Old Fort Point fms basal sandstones
Distribution	Subcrop limit of Basal Cambrian clastics; onlapping Bulmer Lake arch
Source/Seal	Mount Cap Fm shales, possible Proterozoic source west of Bulmer Lake arch/Mount Cap, Saline River fms
Trap Style	Stratigraphic-pinchouts, thickened sand in grabens, facies changes and/or diagenetic porosity control; structural-fault controlled
Gas/Oil	gas
Exploration Risks	Suitable source rock; isolation from source rock; preservation of porosity
Mapped Area	0.310 Miilion Ha (0.765 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	4,708 Million cubic metres (167.09 Bcf)
Undiscovered Marketable Gas	3,484 Million cubic metres (123.64 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	28 Fields, Largest 1,250 million cubic feet (44.4 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
BASAL CAMBRIAN CLASTICS (PLAY 19)

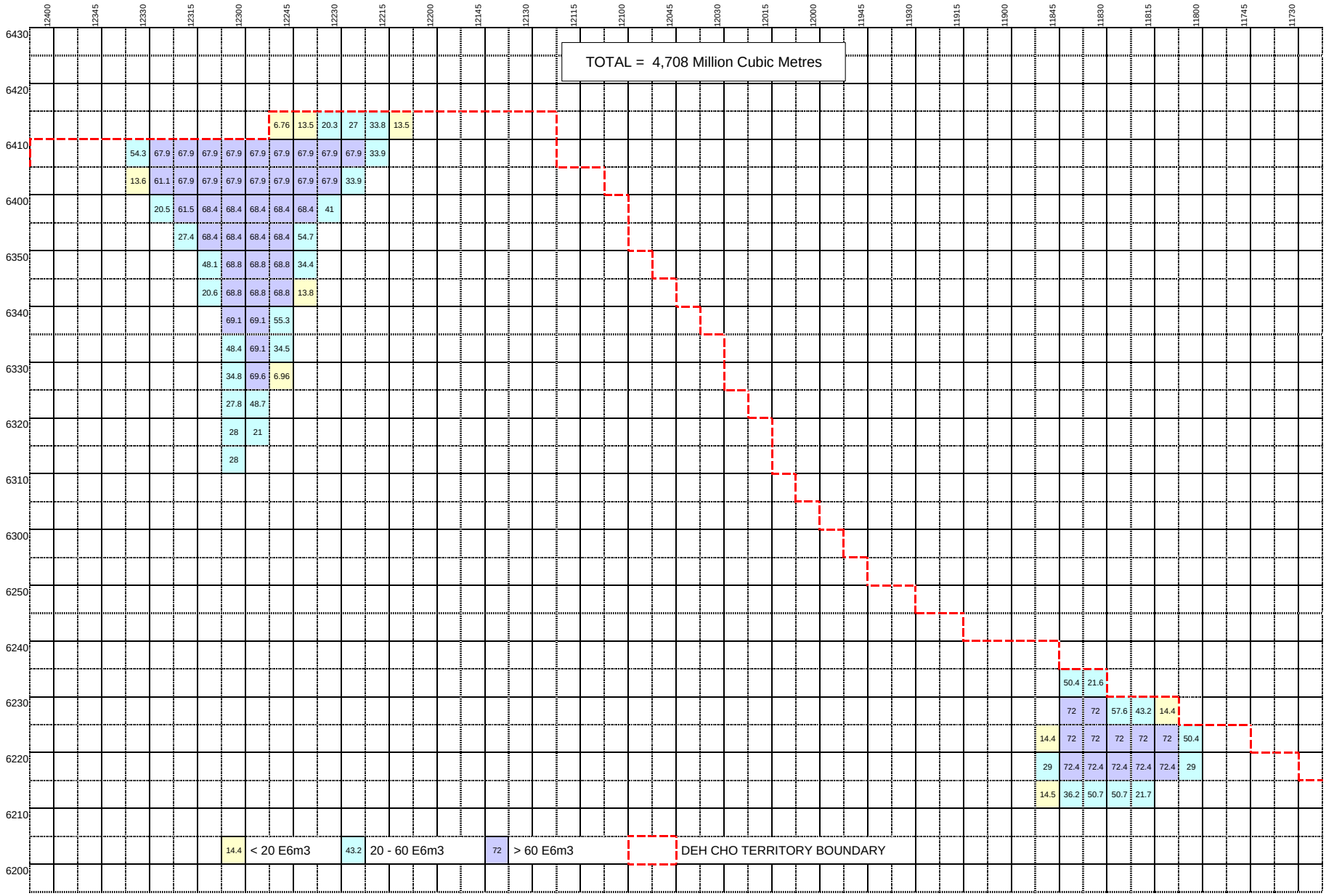




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 19 - BASAL CAMBRIAN CLASTICS

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 19 - BASAL CAMBRIAN CLASTICS - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

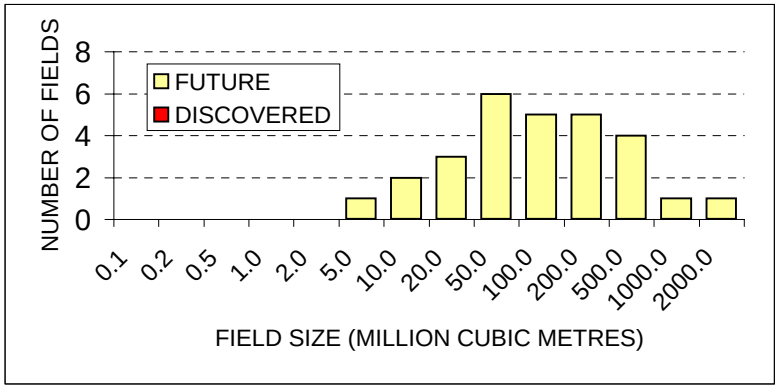
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	4707.5	0.0	4707.5
NUMBER OF FIELDS	28	0	28
AVERAGE SIZE (E6m3)	168.1		168.1
LARGEST FIELD (E6m3)	1250		1250
SMALLEST FIELD (E6m3)	3.06		3.06

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	1	3.1	0	0.0	1	3.1
10	2	15.6	0	0.0	2	15.6
20	3	47.1	0	0.0	3	47.1
50	6	207.8	0	0.0	6	207.8
100	5	364.3	0	0.0	5	364.3
200	5	735.6	0	0.0	5	735.6
500	4	1369.4	0	0.0	4	1369.4
1000	1	714.8	0	0.0	1	714.8
2000	1	1250.0	0	0.0	1	1250.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

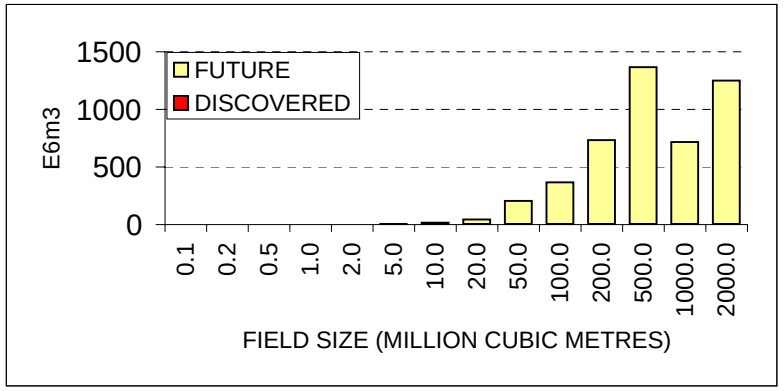
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	16	11	6	2
POTENTIAL (E6m3)	4434	4070	3334	1965
PROBABILITY (%)	57.1%	39.3%	21.4%	7.1%
AVERAGE SIZE (E6m3)	277.1	370.0	555.7	982.4

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

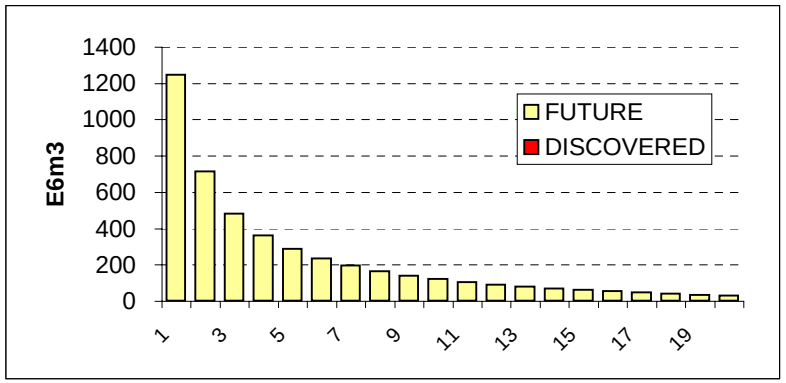
ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20

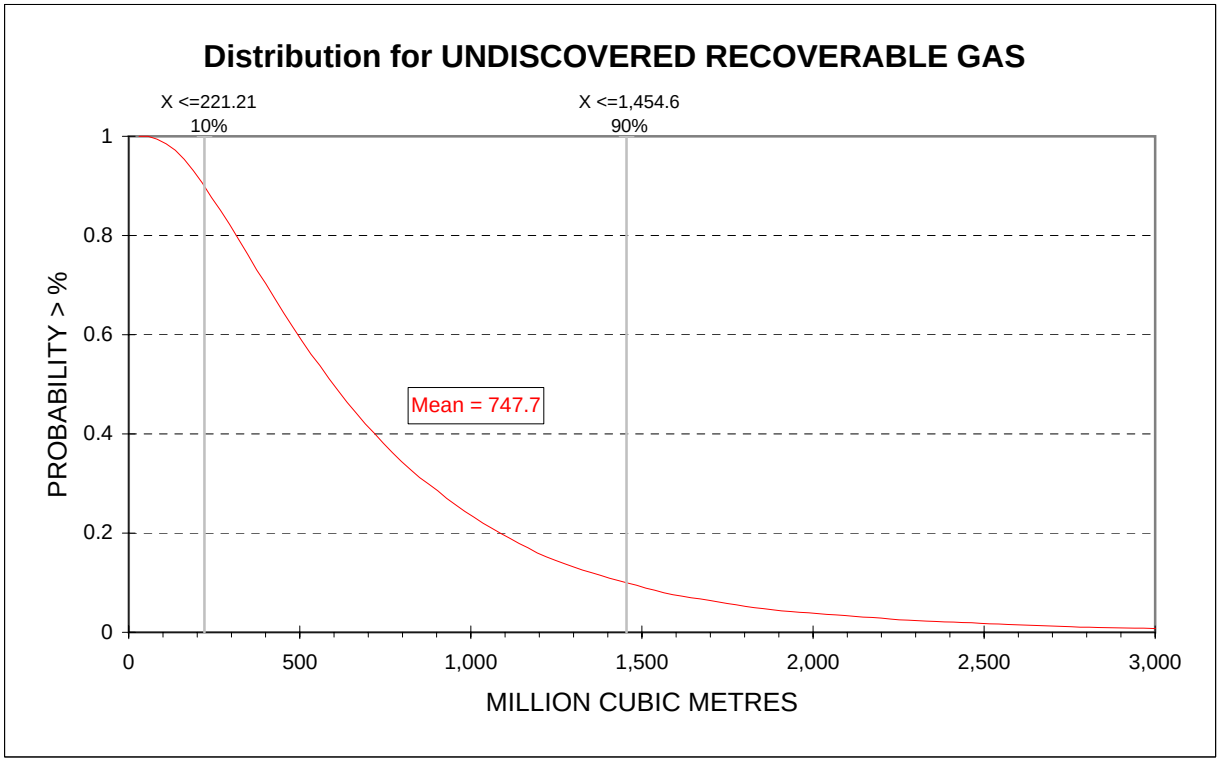


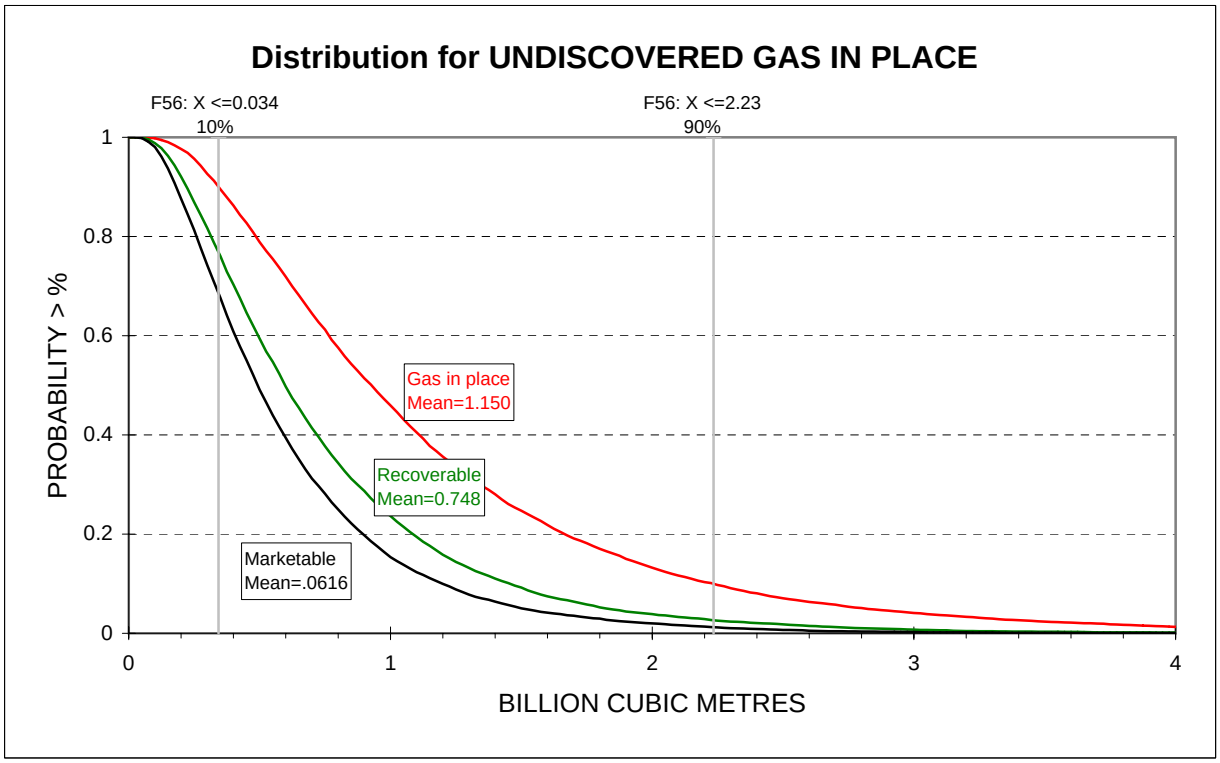
DEH CHO AREA - SUMMARY OF HYDROCARBON PLAY

(Adapted from NWT Open File 2003-03)

Play #	20
Play Name	Plateau Overthrust
References	this study
Reservoir Unit	Paleozoic carbonates
Distribution	Footwall of Plateau thrust fault and related faults
Source/Seal	Devonian shales (Besa River, Horn River, Hare Indian fms)/Devonian shales, fault seal
Trap Style	Structural-fault controlled, fold closures
Gas/Oil	gas
Exploration Risks	Timing of generation, migration with respect to structure; breaching
Mapped Area	0.154 Miilion Ha (0.382 Million Acres)
Deh Cho significant fields/wells	
Discovered Resources	No Discoveries
Undiscovered Recoverable Gas	748 Million cubic metres (26.54 Bcf)
Undiscovered Marketable Gas	616 Million cubic metres (21.87 Bcf)
Undiscovered Recoverable Oil	Gas play only
Undiscovered Gas Fields	22 Fields, Largest 170 million cubic feet (6.0 Bcf)
Undiscovered Oil Fields	Gas play only

DEH CHO TERRITORY
PLATEAU OVERTHRUST (PLAY 20)

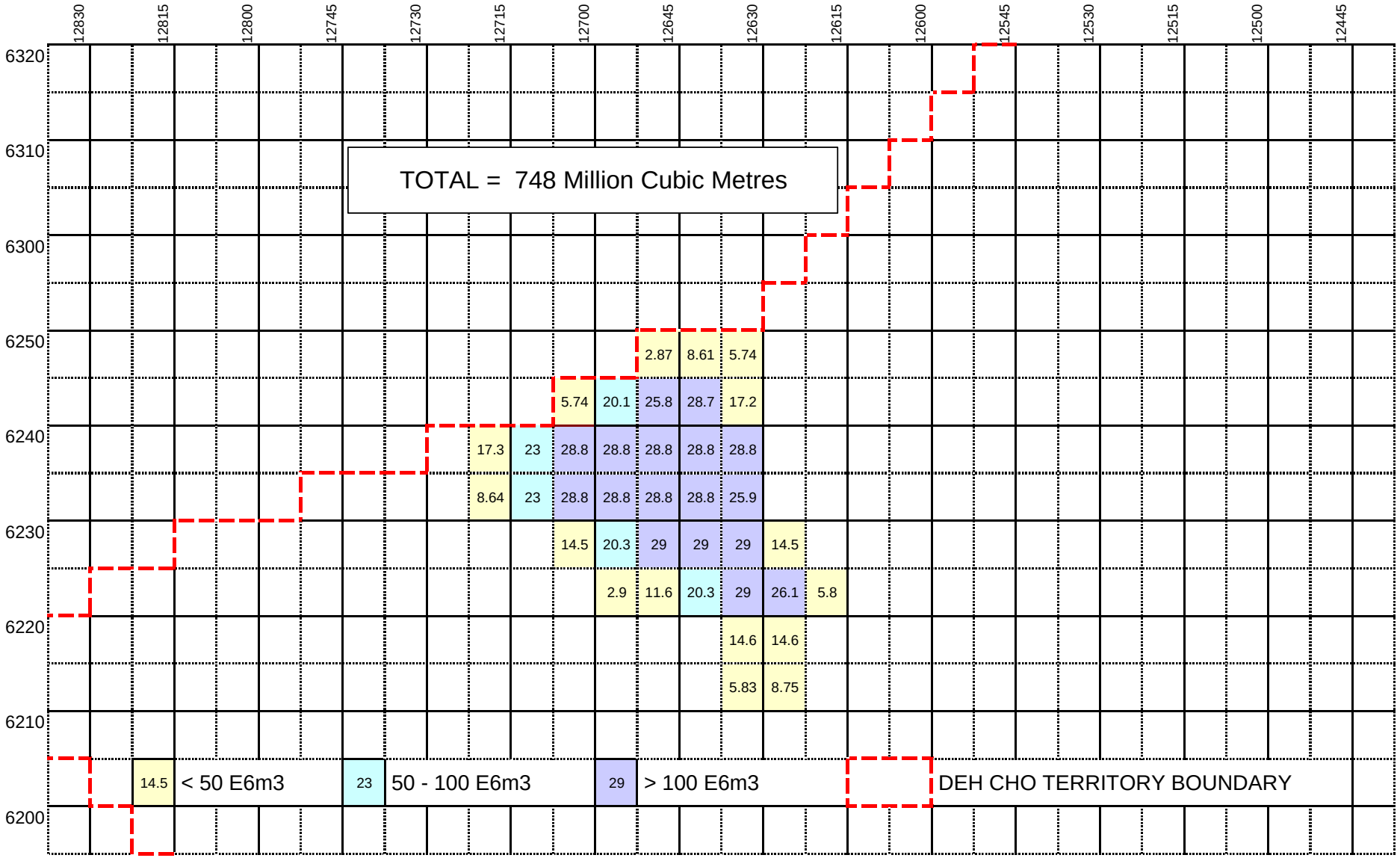




DEH CHO TERRITORY

DISTRIBUTION OF UNDISCOVERED RECOVERABLE GAS PLAY 20 - PLATEAU OVERTHRUST

(MILLION CUBIC METRES / QUARTER GRID)



PLAY AREA 20 - PLATEAU OVERTHRUST - ULTIMATE RECOVERABLE RAW GAS

FIELD SIZE DISTRIBUTION

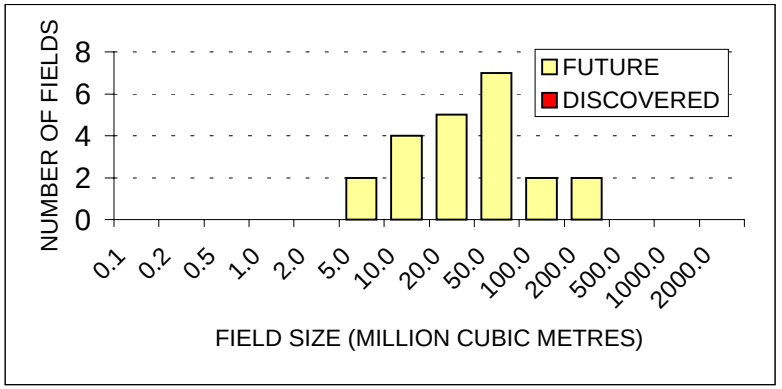
	ULTIMATE	DISCOVERED	FUTURE
GAS RESOURCES (E6m3)	747.7	0.0	747.7
NUMBER OF FIELDS	22	0	22
AVERAGE SIZE (E6m3)	34.0		34.0
LARGEST FIELD (E6m3)	170		170
SMALLEST FIELD (E6m3)	2.12		2.12

	ULTIMATE		DISCOVERED		FUTURE	
SIZE (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)	NO.OF FIELDS	POTENTIAL (E6m3)
0.00						
0.01	0	0.0	0	0.0	0	0.0
0.02	0	0.0	0	0.0	0	0.0
0.05	0	0.0	0	0.0	0	0.0
0.1	0	0.0	0	0.0	0	0.0
0.2	0	0.0	0	0.0	0	0.0
0.5	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0
2	0	0.0	0	0.0	0	0.0
5	2	5.9	0	0.0	2	5.9
10	4	28.7	0	0.0	4	28.7
20	5	72.4	0	0.0	5	72.4
50	7	230.7	0	0.0	7	230.7
100	2	136.0	0	0.0	2	136.0
200	2	274.0	0	0.0	2	274.0
500	0	0.0	0	0.0	0	0.0
1000	0	0.0	0	0.0	0	0.0
2000	0	0.0	0	0.0	0	0.0
5000	0	0.0	0	0.0	0	0.0
10000	0	0.0	0	0.0	0	0.0

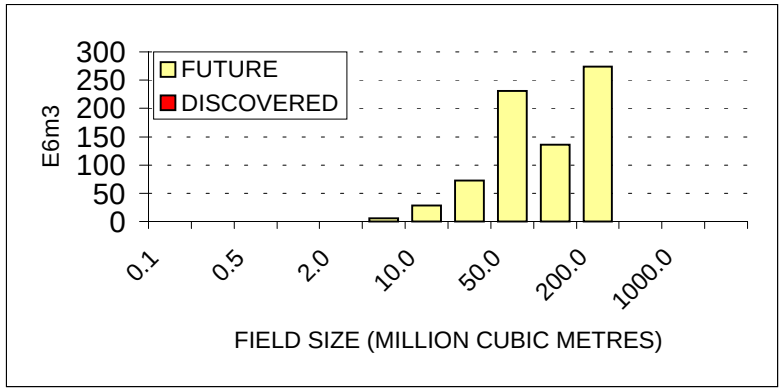
FUTURE FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	4	2	0	0
POTENTIAL (E6m3)	410	274	0	0
PROBABILITY (%)	18.2%	9.1%	0.0%	0.0%
AVERAGE SIZE (E6m3)	102.5	137.0	#DIV/0!	#DIV/0!

DISCOVERED FIELDS	>50 E6m3	>100 E6m3	>200 E6m3	>500 E6m3
NUMBER	0	0	0	0
POTENTIAL (E6m3)	0	0	0	0
PROBABILITY (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AVERAGE SIZE (E6m3)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

ULTIMATE FIELD SIZE DISTRIBUTION



ULTIMATE RESOURCE DISTRIBUTION



ULTIMATE FIELD RANK PLOT - TOP 20