

OCD Courtesy Copy

Form 3160-4
(August 1999)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED
OMB NO. 1004-0137
Expires: November 30, 20005. Lease Serial No.
NMNM36201a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry Other
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.,
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator
Lynx Petroleum Consultants, Inc.

8. Lease Name and Well No.

KITTY HAWK FED. #13. Address
P.O. Box 1708, Hobbs, NM 882413a. Phone No. (include area code)
(505) 392-6950

9. API Well No.

30-015-32746

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface **NWSE 1980' FSL & 1850' FEL**At top prod. interval reported below **Same**At total depth **Same****RECEIVED****FEB 18 2004****OCD-ARTESIA**

10. Field and Pool, or Exploratory

SHUGART;MORROW (GAS)11. Sec., T., R., M., on Block and
Survey or Area **1-19S-31E**12. County or Parish **Eddy** 13. State
NM

14. Date Spudded

12/17/03

15. Date T.D. Reached

1/21/04

16. Date Completed

☐ D & A ☒ Ready to Prod.
2/7/04

17. Elevations (DF, RKB, RT, GL)*

3636' G.L.18. Total Depth: MD **12270**
TVD **12270**19. Plug Back T.D.: MD **12145**
TVD **12145**20. Depth Bridge Plug Set: MD **12180**
TVD **12180**

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

GR-CNL-FDC Laterolog22. Was well cored? ☒ No ☐ Yes (Submit analysis)Was DST run? ☐ No ☒ Yes (Submit report)Directional Survey? ☒ No ☐ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
26	20-H	94	0	40		Redimix		Surface	0
17 1/2	13 3/8H	48	0	755		628	217	Surface	0
11	8 5/8 K	32	0	4500		1236	398	Surface	0
7 7/8	5 1/2 P&N	17	0	12270		2050	628	4450 T.S.	0

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 3/8	11982	11982						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Lower Morrow	12200	12210	12200-210	1/2"	40	Abandoned
B) Middle Morrow	12050	12077	12250-60, 12270-77 1/2"	68		Open
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
12200-12210	Acidized 1000 gals 7 1/2% HCl

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
1/30/04	2/4	24	→	0	0	0	-	-	Swab
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
-	0	0	→	0	0	0	0	Zone Abandoned	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
2/7/04	2/7	4	→	10	233	0	48	0.65	Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	
10	3550	0	→	60	1400	0	23333	S.I. Waiting on Gas Connection	

(See instructions and spaces for additional data on reverse side)

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Flared

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
Delaware	5180	-6000	Oil & Gas Show	Yates	2832
Bone Spring	6630	-6880	Oil & Gas Show	Queen	3530
Bone Spring	7770	-8350	Oil & Gas Show	San Andres	4308
Bone Spring	9090	-9470	Oil & Gas Show	Delaware	5173
Strawn	10900	-10950	Oil & Gas Show	Bone Spring	6782
Atoka	11440	-11531	DST - Gas Cut Mud	Wolfcamp	9963
Morrow	12050	-12080	Oil & Gas	Strawn	10965
Morrow	12200	-12210	Nothing	Atoka	11282
				Morrow	11615

32. Additional remarks (include plugging procedure):

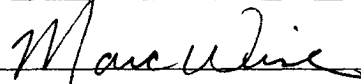
Tested Morrow 12200-210. Acidized and swabbed dry. Set a C.I.B.P. at 12180' and dump bailed 35' cement on top.

33. Circle enclosed attachments:

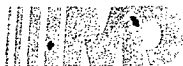
- ☒ 1. Electrical/Mechanical Logs (1 full set req'd.) 2. Geologic Report ☒ 3. DST Report 4. Directional Survey
☐ 5. Sundry Notice for plugging and cement verification 6. Core Analysis ☒ 7. Other: - Deviation Survey

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Marc Wise Title President

Signature  Date 2/10/04

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



McVAY DRILLING CO. ANY
Post Office Box 924
Hobbs, New Mexico 88241
(505) 397-3311
FAX: 39-DRILL

Well Name and Number: Kitty Hawk Fed #1

Location: Lynx

Operator: Eddy

Drilling Contractor: McVay Drilling Company

RECEIVED

FEB 18 2004

OCD-ARTESIA

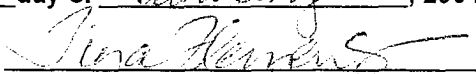
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

Degrees @ Depth		Degrees @ Depth		Degrees @ Depth	
1/4	296	1	5476	1	10852
1/4	596	1	6004	3/4	11345
3/4	721	1	6480	1 1/4	11499
1/2	1203	1	6896	1	11981
1/2	1710	1 1/4	7493	1 1/4	12140
1/2	2210	1 1/4	7781	1 1/2	12270
3/4	2707	1	8254		
3/4	3205	1	8754		
1/2	3704	1	9265		
3/4	4203	1	9762		
1/2	4484	1 1/4	10256		
1	4973	1 1/2	10349		

Drilling Contractor: McVay Drilling Company

By: 

Subscribed and sworn to before me this 27th day of January, 2004


Notary Public

My Commission Expires: 8-16-05

Lea County, New Mexico



Job Summary
Lynx Petroleum
DST

KittyHawk Fed. 1
Sugart

Service Order Number : **10625819**
Test Date : **13-Jan-04**

Company Rep Gary Fonay		SWS Rep Jeremy Cates	
Test Information			
Test Number One		Formation Atoka	
		Interval (MD ft) 91' 11440-11431	
Well Location			
Well..... KittyHawk Fed. 1		Rig..... McVay #4	
Field..... Sugart		State Eddy - New Mexico	
Wellbore Configuration			
Total Depth (MD/TVD ft) 11531		Cushion fresh water	
Casing / Liner ID (in) 8.625		Wellbore Radius (ft) 7.875	
Top of Liner (md- ft) 4500		Mud Weight (lb/gal) 9.3	
		Mud Type Bio Polymer	
		Mud: Chloride/Resistivity..... .143/30000	
Test String Configuration			
Pipe Length (ft) / ID (in) 10646		Gauge Depth (MD) 11460	
Pipe Length (ft) / ID (in)		Gauge Depth (TVD) 11460	
Drill Collar Length (ft) / ID (in) 753.75		Test Valve Type MFE	
Packer Depths (ft MD) 11434 / 11440		Test Valve Depth (ft) (MD) 11414	
Key Information			
Initial Hydrostatic Pressure 5637		Final Shut In Pressure 4777	
Init. Hyd Grad & Density 0.492 psi/ft / 9.46 lb/gal		Final Shut In Grad & Density 0.417 psi/ft / 8.02 lb/gal	
Final Hydrostatic Pressure 5641		Final Flowing Pressure 1705	
Final Hyd Grad & Density 0.492 psi/ft / 9.47 lb/gal		Final Flow Rate (MCF)	
Bottom Hole Temp..... 176		Productivity Index (MCF / psi)	
This is DST #1. The Atoka formation was evaluated from 11440 to 11531. The test was conclusive. There was no gas to surface during the test. The recovery was 36 barrels of gas cut mud. Please direct any questions about this test to the Hobbs Testing District. Thank You for choosing Schlumberger.			
Schlumberger Crew Jeremy Cates			

Schlumberger

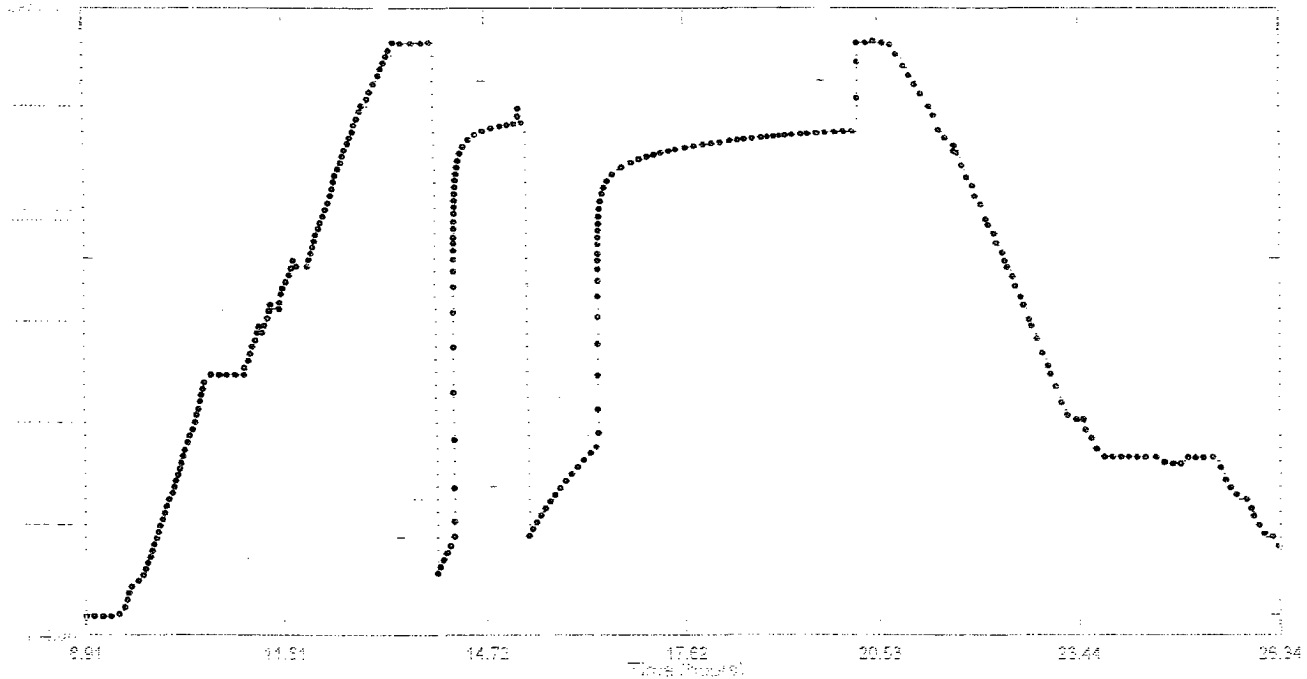
Label Point Data Lynx Petroleum DST

Killyhawk Fed. 1

10625519

Super

13-Jan-04



Label Point / Comments	Date	Time	Gauge P1	BNP	Rate (MCF)
Label Point Summary					
1) Hydrostatic Pressure	13-Jan-04	13:11:51	13.831	5636.71	0
2) Start Flow	13-Jan-04	13:22:00	14.000	419.10	1
3) End Flow & Start Shut-in	13-Jan-04	13:37:27	14.258	780.49	0
4) End Shut-in	13-Jan-04	14:34:18	15.205	4852.82	0
5) Start Flow	13-Jan-04	14:41:54	15.332	813.81	1
6) End Flow & Start Shut-in	13-Jan-04	15:43:00	16.350	1705.07	0
7) End Flow <i>Shut in</i>	13-Jan-04	19:35:27	20.224	4777.16	0
8) Hydrostatic Pressure	13-Jan-04	19:40:09	20.303	5641.10	0

Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-122
RECEIVED Revised October, 1999

FEB 18 2004

OCD-ARTESIA

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator LYNX PETROLEUM					Lease or Unit Name KITTY HAWK FED.				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 2/10/04		Well No. 1		
Completion Date		Total Depth		Plug Back TD		Elevation		Unit Ltr - Sec - TWP - Rge 1 19 31	
Csg. Size	Wt.	d	Set At	Perforations: From: 12050 To: 12076			County EDDY		
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At	Perforations: From: To:			Pool <i>Shagat Morrow</i>		
Type Well-Single-Bradenhead-G.G. or G.O. Multiple SINGLE				Packer Set At			Formation MORROW		
Producing Thru TBG		Reservoir Temp. °F 172.7 @ 11950		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		Connection VENTED	
L * 11950	H 11950	Gg 0.677	%CO ₂ 0.537	%N ₂ 1.147	%H ₂ S N/A	Prover N/A	Meter Run 4.026	Taps FLG	
FLOW DATA					TUBING DATA			CASING DATA	
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h _w	Temp. °F	Press p.s.i.g.	Temp. °F	Press p.s.i.g.	Temp. °F
SI						3672		PKR	
1	4	X 2.000	41	22	72	3540		"	
2	4	X 2.000	122	25	66	3435		"	
3	4	X 2.000	277	25	62	3310		"	
4	4	X 2.000	474	26	53	3150		"	
5									
RATE OF FLOW CALCULATIONS									
No.	COEFFICIENT (24 Hour)		$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress Factor F _{pv}		Rate of Flow Q, Mcfd
1	19.81		34.6	54.2	0.9887	1.215	1.009		831
2	19.81		58.14	135.2	0.9943	1.215	1.014		1,411
3	19.81		80.62	290.2	0.9981	1.215	1.031		1,997
4	19.81		112.55	487.2	1.007	1.215	1.055		2,878
5									
No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 19.769 Mcf bbl.				
1	0.08	532	1.41	0.983	A.P. I. Gravity of Liquid Hydrocarbons 50.0 @ 60 Deg.				
2	0.2	526	1.4	0.973	Specific Gravity Separator Gas 0.677 XXXXXXXX				
3	0.43	522	1.38	0.94	Specific Gravity Flowing Fluid XXXXXX GMIX = .828				
4	0.73	513	1.36	0.894	Critical Pressure **666 P.S.I.A. 665 P.S.I.A.				
5					Critical Temperature **376 R. 431 R.				
P _c 3685.2 P _{c2} 13580.7									
No.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) $P_c^2 = \frac{5.882}{P_c^2 - P_w^2}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.882$				
1		3629.2	13171.1	409.6					
2		3527	12439.7	1141					
3		3427	11744.3	1836.4					
4		3295.8	10862.3	2308.8					
5									
Absolute Open Flow 16.929 Mcfd @ 15.025					Angle of Slope (°): 45		Slope n: 1		
Remarks: *BHP Inst. Set @ this depth--AOF cal. From known BHPS --well prod. 15 bls 50 API cond. ** corr to 1.147 N2									
Approved By Division:			Conducted By: Metering & Testing Serv., Inc.		Calculated By: BM		Checked By: BM		

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE (Pc or Pw)

FORM C-122F

FROM KNOWN BOTTOM HOLE PRESSURE (Pf or Ps)

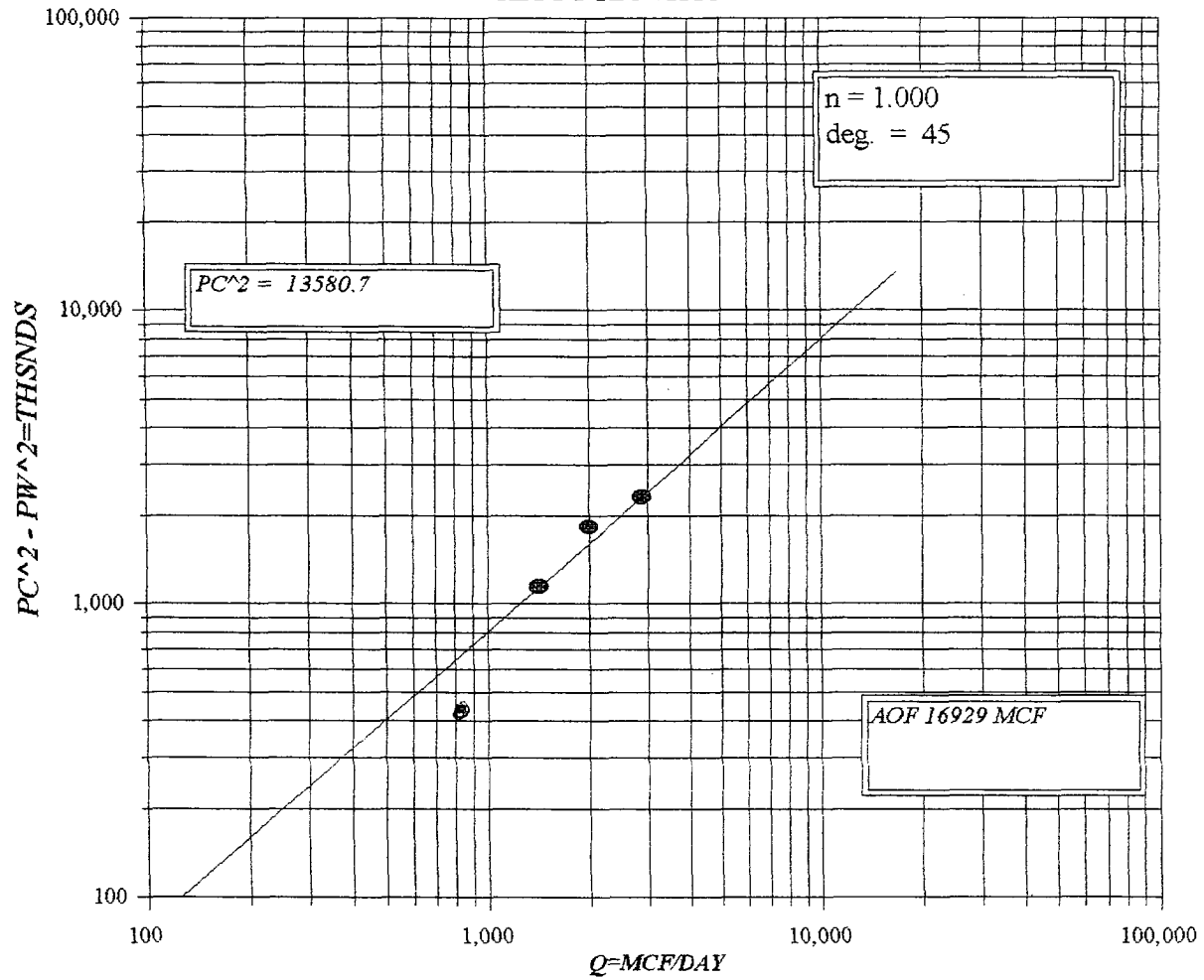
COMPANY LYNX PETROLEUM LEASE :K. H. FED.WELL NO. : 1 DATE 2-10-04
 UNIT SECTION : 1 TWSHP : 19 RANGE : 31
 L 11950 H : 11950 L/H : 1 G/GMIX : 0.8280
 CO2 : 0.537 N2 : 1.147 H2S :
 GH : 9894.6 PCR : 665 TCR : 431

LINE		1	2	3	4	5	6	7	8
1	TW(W.H. R)	534	534	534	534	534	534	534	534
2	Ts(B.H. R)	653.5	653.5	653.5	653.5	653.5	653.5	653.5	653.5
3	T=(Tw+Ts/2)	593.8	593.8	593.8	593.8	593.8	593.8	593.8	593.8
4	Z (EST.)	1.011	0.863	0.929	0.846	0.915	0.834	0.897	0.818
5	TZ	600	512	551	502	543	495	533	486
6	GH/TZ	16.488	19.319	17.942	19.692	18.208	19.977	18.570	20.362
7	eS(TABLE XIV)	1.856	2.064	1.960	2.093	1.979	2.115	2.006	2.146
8	Pf or Ps	5213.5	5213.5	5102.2	5102.2	4984.2	4984.2	4828.1	4828.1
9	Pf2 or Ps2	27180.6	27180.6	26032.4	26032.4	24842.2	24842.2	23310.5	23310.5
10	Pc2=Pf/eS or Pw2=Ps2/eS	14646.3	13171.4	13283.6	12439.9	12550.4	11744.6	11617.7	10862.5
11	Pc or Pw	3827	3629	3645	3527	3543	3427	3408	3296
12	P=(Pw+Ps/2)or(Pc+Pf/2)	4520	4421	4373	4315	4263	4206	4118	4062
13	Pr=(P/Pcr)	6.80	6.65	6.58	6.49	6.41	6.32	6.19	6.11
14	Tr(T/Tcr)	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
15	Z (TABLE XI)	0.863	0.852	0.846	0.840	0.834	0.828	0.818	0.812

PW 1 : 3629.2 PW 2 : 3527.0 PW 3 : 3427.0 PW 4 : 3295.8

LYNX PETROLEUM

KITTY HAWK FED. # 1



LYNX PETROLEUM

KITTY HAWK FED. # 1

