Form G-2
(Rev. 7/03)

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:
☐ Open Flow
☐ Deliverabilty

(See Instructions on Reverse Side)

Test Date:

API No. 15 01
15-181-20373-~~00~~-00

Company	Lease	Well Number
Noble Energy, Inc.	Helman	8-24

County	Location	Section	TWP	RNG (E/W)	Acres Attributed
Sherman	SE-SE-NE	24	6S	40W	

Field	Reservoir	Gas Gathering Connection
Goodland Niobrara gas area	Niobrara	Kinder Morgan / Prairie Star

Completion Date	Plug Back Total Depth	Packer Set at
10/22/2005	2805'	n/a

Casing Size	Weight	Internal Diameter	Set at	Perforations	To
9-5/8", 7"	32.3#, 20#	12-1/4", 8-3/4"	425', 1622'	Open Hole	Horizontal

Tubing Size	Weight	Internal Diameter	Set at	Perforations	To
2-3/8"	4.7#	1.995"	1602'		

Type Completion (Describe)	Type Fluid Production	Pump Unit or Traveling Plunger? (Yes) / No
Single (Gas)	Saltwater	Yes - Rod Pump

Producing Thru (Annulus / Tubing)	% Carbon Dioxide	% Nitrogen	Gas Gravity - G_g
Annulus			

Vertical Depth(H) | Pressure Taps | (Meter Run) (Prover) Size

Pressure Buildup: Shut in 6/7/ 20 08 at 6:00 (AM) (PM) Taken ____ 20 ____ at ____ (AM) (PM)

Well on Line: Started 6/10/ 20 08 at 12:00 (AM) (PM) Taken ____ 20 ____ at ____ (AM) (PM)

OBSERVED SURFACE DATA

Duration of Shut-in 78 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter Prover Pressure psig (Pm)	Pressure Differential in Inches H_2O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P_w) or (P_t) or (P_c) psig	Casing psia	Tubing Wellhead Pressure (P_w) or (P_t) or (P_c) psig	Tubing psia	Duration (Hours)	Liquid Produced (Barrels)
Shut-In						120					
Flow											

FLOW STREAM ATTRIBUTES

Plate Coeffiecient (F_b) (F_p) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m x h}$	Gravity Factor F_g	Flowing Temperature Factor F_{tt}	Deviation Factor F_{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G_m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2$ = ____ : $(P_w)^2$ = ____ : P_d = ____ % $(P_c - 14.4) + 14.4$ = ____ : $(P_a)^2$ = 0.207 $(P_d)^2$ = ____

$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	Choose formula 1 or 2: 1. $P_c^2 - P_a^2$ 2. $P_c^2 - P_d^2$ divided by: $P_c^2 - P_w^2$	LOG of formula 1. or 2. and divide by: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" -------or------- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)

Open Flow ____ Mcfd @ 14.65 psia Deliverability ____ Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct. Executed this the 6th day of March, 20 09.

RECEIVED
KANSAS CORPORATION COMMISSION
MAR 09 2009
CONSERVATION DIVISION
WICHITA, KS

Witness (if any)

For Company Jennifer Barnett

For Commission

Checked by

I declare under penalty of perjury under the laws of the state of Kansas that I am authorized to request exempt status under Rule K.A.R. 82-3-304 on behalf of the operator Noble Energy, Inc. and that the foregoing pressure information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon available production summaries and lease records of equipment installation and/or upon type of completion or upon use being made of the gas well herein named.

I hereby request a one-year exemption from open flow testing for the Helman 8-24 gas well on the grounds that said well:

(Check one)

- ☐ is a coalbed methane producer
- ☐ is cycled on plunger lift due to water
- ☐ is a source of natural gas for injection into an oil reservoir undergoing ER
- ☐ is on vacuum at the present time; KCC approval Docket No. _____
- ☑ is not capable of producing at a daily rate in excess of 250 mcf/D

I further agree to supply to the best of my ability any and all supporting documents deemed by Commission staff as necessary to corroborate this claim for exemption from testing.

Date: 3/6/09

Signature: Jennifer Barnett

Title: Regulatory Analyst

Instructions: If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well.

At some point during the current calendar year, wellhead shut-in pressure shall have been measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under **OBSERVED SURFACE DATA**. Shut-in pressure shall thereafter be reported yearly in the same manner for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility for exemption **IS** denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results.

EMPACT ANALYTICAL SYSTEMS, INC

365 SOUTH MAIN STREET
BRIGHTON, CO 80601
(303) 637-0150

EXTENDED NATURAL GAS ANALYSIS (*DHA)

PROJECT NO. :	**0512063**	ANALYSIS NO. :	**01**
COMPANY NAME :	**BERRY PETROLEUM**	ANALYSIS DATE:	DECEMBER 17, 2005
ACCOUNT NO. :		SAMPLE DATE :	DECEMBER 11, 2005
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	B.P. 1
NAME/DESCRIP :	HELMAN 8-24		
FIELD DATA	SHERMAN, KS		
SAMPLED BY:			AMBIENT TEMP.:
SAMPLE PRES. :	30 PSIG	SAMPLE TEMP. 15	GRAVITY :
COMMENTS :	SPOT; GAS		

COMPONENT	MOLE %	MASS %	GPM@ 14.696	GPM@ 14.73
HELIUM	0.151	0.035	—	—
HYDROGEN	0.009	0.001	—	—
OXYGEN/ARGON	0.042	0.077	—	—
NITROGEN	4.807	7.816	—	—
CO2	0.392	1.001	—	—
METHANE	92.159	85.816	—	—
ETHANE	1.694	2.956	0.4520	0.4530
PROPANE	0.488	1.250	0.1342	0.1345
I-BUTANE	0.084	0.285	0.0274	0.0275
N-BUTANE	0.090	0.303	0.0283	0.0284
I-PENTANE	0.025	0.106	0.0091	0.0091
N-PENTANE	0.016	0.065	0.0058	0.0058
HEXANES PLUS	0.043	0.289	0.0196	0.0196
TOTALS	100.000	100.000	0.6764	0.6779

BTEX COMPONENTS	MOLE%	WT%	
BENZENE	0.000	0.001	**LOW**
ETHYLBENZENE	0.000	0.001	
TOLUENE	0.000	0.001	**HIGH**
XYLENES	0.000	0.001	
TOTAL BTEX	0.000	0.004	

BTU @	14.696	14.73
NET DRY REAL :	887.61 /scf	889.66 /scf
NET WET REAL :	872.14 /scf	874.20 /scf
GROSS DRY REAL :	984.79 /scf	987.06 /scf
GROSS WET REAL :	967.62 /scf	969.90 /scf
NET DRY REAL :	19517 /lb	19562 /lb
GROSS DRY REAL :	21654 /lb	21704 /lb
RELATIVE DENSITY (AIR=1):		0.5956
COMPRESSIBILITY FACTOR :		0.99806

(CALC: GPA STD 2145 & TP-17 @14.696 & 60 F)

**DHA (DETAILED HYDROCARBON ANALYSIS/NJ 1993)*

; ASTM D6730

THIS DATA HAS BEEN ACQUIRED THROUGH APPLICATION OF CURRENT STATE-OF-THE-ART ANALYTICAL TECHNIQUES. THE USE OF THIS INFORMATION IS THE RESPONSIBLITY OF THE USER. EMPACT ANALYTICAL SYSTEMS, ASSUMES NO RESPONSIBLITY FOR ACCURACY OF THE REPORTED INFORMATION NOR ANY CONSEQUENCES OF IT'S APPLICATION.

EMPACT ANALYTICAL SYSTEMS, INC

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BRIGHTON, CO 80601
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E & P /GlyCalc Information

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PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	B.P. 1
NAME/DESCRIP :	HELMAN 8-24		
FIELD DATA	SHERMAN, KS		
SAMPLED BY:		AMBIENT TEMP.:	
SAMPLE PRES. :	30 PSIG	GRAVITY :	
		SAMPLE TEMP. :	15
COMMENTS :	SPOT; GAS		

Componenet	Mole %	Wt %
Helium	0.151	0.035
Hydrogen	0.009	0.001
Methanol	0.000	0.000
Carbon Dioxide	0.392	1.001
Nitrogen	4.807	7.816
Methane	92.159	85.816
Ethane	1.694	2.956
Propane	0.488	1.250
Isobutane	0.084	0.285
n-Butane	0.090	0.303
Isopentane	0.025	0.106
n-Pentane	0.016	0.065
Cyclopentane	0.002	0.008
n-Hexane	0.003	0.014
Cyclohexane	0.001	0.003
Other Hexanes	0.014	0.065
Heptanes	0.008	0.039
Methycyclohexane	0.001	0.008
2,2,4 Trimethylpentane	0.000	0.000
Benzene	0.000	0.001
Toluene	0.000	0.001
Ethylbenzene	0.000	0.001
Xylenes	0.000	0.001
C8+ Heavies	0.014	0.148
Subtotal	99.958	99.923
Oxygen	0.042	0.077
Total	100.000	100.000

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COMPONENT	PIANO #	MOLE %	MASS %	GPM 14.696	GPM 14.73
HELIUM		0.151	0.035	—	—
HYDROGEN		0.009	0.001	—	—
OXYGEN/ARGON		0.042	0.077	—	—
NITROGEN		4.807	7.816	—	—
CO2		0.392	1.001	—	—
METHANE	P1	92.159	85.816	—	—
ETHANE	P2	1.694	2.956	0.4520	0.4530
PROPANE	P3	0.488	1.250	0.1342	0.1345
I-BUTANE	I4	0.084	0.285	0.0274	0.0275
N-BUTANE	P4	0.090	0.303	0.0283	0.0284
2,2 DIMETHYLPROPANE	I5	0.000	0.001	0.0000	0.0000
I-PENTANE	I5	0.025	0.105	0.0091	0.0091
N-PENTANE	P5	0.016	0.065	0.0058	0.0058
CYCLOPENTANE	N5	0.002	0.008	0.0006	0.0006
2 METHYLPENTANE	I6	0.005	0.023	0.0021	0.0021
3 METHYLPENTANE	I6	0.002	0.010	0.0008	0.0008
N-HEXANE	P6	0.003	0.014	0.0012	0.0012
METHYLCYCLOPENTANE	N6	0.007	0.032	0.0025	0.0025
2,4 DIMETHYLPENTANE	I7	0.000	0.001	0.0000	0.0000
BENZENE	A6	0.000	0.001	0.0000	0.0000
CYCLOHEXANE	O6	0.001	0.003	0.0003	0.0003
2 METHYLHEXANE	I7	0.001	0.003	0.0005	0.0005
2,3 DIMETHYLPENTANE	I7	0.001	0.003	0.0005	0.0005
3 METHYLHEXANE	I7	0.001	0.004	0.0005	0.0005
1,C 3 DIMETHYLCYCLOPENTANE	N7	0.001	0.005	0.0004	0.0004
1,T 3 DIMETHYLCYCLOPENTANE	N7	0.001	0.004	0.0004	0.0004
3 ETHYLPENTANE	I7	0.000	0.001	0.0000	0.0000
1,T 2 DIMETHYLCYCLOPENTANE	N7	0.001	0.007	0.0004	0.0004
N-HEPTANE	P7	0.001	0.006	0.0005	0.0005
1,C 2 DIMETHYLCYCLOPENTANE	N7	0.000	0.002	0.0000	0.0000
METHYLCYCLOHEXANE	N7	0.001	0.008	0.0004	0.0004
ETHYLCYCLOPENTANE	N7	0.001	0.003	0.0004	0.0004
2,2,3-TRIMETHYLPENTANE	I8	0.000	0.001	0.0000	0.0000
1C,2T,4-TRIMETHYLCYCLOPENTANE	N8	0.000	0.002	0.0000	0.0000
1T,2C,3-TRIMETHYLCYCLOPENTANE	N8	0.000	0.001	0.0000	0.0000
TOLUENE	A7	0.000	0.001	0.0000	0.0000
2-METHYL-3-ETHYLPENTANE	I8	0.000	0.001	0.0000	0.0000
2-METHYLHEPTANE	I8	0.001	0.003	0.0005	0.0005
4-METHYLHEPTANE	I8	0.000	0.002	0.0000	0.0000
3-METHYLHEPTANE	I8	0.000	0.001	0.0000	0.0000
1C,2T,3-TRIMETHYLCYCLOPENTANE	N8	0.001	0.003	0.0005	0.0005
1T,4-DIMETHYLCYCLOHEXANE	N8	0.000	0.001	0.0000	0.0000
3C-ETHYLMETHYLCYCLOPENTANE	N8	0.000	0.002	0.0000	0.0000
3T-ETHYLMETHYLCYCLOPENTANE	N8	0.000	0.002	0.0000	0.0000
2T-ETHYLMETHYLCYCLOPENTANE	N8	0.001	0.003	0.0004	0.0004
2,2,4-TRIMETHYLHEXANE	I9	0.000	0.002	0.0000	0.0000

N-OCTANE	P8	0.001	0.004	0.0005	0.0005
I-PROPYLCYCLPENTANE	N8	0.000	0.001	0.0000	0.0000
1C,2-DIMETHYLCYCLOHEXANE	N8	0.000	0.001	0.0000	0.0000
1,1,4-TRIMETHYLCYCLOHEXANE	N9	0.000	0.003	0.0000	0.0000
2,2,3-TRIMETHYLHEXANE	I9	0.000	0.001	0.0000	0.0000
2,2-DIMETHYLHEPTANE	I9	0.000	0.001	0.0000	0.0000
4,4-DIMETHYLHEPTANE	I9	0.001	0.004	0.0006	0.0006
ETHYLBENZENE	A8	0.000	0.001	0.0000	0.0000
1,3-DIMETHYLBENZENE (M-XYLENE)	A8	0.000	0.001	0.0000	0.0000
N-NONANE	P9	0.000	0.003	0.0000	0.0000
I-PROPYLBENZENE	A9	0.000	0.001	0.0000	0.0000
1,2-METHYLETHYLBENZENE	A9	0.000	0.002	0.0000	0.0000
1,2,4-TRIMETHYLBENZENE	A9	0.000	0.001	0.0000	0.0000
UNKNOWN NONANES	U9	0.000	0.002	0.0000	0.0000
N-DECANE	P10	0.001	0.004	0.0006	0.0006
1,2,3-TRIMETHYLBENZENE	A9	0.000	0.001	0.0000	0.0000
1,2-METHYL-I-PROPYLBENZENE	A10	0.000	0.001	0.0000	0.0000
1,2-DIMETHYL-4-ETHYLBENZENE	A10	0.000	0.001	0.0000	0.0000
UNKNOWN DECANES	U10	0.001	0.004	0.0006	0.0006
N-UNDECANE	P11	0.001	0.013	0.0005	0.0005
1,2,4,5-TETRAMETHYLBENZENE	A10	0.000	0.002	0.0000	0.0000
1,2,3,5-TETRAMETHYLBENZENE	A10	0.000	0.003	0.0000	0.0000
5-METHYLINDAN	A10	0.000	0.001	0.0000	0.0000
1,2-ETHYL-N-PROPYLBENZENE	A11	0.000	0.001	0.0000	0.0000
N-PENTYLBENZENE	A11	0.000	0.001	0.0000	0.0000
TETRAHYDRONAPHTHALENE	A10	0.000	0.001	0.0000	0.0000
NAPHTHALENE	A10	0.000	0.003	0.0000	0.0000
1,4-ETHYL-T-BUTYLBENZENE	A12	0.000	0.003	0.0000	0.0000
UNKNOWN UNDECANES	U11	0.002	0.016	0.0010	0.0010
DODECANES	P12	0.003	0.026	0.0021	0.0021
TRIDECANES	P13	0.001	0.015	0.0008	0.0008
TETRADECANES PLUS	P14	0.000	0.004	0.0000	0.0000
TOTALS		100.000	100.000	0.6764	0.6779