Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - *Other instructions on reverse side*

5. Lease Serial No.
LC-065421

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NM-111029

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Bradley 14 Federal Com No. 1

2. Name of Operator
Cimarex Energy Co. of Colorado

9. API Well No.
30-015-32672

3a. Address
600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b. Phone No. *(include area code)*
432-571-7800

10. Field and Pool, or Exploratory Area
White City; Penn (G) & Wolfcamp Wildcat

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1650 FNL & 990 FWL
14-24S-26E

11. County or Parish, State
Eddy County, NM

CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Recomplete to Cisco and Wolfcamp and DHC
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

07.14.10 NDWH & NU 5K BOP.

07.15.10 Tested casing to 4000 psi, ok.

07.18.10 Began DO CBP @ 10142.'

07.19.10 DO & pushed CBP to 10377' and tagged.

07.20.10 Set CIBP @ 10175.' Perfed Cisco Canyon 10067-10071, 10082-10086, 10105-10109, 10120-10125, 10136-10139, 10147-10151 3 spf, 72 holes, 3⅛" perf guns.

07.22.10 Frac'd Cisco Canyon 10067-10151 w/ 4795 gal 15% HCL, 3165 gal 6% HCL-1.5% HF followed by 220,095 gal slickwater containing 25,132# 100 mesh sand. Set CBP @ 10060.'

Perfed Cisco Canyon 9979-9983, 9997-10001, 10024-10029, 10042-10047 3 spf, 54 holes, 3⅛" perf guns. Frac'd 9979-10047 w/ 977 gal 15% HCL and 4003 gal 6% HCL-1.5% HF followed by 138624 gal slickwater containing 11960# 100 mesh. Set CBP @ 9950.'

Perfed Wolfcamp 9406-9408, 9421-9423, 9438-9440, 9445-9447, 9470-9472, 9492-9494, 9537-9541, 9570-9574, 3 spf, 60 holes, 3⅛" guns. Frac'd 9406-9574 w/ 8702 gal 15% HCL and 4708 gal 6% HCL-1.5% HF followed by 298,853 gal slickwater containing 43,691 # 100 mesh. Set CBP @ 9390.'

Perfed Wolfcamp 9167-9170, 9257-9260, 9288-9291, 9311-9314, 9336-9340, 9361-9365, 3 spf, 60 holes, 3⅛" guns. Frac'd 9167-9365 w/ 5176 gal 15% HCL and 4823 gal 6% HCL-1.5% HF followed with 268,669 gal slickwater containing 30,706# 100 mesh.

07.27.10 DO all CBPS.

08.07.10 First production/sales.

Tbg: 2⅜" L-80 8RD to 9098' w/ pkr @ 9080'

Submit Completion Report within 30 days

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
Natalie Krueger	Regulatory
Signature Natalie Krueger	Date 09.08.10

ACCEPTED FOR RECORD
SEP 27 2010
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Conditions of Approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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.

(Instructions on page 2)

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - *Other instructions on reverse side*

5. Lease Serial No.
LC-065421

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NM-111029

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Bradley 14 Federal Com No. 1

2. Name of Operator
Cimarex Energy Co. of Colorado

9. API Well No.
30-015-32672

3a. Address
600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b. Phone No. *(include area code)*
432-571-7800

10. Field and Pool, or Exploratory Area
White City; Penn (G) & Wolfcamp Wildcat

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1650 FNL & 990 FWL
14-24S-26E

11. County or Parish, State
Eddy County, NM

CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other DHC
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

07.27.10 DO all CBPS.

08.07.10 First production/sales as DHC Cisco Canyon/Wolfcamp well.

Results of Production Log

	Water	Oil	Gas
Wolfcamp	32.92%	33.46%	29.79%
Cisco Canyon	67.08%	66.54%	70.21%

Production Log is attached.

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)* Natalie Krueger — Title Regulatory

Signature Natalie Krueger — Date 09.08.10

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Conditions of Approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Office _____

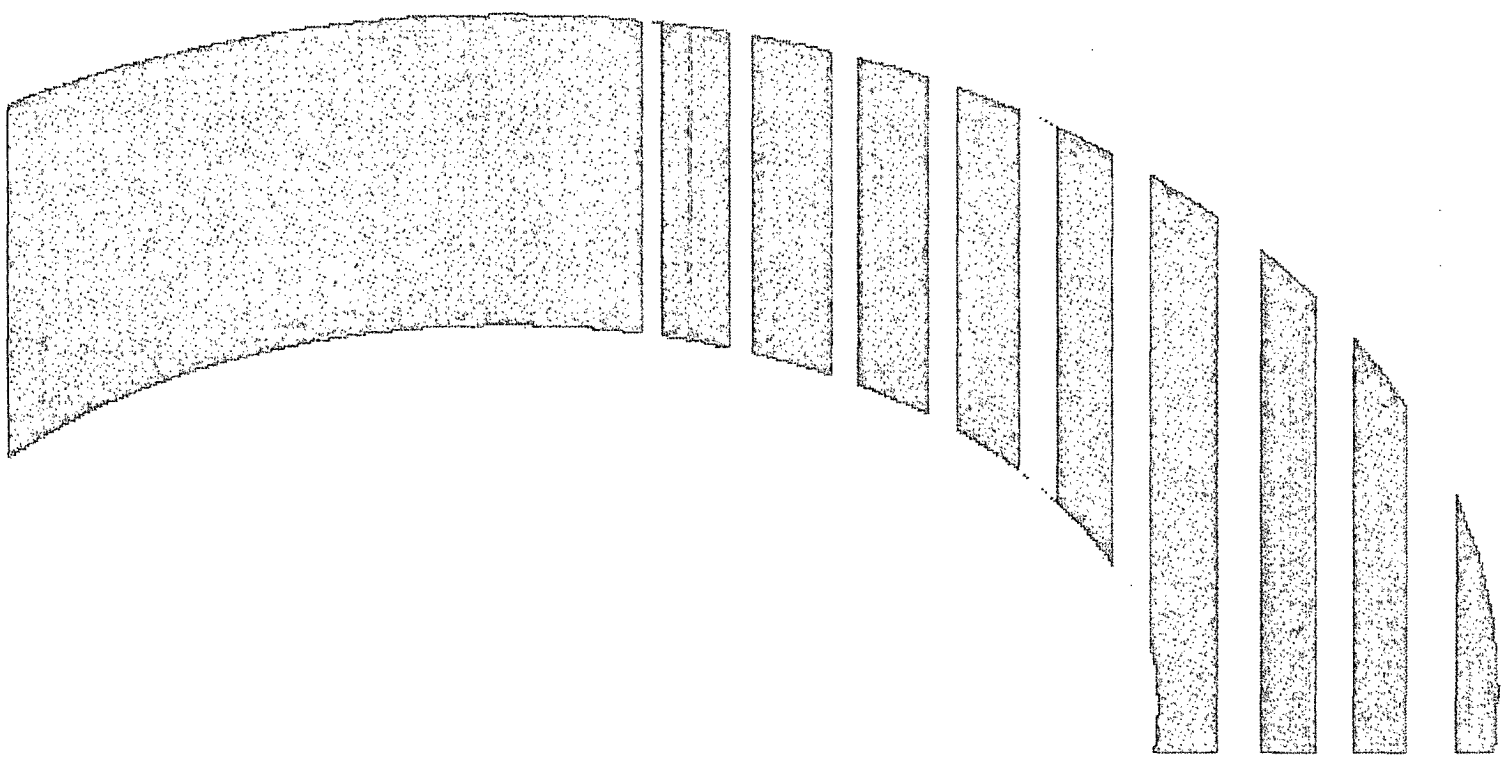
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Techwell Surveys Corporation

Production Profile Interpretation Report

Company:	Cimarex Energy Co. Colorado
Field:	White City
Well:	Bradley 14 Federal Com.#1
Survey Date:	8-25-2010
Service Company:	Techwell Surveys Corporation
Interpretation Date:	8-30-2010
Analyst:	JD Taylor



Techwell Surveys Corporation	Job Information	Bradley_14-1
	Company: Cimarex Energy Co. of Colorado Field: White City Well: Bradley 14 Federal Com. #1	Test: Flowing 3/4" Choke Date: 8-25-2010 Survey: Survey # 1

Survey date	8-25-2010	Interpretation date	8/30/2010
Service company	Techwell Surveys Corporation	Done by	JD Taylor
SURVEY	Survey # 1		
Surface rates		Gas	449 Mscf/D
Oil	29 STB/D	Water	172 STB/D
TOOLS			
String O.D.	1.375 in	Capacitance	
Spinner blade O.D.	3. in	Calib. type	Yw vs norm. resp.
Density	Corrected	Default chart	CWH Water-Hydrocarbon
		100% Water	7690 cps
		100% HC	18392 cps
INTERPRETATION	Interpretation # 1		
Density offset	0 g/cc		
Capacitance offset	0 cps		
Flow type	3-Phase L-G		
Flow model L-G	Dukler		
Flow model W-O	ABB - Deviated		
Vpcf mult.	1		
Vslip mult.	1		
Vslip mult.W-O	1		

Comments

Well logged flowing to sales with 260 psi ftp on a 3/4" choke, line pressure at 244 psi. 70% of the production is coming from the Wolfcamp with 30% from the Cisco Canyon. There was no fluid entry into the lower part of the casing string as it was filled with a thick viscous fluid (10112-10151). Data suggests that the major oil is from the middle of the Wolfcamp, top of inflow zone 3. Depth corrected to Halliburton CBL dated 5-30-2003. See detailed analysis below!

Bradley 14-1 API # 30-015-32672
1650' FNL & 990' FWL of Sec.14, T24S,R26E
Eddy Co., New Mexico

JD Taylor
Techwell Surveys Corporation 432-664-4978.

Techwell Surveys Corporation
Measurement & Analysis

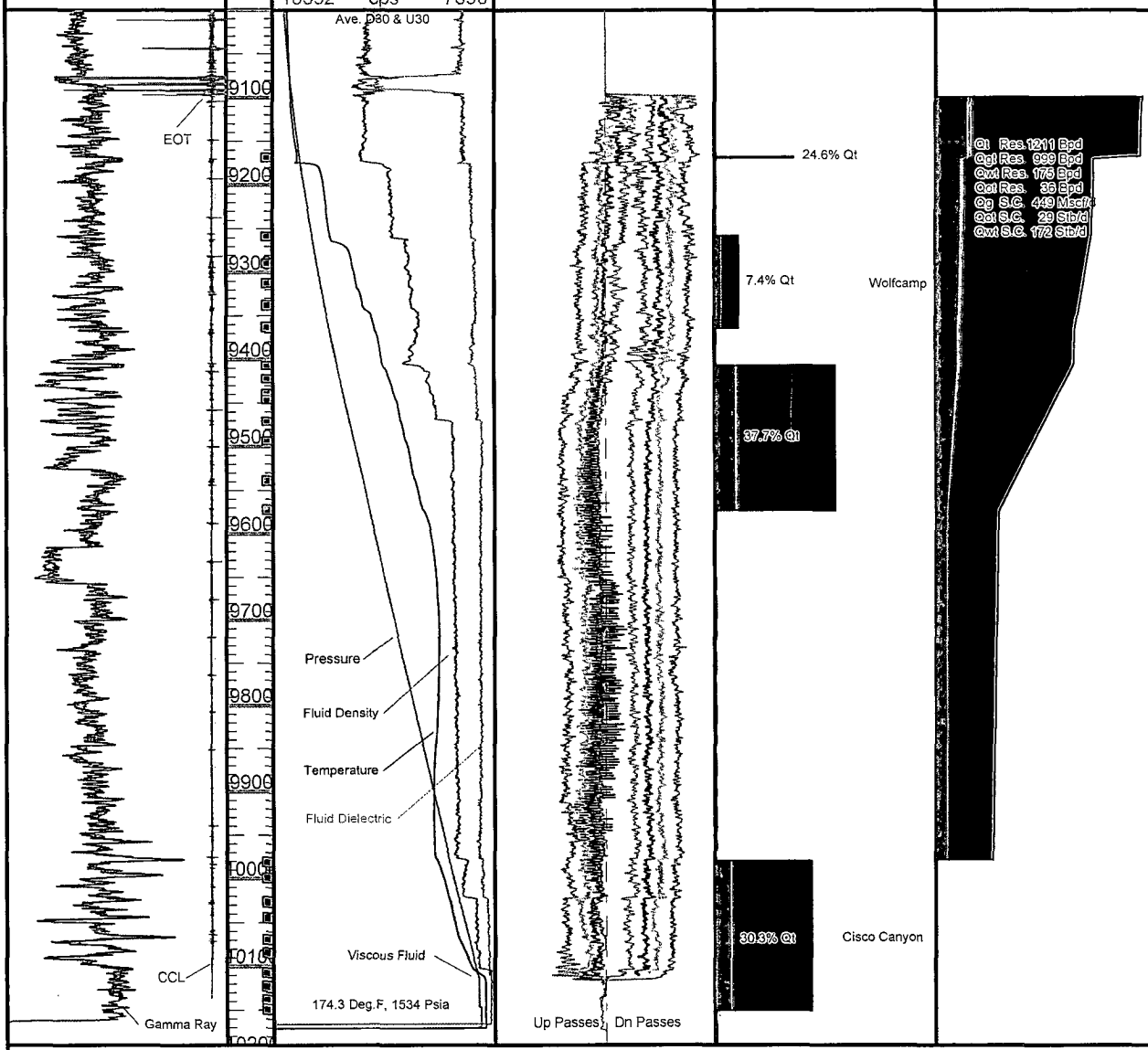
Production Profile

Bradley_14-1

Company: Cimarex Energy Co. of Colorado
Field: White City
Well: Bradley 14 Federal Com. #1

Test: Flowing 3/4" Choke
Date: 8-25-2010
Survey: Survey # 1

Gamma Ray/CCL	Depth (ft)	Interpretation # 1	Flowmeter	Rates	Rates
GR S1,U30		TEMP S1,I1	CFLOW (rps)	Rates (QZI) (B/D)	Rates (QZT) (B/D)
0 GAPI 200		159 °F 175	-7. 7.	0 800	0 1300
GR S1,D30		PRESS S1,I1			
0 GAPI 200		1160 psia 1560			
CCL S1,D30		GRAD S1,I1			
45000. 49000.		0 g/cc 1			
		CWH S1,I1			
		18392 cps 7690			



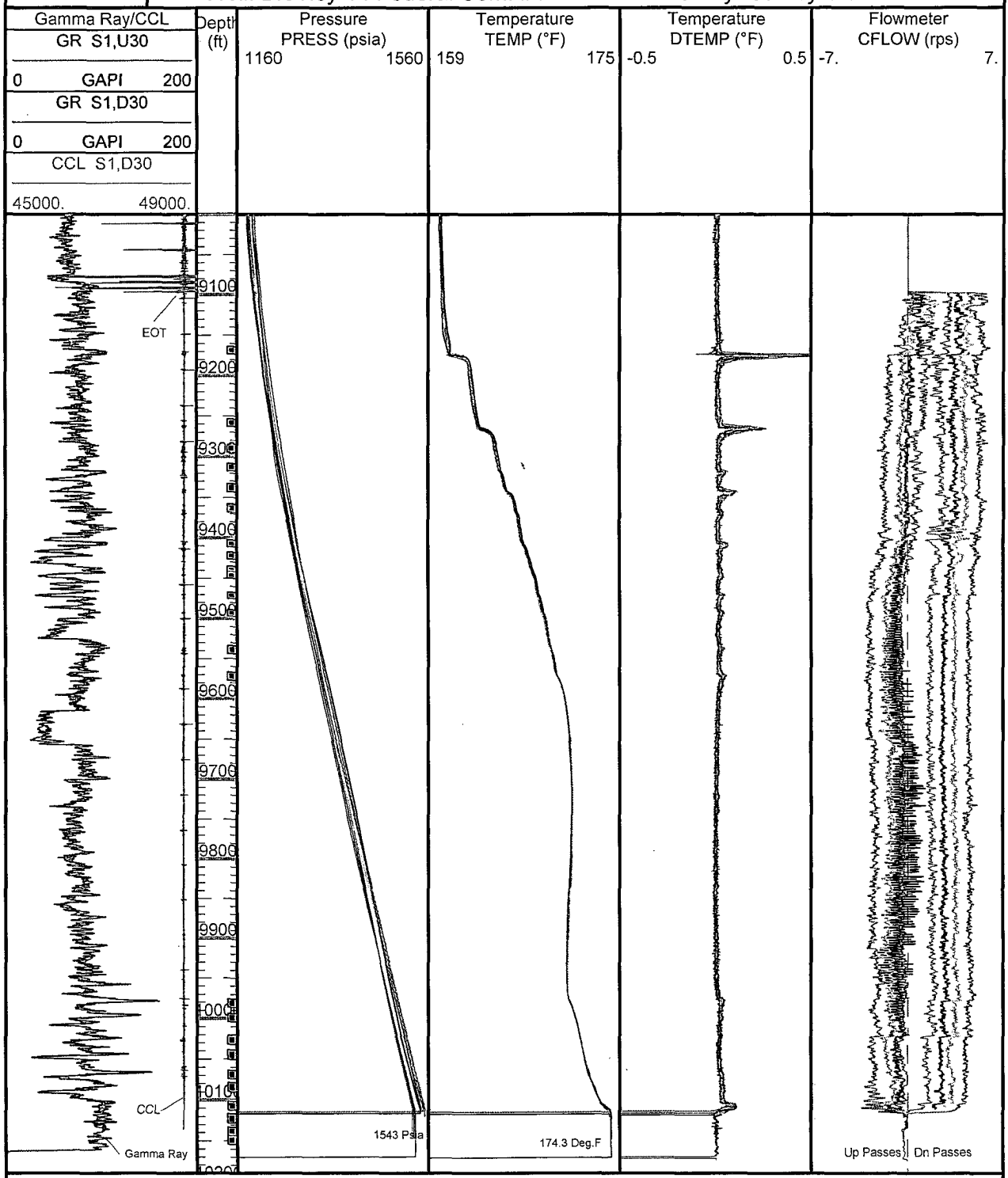
Techwell Surveys Corporation
Measurement & Analysis

Pressure-Temp-FM

Bradley_14-1

Company: Cimarex Energy Co. of Colorado
Field: White City
Well: Bradley 14 Federal Com. #1

Test: Flowing 3/4" Choke
Date: 8-25-2010
Survey: Survey # 1



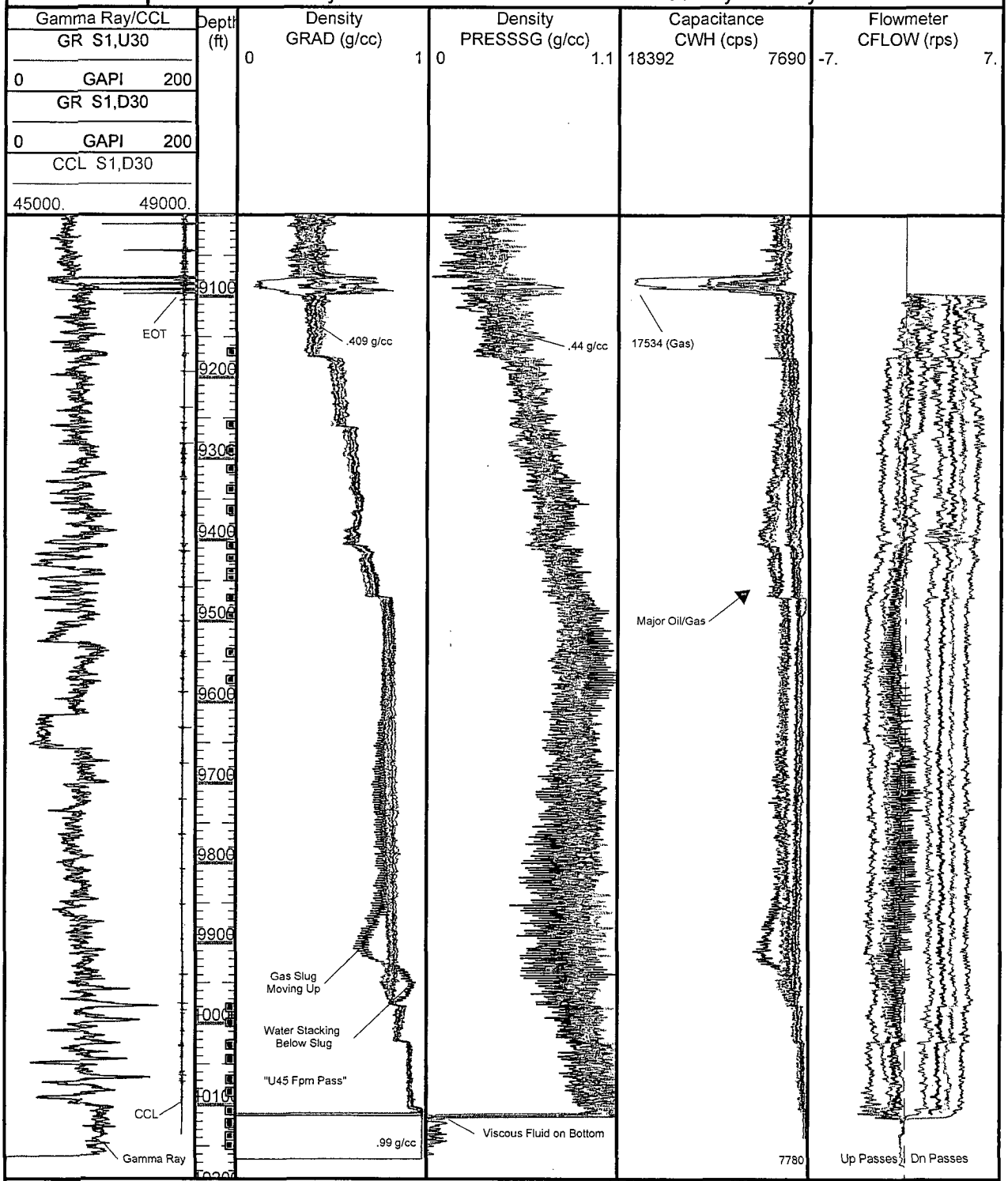
Techwell Surveys Corporation
Measurement & Analysis

Fluid Density-Dielectric-FM

Bradley_14-1

Company: Cimarex Energy Co. of Colorado
Field: White City
Well: Bradley 14 Federal Com. #1

Test: Flowing 3/4" Choke
Date: 8-25-2010
Survey: Survey # 1

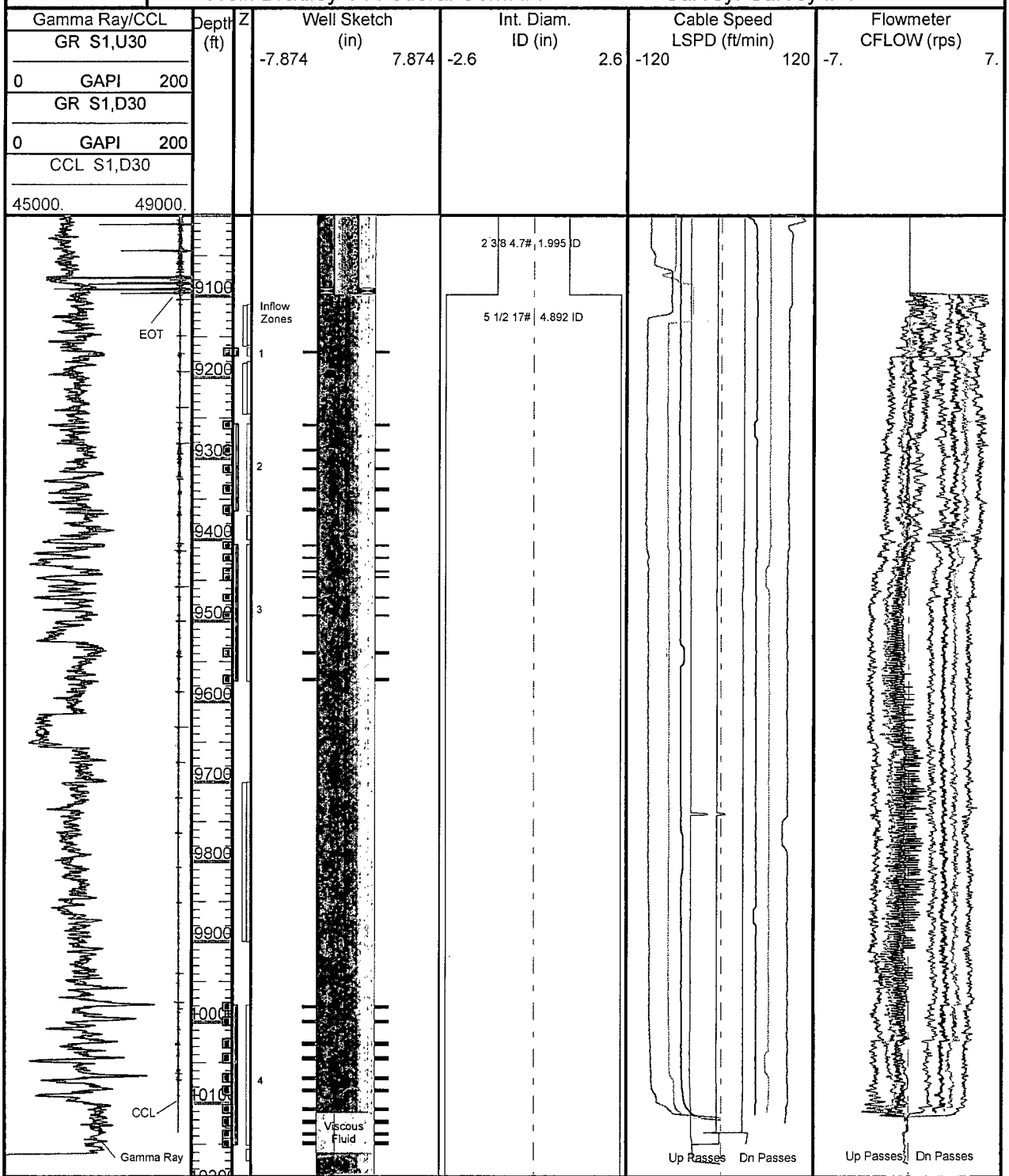


Techwell
Surveys Corporation

Zones-WS-LS-FM | Bradley_14-1

Company: Cimarex Energy Co. of Colorado
Field: White City
Well: Bradley 14 Federal Com. #1

Test: Flowing 3/4" Choke
Date: 8-25-2010
Survey: Survey # 1



Zones ft	Water STB/D	Oil STB/D	Gas Mscf/D
9167.0-9170.0	41.22	7.10	103.91
9257.0-9365.0	15.43	2.66	29.90
9406.0-9574.0	66.24	11.33	165.07
9979.0-10151.0	49.20	8.08	150.31
Total	172.08	29.17	449.18

Zones ft	Qt res. B/D	Production %
9167.0-9170.0	281.81	24.56
9257.0-9365.0	84.78	7.39
9406.0-9574.0	432.96	37.74
9979.0-10151.0	347.81	30.31

Contributions by phase

Zones ft	Qw res. B/D	Qo res. B/D	Qg res. B/D	W O G
9167.0-9170.0	41.99	8.76	231.06	
9257.0-9365.0	15.73	3.24	65.81	
9406.0-9574.0	67.60	14.09	351.28	
9979.0-10151.0	50.25	10.36	287.20	

Zone ft	Corr. factor	Vm ft/min	Q downhole B/D	Contribution %
9167.0-9170.0	0.87	36.165	1210.70	24.56
9257.0-9365.0	0.87	27.521	921.30	7.39
9406.0-9574.0	0.87	24.303	813.60	37.74
9979.0-10151.0	0.85	10.390	347.81	30.31

Total rates by phase

Zone ft	Qw res. B/D	Qw s.c. STB/D	Qo res. B/D	Qo s.c. STB/D	Qg res. B/D	Qg s.c. Mscf/D
9167.0-9170.0	175.30	172.08	36.10	29.17	999.30	449.18
9257.0-9365.0	133.40	130.87	27.40	22.07	760.50	345.28
9406.0-9574.0	117.80	115.43	24.30	19.41	671.50	315.38
9979.0-10151.0	50.25	49.20	10.36	8.08	287.20	150.31

#	From-To ft	ID in	Deviation °	Rt	T °F	P psia
1	9110.0-9160.0	4.8900	0.0000	3.679E-4	160.0000	1199.9000
2	9180.0-9245.0	4.8900	0.0000	3.679E-4	163.0000	1217.4000
3	9370.0-9400.0	4.8900	0.0000	3.679E-4	167.0000	1267.2000
4	9700.0-9900.0	4.8900	0.0000	3.679E-4	171.0000	1412.4000

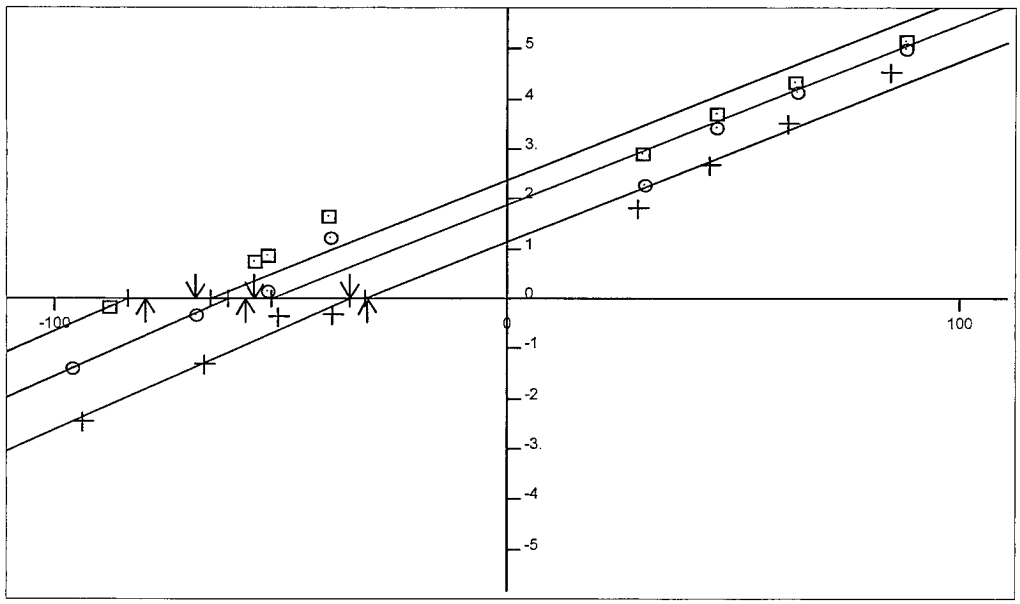
#	Bw	Muw cp	Rhow g/cc	Bo	Muo cp	Rhoo g/cc	Bg	Mug cp	Rhog g/cc
1	1.0187	0.4409	1.0000	1.2374	0.4218	0.6800	0.0129	0.0144	0.0666
2	1.0194	0.4326	1.0000	1.2412	0.4139	0.6800	0.0127	0.0145	0.0673
3	1.0205	0.4187	0.9900	1.2518	0.3979	0.6800	0.0123	0.0146	0.0696
4	1.0214	0.4048	0.9900	1.2821	0.3704	0.6700	0.0110	0.0151	0.0776

#	Correl.	Correl. W-O	Regime	Slip ft/min	Slip W-O ft/min
1	Dukler	ABB - Deviated	Slug liquid-gas	57.433	20.438
2	Dukler	ABB - Deviated	Slug liquid-gas	57.464	20.470
3	Dukler	ABB - Deviated	Slug liquid-gas	57.413	20.561
4	Dukler	ABB - Deviated	Bubble	59.378	20.821

#	Yw	Yo	Yg	Vw ft/min	Vo ft/min	Vg ft/min
1	0.5400	0.0235	0.4400	9.6700	45.8000	68.6000
2	0.6300	0.0216	0.3500	6.3400	37.9000	64.9000
3	0.6600	0.0205	0.3200	5.3000	35.3000	63.6000
4	0.8500	0.0119	0.1400	1.7700	26.0000	61.5000

FLUID TYPE	Water - Oil+Gas
GAS	
Specific gravity	0.7
N2 %	0
CO2 %	0
H2S %	0
Z	Beggs and Brill
Mug	Lee et al.
OIL	
Gravity	0.7822 sp. gr.
GOR	561.458 cf/bbl
Pb	Standing
Rs	Standing
Bo	Standing
co	Vasquez and Beggs
Muo	Beggs and Robinson
WATER	
Salinity, ppm	20000
Rsw	Katz
cw	Dodson and Standing
Muw	Van-Wingen+Frick

Techwell Surveys Corporation	Calibration	Bradley_14-1
	Company: Cimarex Energy Co. of Colorado Field: White City Well: Bradley 14 Federal Com. #1	Test: Flowing 3/4" Choke Date: 8-25-2010 Survey: Survey # 1



rps versus ft/min

Threshold (+) 3.6 ft/min

Threshold (-) -3.7 ft/min

	Calib. Zone ft	Slope (+)	Slope (-)	Int (+) ft/min	Int (-) ft/min	Int. Diff. ft/min
□	9111.3-9161.5	0.036	0.040	-65.21	-83.59	18.38
○	9182.3-9245.2	0.036	0.040	-51.99	-61.27	9.28
+	9700.7-9899.8	0.036	0.040	-31.13	-34.52	3.39