Form 3160-4
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. **NMSF-078095 A**

1a. 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 **N/A**

7. Unit or CA Agreement Name and No. **N/A**

2. Name of Operator **QUESTAR EXPLORATION & PRODUCTION CO.**

8. Lease Name and Well No. **HORTON 1 D**

3. Address **1050 17TH STREET, SUITE 500 DENVER, CO 80265**

3a. Phone No. *(include area code)* **303-672-6900**

9. API Well No. **30-045-33065**

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

At surface **1418 FSL & 1267 FEL**

At top prod. interval reported below

At total depth **SAME**

10. Field and Pool, or Exploratory **Blanco Mesa V., Basin Dakota**

11. Sec., T., R., M., on Block and Survey or Area **7-31N-11W, NMPM**

12. County or Parish **SAN JUAN** 13. State **NM**

14. Date Spudded **09/05/2005**

15. Date T.D. Reached **09/16/2005**

16. Date Completed **10/29/2005** ☐ D & A ☑ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)* **6230' GL 6243' KB**

18. Total Depth: MD **7450'** TVD

19. Plug Back T.D.: MD **7395'** TVD

20. Depth Bridge Plug Set: MD **N/A** TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
INDUCTION, GAMMA RAY, DENSITY, NEUTRON, SONIC, CBL

22. 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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
12.250"	9-5/8"	36#	SURF	219'		125sx 50/50	28.2	SURF/CIRC	
	J-55					poz			
8.750"	7"	26#	SURF	3450'		360sx "G"	167.0	SURF/CALC	
	K-55								
6.250"	4-1/2"	13.5#	3071'	7397'		230sx TXI lt,	85.4	3071'-CBL	
	N-80					100sx 50/50	22.2		

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"	~~DK~~ MV - 5004	DK - 7247						

25. Producing Intervals / 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) **Mesaverde**			**5002'-5361'**	.342	**30**	**Please see attached**
B) **Dakota**			**7247'-7388'**	.342	**27**	**wellbore diagram**
C)						**for details.**
D)						

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

Depth Interval	Amount and Type of Material
7247'-7388'	**1000 gal 7.5% HCL, 18,000 gal gel, 67,000# 20/40 SLC**
5002'-5361'	**1500 gal 7.5% HCL, 50,000 gal gel, 18,200# CSCF N2, 180,000 20/40 Brady**

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
	11/02/2005	12 hrs.	→	0	1800 mcf	60 bbl			Flowing via casing
Choke Size	**Tbg. Press. Flwg.**	**Csg. Press.**	**24 Hr. Rate**	**Oil BBL**	**Gas MCF**	**Water BBL**	**Gas/Oil Ratio**	**Well Status**	
48/64"	SI n/a	235	→	0	3600 mcf	120 bbl			Ready to Produce

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
11/14/2005	11/02/2005	12 hrs.	→	0	1800 mcf	60 bbl			Flowing via casing
Choke Size	**Tbg. Press. Flwg.**	**Csg. Press.**	**24 Hr. Rate**	**Oil BBL**	**Gas MCF**	**Water BBL**	**Gas/Oil Ratio**	**Well Status**	
48/64"	SI n/a	235	→	0	3600 mcf	120 bbl			Ready to Produce

(See instructions and spaces for additional data on page 2)

RECEIVED
NOV 2005
Oil Cons. DIV.
DIST. 3

ACCEPTED FOR RECORD
NOV 15 2005
FARMINGTON FIELD OFFICE
BY

NMOCD

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.)*

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
				Nacimiento Fm.	**Surface**
				Ojo Alamo Ss.	**1040'**
				Kirtland Sh.	**1110'**
				Fruitland Fm.	**2344'**
				Pictured Cliffs Ss.	**2824'**
				Lewis Sh.	**3010'**
				Cliff House Ss.	**4400'**
				Menefee Fm.	**4630'**
				Point Lookout Ss.	**5059'**
				Mancos Sh.	**5449'**
				Gallup Ss.	**6426'**
				Greenhorn Ls.	**7132'**
				Graneros Sh.	**7186'**
				Dakota Ss.	**7244'**
				Total Depth (Driller)	**7450'**
				Total Depth (Logger)	**7451'**

32. Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☐ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

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)* **SCOTT A. GOODWIN JR.** Title **SR. PETROLEUM ENGINEER**

Signature Date **11/09/2005**

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.

HORTON 1D
NESE 7 - 31N - 11W
San Juan County, NM
Spud: 9/5/05
First Sales:

Date: 11/9/2005

9-5/8" Surface Casing:
5 jts 9-5/8", 36#, J-55, 8rd @ 219' KB
Cmt w/ 125 sx "G" @ 15.8# and 1.16 cf/sk
Full returns - Cement to surface - Float held

7" Intermediate Casing:
78 jts 7", 26#, K-55, 8rd @ 3,450' KB
Cmt w/ Lead 360 sx "G" @ 11.7# and 2.61 cf/sk
Tail 125 sx 50/50 Poz @ 13.5# and 1.27 cf/sk
Full returns - No Cement to Surf - Float Held

ID	DD	Cap	*Collap	*Burst
(in)	(in)	(bbl / ft)	(psi)	(psi)
6.276	6.151	0.0382	3400	3900

4-1/2" Liner:
99 jts 4-1/2" 13.5#, N-80, ST&C set @ 7,397' KB
Hanger De-rated to 4-1/2" 10.5# K-55
Liner Top @ 3,071' KB; Float Collar @ 7,395' KB
Cmt w/ Lead 230 sx TXI Lt Wt @ 11.4# and 2.28 cf/sk
Tail 100 sx 50/50 Poz @ 13.5# and 1.25 cf/sk

ID	DD	Cap	*Collap	*Burst
(in)	(in)	(bbl / ft)	(psi)	(psi)
3.920	3.795	0.0149	3200	3800

2-3/8" Tubing:	Length	Top
XX jts 2-3/8" 4.7#, J-55, 8rd	1.00	
Standard Seating Nipple	1.00	14
1/2 Pump-off sub	1.00	15
EOT		16

ID	DD	Cap	*Collap	*Burst	*Yield
(in)	(in)	(bbl / ft)	(psi)	(psi)	(lb)
1.995	1.901	0.00387	6400	6100	57000

*Burst, Collapse, and Yield are De-rated to 80%