

District I  
1625 N French Dr , Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
June 16, 2008

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NOV 10 2009

HOBBSOCD

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address ConocoPhillips Company P.O. Box 51810 Midland, Texas 79710-1810		<sup>2</sup> OGRID Number 217817
<sup>3</sup> Property Code 31667		<sup>3</sup> API Number 30 - 025-35485
<sup>5</sup> Property Name Hardy 36 State		<sup>6</sup> Well No 31
<sup>9</sup> Proposed Pool 1 Hardy Tubb/Drinkard (North) 96356		<sup>10</sup> Proposed Pool 2

<sup>7</sup> Surface Location

UL or lot no F	Section 36	Township 20S	Range 37E	Lot Idn	Feet from the 1900	North/South line North	Feet from the 2310	East/West line West	County Lea
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<sup>8</sup> Proposed Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Additional Well Information

<sup>11</sup> Work Type Code A P	<sup>12</sup> Well Type Code O	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3500'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 7950	<sup>18</sup> Formation Strawn	<sup>19</sup> Contractor Nabors	<sup>20</sup> Spud Date

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12.25"	8.625#	24#	1500'	1268	Surface
7.875"	5.5"	15.5#	7950'	1560	Surface

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary

ConocoPhillips currently produces this well from the Strawn formation with perforations at 7700-7704 & 7726-7738  
COP is proposing to recompleate this well to the Tubb and Drinkard formations with perforations at 6847-6460 after placing a CIBP at 7500' with 35' of cement on top to isolate the existing Strawn perfs.

Please see the attached procedure for more specific information.

Permit Expires 2 Years From Approval  
Date Unless Drilling Underway  
Plugback

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name: Justin C. Firkins

Title: Regulatory Specialist

E-mail Address justin.c.firkins@conocophillips.com

Date: 11/09/2009

/Phone. 432-688-6913

OIL CONSERVATION DIVISION

Approved by:

Title:

PETROLEUM ENGINEER

Approval Date: DEC 08 2009

Expiration Date:

Conditions of Approval Attached ☐

District I  
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State of New Mexico

Energy, Minerals & Natural Resources Department

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WELL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-35485	<sup>2</sup> Pool Code 96356	<sup>3</sup> Pool Name Hardy: Tubb/Drinkard (North)
<sup>4</sup> Property Code 31667	<sup>5</sup> Property Name Hardy 36 State	<sup>6</sup> Well Number 31
<sup>7</sup> OGRID No. 217817	<sup>8</sup> Operator Name ConocoPhillips Company	<sup>9</sup> Elevation 3500' GR

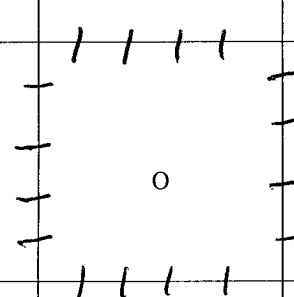
<sup>10</sup> Surface Location

UL or lot no. F	Section 36	Township 20S	Range 37E	Lot Idn	Feet from the 1900	North/South line North	Feet from the 2310	East/West line West	County Lea, NM
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<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<sup>3</sup>		<p><sup>17</sup> <b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division</p> <p>Signature: <i>Justin C. Firkins</i> Date: 11/09/2009</p> <p>Justin C. Firkins Printed Name</p>
		<p><sup>18</sup> <b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>Certificate Number</p>

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NOV 10 2009

**HOBBSOCD**

**HARDY 36 STATE #31**

**WBS ELEMENT – WA5.CNM.\_\_\_\_\_**

**WellView Well Name – HARDY 36 STATE #31**  
**Re-Completion Procedure**

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November 4, 2009

**Objective:** Recomplete to the Tubb and Drinkard formations.

COPC WI: 100%	COPC NRI: 87.5%	
Well Status: Prod	Well Type: Oil Well	County: Lea
Area: Permian	Field: Strawn	Team: Permian Oil
Venting: Permit not required	Flaring: Permit not required	H <sub>2</sub> S: Possible
Well Control: Class 2 Category 2	(post perforating & post stimulation)	

**IMPORTANCE OF SAFETY**

Safe operations are of utmost importance at all ConocoPhillips properties and facilities. To further this goal, the ConocoPhillips Supervisor at the location shall request tailgate safety meetings prior to initiation of work and also prior to any critical operations. All company, contract, and service personnel then present shall attend these tailgate safety meetings at the location. All parties shall review the proposed upcoming steps, procedures, and potentially hazardous situations. Occurrence of these meetings shall be recorded in the Well View daily report.

**History / Justification**

The Hardy 36 State #31 was originally drilled to 7950' in June 2001. The well was completed in the Strawn from 7700-7738' and acid frac'd with 23,100 gals of 20% NEFE HCl. The Strawn has produced 5,367 BO and 41,825 Mcf thru February 2009 according to Dwight's PI. The last test of the Strawn was 9/30/09; the well was making 1 BO, 1 BW and 1 Mcf. It is proposed to recomplete to the Tubb and Drinkard formations.

An initial rate of 20 BOPD with 25 Mcf/d is projected based upon the initial rates of the offset wells. Economics were performed using an exponential decline rate of 25% per year, a recompletion cost of \$400,000, and an operating cost of \$7.92/BOE per year. ConocoPhillips owns a 100% WI and a NRI of 87.5% in the Hardy State lease. This project yields an ATAX ROR of 41.3% with a NPV of \$213M at 13%.

**Prepared by: David McPherson: Contract Production Engineer, Panhandle/Permian Group**  
**Mobile: 1(903) 316-4272 Home: 1(903) 894-3547**

Hardy 36 State #31  
 Recomplete to Tubb and Drinkard formations

**AFE Number:** WA5.CNM.\_\_\_\_\_

**API Number:** 30-025-35485

**Field:** North Hardy Strawn

**Location:** 1900' FNL & 2310' FWL, Sec. 36, T-20-S, R-37-E, Lea County, NM

**Depths:** TD = 7950'

**Elevation:** GR = 3500' KB = 3511'

**Casing Data:**

**Existing & Proposed Casing, Tubing and Packer Information**

	OD (in)	Depth (ft)	ID/Drift (inches)	Weight (#/ft)	Grade	Burst	Burst w/ 1.15 D.F.	Collapse (psi)	Collapse w/ 1.05 D.F.	Volume (Bbls/Ft)
Int. Csg	8 3/4	1500'	8.097/7.972	24#	J-55	2950	2565	1370	1305	.0609
*Prod.	5 1/2	7950'	4.892/4.767	17#	J-55	5320	4626	4910	4676	.0232
Prod. Tbg	2 7/8		2.441/2.347	6 5/8	L-80	10570	9191	11170	10638	.00579

Top of Cement: surface

Casing Fluid: Fresh Water

**Proposed Cased Hole Perforations**

Formation	Perforations (MD)	Frac Grad	Perf Feet	SPF	Phase	Holes	Anticipated Reservoir Pressure	Reservoir Temp
Tubb	6460-6466'	.84	6	2	60°	12	3004	109°
Stage 2	6492-6496'	.84	4	2	60°	8	3019	109°
	6510-6514'	.84	4	2	60°	8	3027	109°
	6535-6538'	.84	3	2	60°	6	3039	109°
	6601-6604'	.84	3	2	60°	6	3069	110°
	6667-6671'	.84	4	2	60°	8	3100	110°
Drinkard	6789-6793'	.84	4	3	60°	12	3157	111°
Stage 1	6806-6810'	.84	4	3	60°	12	3165	111°
	6816-6819'	.84	3	3	60°	9	3169	111°
	6827-6829'	.84	2	3	60°	6	3175	111°
	6836-6838'	.84	2	3	60°	6	3179	111°
	6844-6847'	.84	3	3	60°	9	3182	111°

Correlation Log: Schlumberger's Platform Express dated 6/21/2001  
 Gun Type: Schlumberger's 3-3/8" SLB Power Jet 3406 HMX, 22.7 gm

## GENERAL NOTES

1. No project or task is to be performed unless it can be done safely and without harm to the environment. All work must comply with all State and Federal regulations and with COPC Safety and Environmental Policies.
2. Conduct daily safety meetings and review all procedures with all contractors prior to performing the operation.
3. Report all activity on the Well View Daily Completion Work-Over Report.
4. Insure contractors are familiar with and comply with all relevant COPC safety/environmental policies.
5. Spills are to be prevented. Utilize a vacuum truck as necessary.
6. Throughout the entire completion process, any fluids from the well-bore that are displaced or produced must be sent through the flow-back equipment so that the fluids can be properly disposed.
7. Verify that all pressured lines and fittings meet or exceed the MPSP (Maximum Predicted Surface Pressure) for the treatment lines of **6000** psi for the pressure test during stimulation operations. Maximum treatment pressure during the acid treatment will be **7000** psi. MPSP from the zone should not be greater than 2000 psi before & after stimulation operations of the Tubb and Drinkard zones.
8. Well control for this well will be Class 2, Category 2 before and after stimulation. Expected Shut in Casing Pressures (SICP) before & after stimulation should not exceed 2000 psi.

### Mid-Continent / Permian / Hobbs East Contact List:

Reservoir Engineer:	D. Pecore	832-486-2145
Production Engineer:	J. Lowder	432-368-1609
Facilities Engineer Tech:	L. Johansen	432-368-1223
Operations Supervisor:	J. Coy	505-391-3127
Projects Planner:	D. Garrett	505-368-1410
Production Foreman:	V. Mackey	505-391-3129

### **Recommended Procedure**

1. MIRU well service unit. POOH with rods & pump. ND wellhead and NU BOP's and test. POOH with 2 $\frac{7}{8}$ ", 6.5#, L-80 tubing. Scan tubing while pulling. If tubing is acceptable, use 2 $\frac{7}{8}$ ", 6.5#, L-80 production tubing as workstring, and haul in enough workstring for bit run in Step #2. If tubing is unacceptable, lay down 2 $\frac{7}{8}$ ", 6.5#, L-80 tubing, send tubing in for inspection, place all inspected yellow and blue band tubing in COPC inventory, and haul in 6300'± of 2 $\frac{7}{8}$ ", 6.5#, L-80 production tubing and enough workstring for bit run in Step #2.
2. PU and TIH with 4 $\frac{5}{8}$ " bit on 2 $\frac{7}{8}$ ", 6.5#, L-80 workstring to 7900'± (PBTD), circulating well clean with fresh water. Test 2 $\frac{7}{8}$ ", 6.5#, L-80 workstring to 6500 psi while TIH. POOH with 2 $\frac{7}{8}$ ", 6.5#, L-80 workstring and bit. Lay down drill bit.
3. MIRU Schlumberger wireline. RU 1000 psi lubricator. Set CIBP at 7500'±. Dump bail 35' of cement on top of CIBP. Correlate to Schlumberger's Platform Express dated 6/21/2001. RU pump truck and test casing to 1000 psi. RD pump truck. Perforate the Drinkard from 6789-6793', 6806-6810', 6816-6819', 6827-6829', 6836-6838', and 6844-6847' (54 holes) with 3 SPF 60° phasing, using Schlumberger's 3-3/8" SLB Power Jet 3406 HMX, 22.7 gm. RD/MO wireline and lubricator.
4. PU 3 $\frac{1}{2}$ ", 9.3#, N-80 workstring. TIH with 5 $\frac{1}{2}$ " packer on 3 $\frac{1}{2}$ " workstring. Test 3 $\frac{1}{2}$ " workstring to 7500 psi while TIH. Set packer at 6700'±.
5. Spot two 500 bbl clean, lined frac tanks and fill with fresh water. Add biocide to the first load of each tank.
6. MIRU Schlumberger pumping services fracturing equipment. RU and test all lines to 7,000 psi and monitor for 5 min. Make sure the pressure does not decrease more than 300 psi over the 5 min. Pressure up casing / tubing annulus to 300 psi and monitor during job
7. Load well w/ 500± gals. Fresh Water @ < 5 BPM. Pump FET with Fresh Water: Step rate up commencing at 2 bpm; 3 bpm; 4 bpm; 5 bpm; 6 bpm; bring on 2nd pump and bring rate to 10 bpm; 3rd pump to achieve 15 bpm; 4th pump to achieve 20 bpm; & 5th pump to 25 bpm\*. Hold each rate going down for no more than 10 seconds (\*Hold 25 bpm for 1 minute). Step down by dropping each pump offline every 5 seconds. Inform the pump operators that it is more important to get somewhere close to the specified rate rather than be exactly on the specified rates.
8. Perform acid ballout with 1800 gals 15% HCl acid at 6-10 bpm with 65± 1.3 SG bio balls as per attached procedure. When acid is on perfs, bring rate up to 15-16 BPM. Obtain ISIP and 5 minute shut-in pressure. Surge the well 3-4 times to dislodge balls. Shut down for 30 minutes to allow balls to fall.

Note: It is a ConocoPhillips policy to have shower facilities on location when using acid.

9. Fracture treat the Drinkard with 20,000 gal of YF120ST containing 50,000 lbs of 20/40 sand coated with prop-net as per attached treating schedule. Set treating line pop off at 5525 psi. Set pump trips at 6500 psi. Set annulus pop off at 700 psi. Frac at 30-35± BPM with maximum wellhead treating pressure of 5125 psi.
10. Obtain ISIP and 5 minute, 10 minute, and 15 minute shut-in pressures. Close Hydraulic Master Valve. RD Schlumberger Iron.
11. Unseat packer and reverse out any excess sand from tubing if flush volume not achieved. POOH with 5½" packer and 3½" workstring. Stand back 3½" workstring.
12. MIRU Schlumberger wireline. RU 1000 psi lubricator. Set 5K composite plug at 6700'±. Correlate to Schlumberger's Platform Express dated 6/21/2001. RU pump truck and test casing to 1000 psi. RD pump truck. Perforate the Tubb from 6460-6466', 6492-6496', 6510-6514', 6535-6538', 6601-6604', and 6667-6671' (48 holes) with 2 SPF 60° phasing, using Schlumberger's 3-3/8" SLB Power Jet 3406 HMX, 22.7 gm. RD/MO wireline and lubricator.
13. PU 3½", 9.3#, N-80 workstring. TIH with 5½" packer on 3½" workstring. Test 3½" workstring to 7500 psi while TIH. Set packer at 6400'±.
14. Fill two 500 bbl clean, lined frac tanks and fill with fresh water. Add biocide to the first load of each tank.
15. MIRU Schlumberger pumping services fracturing equipment. RU and test all lines to 7,000 psi and monitor for 5 min. Make sure the pressure does not decrease more than 300 psi over the 5 min. Pressure up casing / tubing annulus to 300 psi and monitor during job.
16. Load well w/ 500± gals. Fresh Water @ < 5 BPM. Pump FET with Fresh Water: Step rate up commencing at 2 bpm; 3 bpm; 4 bpm; 5 bpm; 6 bpm; bring on 2nd pump and bring rate to 10 bpm; 3rd pump to achieve 15 bpm; 4th pump to achieve 20 bpm; & 5th pump to 25 bpm\*. Hold each rate going down for no more than 10 seconds (\*Hold 25 bpm for 1 minute). Step down by dropping each pump offline every 5 seconds. Inform the pump operators that it is more important to get somewhere close to the specified rate rather than be exactly on the specified rates.
17. Perform acid ballout with 2400 gals 15% HCl acid at 6-10 bpm with 58± 1.3 SG bio balls as per attached procedure. When acid is on perfs, bring rate up to 15-16 BPM. Obtain ISIP and 5 minute shut-in pressure. Surge the well 3-4 times to dislodge balls. Shut down for 30 minutes to allow balls to fall.

Note: It is a ConocoPhillips policy to have shower facilities on location when using acid.

18. Fracture treat the Tubb with 23,000 gal of YF120ST containing 60,000 lbs of 20/40 sand coated with prop-net as per attached treating schedule. Set treating line pop off at 5525 psi. Set pump trips at 5125 psi. Set annulus pop off at 700 psi. Frac at 30-35± BPM with maximum wellhead treating pressure of 5500 psi.

19. Obtain ISIP and 5 minute, 10 minute, and 15 minute shut-in pressures. Close Hydraulic Master Valve. RD Schlumberger Iron.
20. Unseat packer and reverse out any excess sand from tubing if flush volume not achieved. POOH with 5½" packer and 3½" workstring. Lay down 3½" workstring.
21. TIH with 4⅝" bit on 2⅞", 6.5#, L-80 workstring to 6700'±. Circulate out any excess sand from frac job. Drill out composite plug at 6700'±. Continue TIH to TOC @ 7465±. Do not drill out cement. When wellbore is clean, POOH with 2⅞" workstring.
22. RIH with the 2⅞", 6.5#, L-80 production tubing (per tubing design in Well View). Place the EOT at 6875'± with the tubing anchor at 6410'±. Maintain a dynamic fluid column (DFC) while running tubing. (Trickle some fresh water down the tubing head valve.)
23. ND BOP's and NU wellhead. RIH with pump and rods (per rod design in Well View). Space and hang well on. Load tubing and check pump action.
24. RD/MO well service rig. Release any ancillary equipment. Clean up location.
25. Turn well over to Operations. Place well on production. Report well tests on morning report. Place stabilized well test in Field View. Contact chemical representative to place well on corrosion inhibition and scale squeeze program if needed. Submit change of status report.



# HARDY 36 STATE #31

## CURRENT WELLBORE DIAGRAM

API #: 30-025-35485

FIELD: North Hardy Strawn

CO ST: Lea, NM

AREA: Hobbs East

SECTION: 36

TOWNSHIP: 20S

RANGE: 37E

LOCATION: 1900' FNL & 2310' FWL

DATES: SPUD: 6/5/01

IC: 10/8/01

LATEST RIG WORKOVER:

DIAGRAM REVISED: 10/06/09 by D. McPherson

8 3/4" @ 1500', cmt w/ 665 sx

DV tool @ 3874'

DV tool @ 5339'

TAC @ 7644'

Perfs 7700-7704', 7726-7738' (4 SPF)  
Acid frac'd w/ 23,100 gals 20% HCL NEFE  
EOT @ 7781'

5 1/2" @ 7950' cmt w/ 990 sxs

	CASING		LINER	TUBING
Hole Size	12 1/4"	7 7/8"		
Pipe Size	8 3/4"	5 1/2"		2 7/8"
Weight	24#	17#		6 5#
Grade	J-55	J-55		L-80
Thread	ST&C	LT&C		8 rd
Depth	1500'	7950'		7781'

ELEVATION: GR 3500', KB 3511'

TREE CONNECTION:

Tubing Description	Length	From	To
Elevation	10.00	0 00	10.00
241 jts 2 7/8" 6.5# L-80 tubing	7634.00	10 00	7644.00
TAC	3 00	7644 00	7647.00
4 jts 2 7/8" 6.5# L-80 tubing	128 00	7647.00	7775.00
SN	1.00	7775 00	7776.00
SOPMA	5.00	7776.00	7781.00

Rod String Description	Length	From	To
1 1/2" polished rod	15 00	-1 00	14.00
102 7/8" rods	2542 00	14 00	2556.00
205 3/4" rods	5125 00	2556 00	7681.00
3 1 1/2" sinker bars	75 00	7681 00	7756.00
1 1/2" insert pump	20 00	7756 00	7776.00
1 1/2" strainer	1 00	7776.00	7777.00

## COMMENTS

TD

7950'

# HARDY 36 STATE #31

## PROPOSED WELLBORE DIAGRAM

API #: 30-025-35485

FIELD: North Hardy Strawn

CO ST: Lea, NM

AREA: Hobbs East

SECTION: 36

TOWNSHIP: 20S

RANGE: 37E

LOCATION: 1900' FNL & 2310' FWL

DATES: SPUD: 6/5/01

IC: 10/8/01

LATEST RIG WORKOVER:

DIAGRAM REVISED: 10/06/09 by D. McPherson

8 5/8" @ 1500', cmt w/ 665 sx

DV tool @ 3874'

DV tool @ 5339'

Packer @ 6700'±

Drinkard

PERFS: 6789-93', 6806-10', 6816-19'

PERFS: 6827-29', 6836-38', 6844-47'

CIBP @ 7500'± w/ 35' cement on top

Perfs: 7700-7704', 7726-7738' (4 SPF)

Acid frac'd w/ 23,100 gals 20% HCL NEFE

5 1/2" @ 7950' cmt w/ 990 sxs

	CASING		LINER	TUBING
Hole Size	12 1/4"	7 7/8"		
Pipe Size	8 5/8"	5 1/2"		
Weight	24#	17#		
Grade	J-55	J-55		
Thread	ST&C	LT&C		
Depth	1500'	7950'		

ELEVATION: GR 3500', KB 3511'

TREE CONNECTION.

## COMMENTS

TD

7950'

# HARDY 36 STATE #31

## PROPOSED WELLBORE DIAGRAM

API #: 30-025-35485  
FIELD: North Hardy Strawn  
CO ST: Lea, NM AREA: Hobbs East  
SECTION: 36 TOWNSHIP: 20S RANGE: 37E  
LOCATION: 1900' FNL & 2310' FWL  
DATES: SPUD: 6/5/01 IC: 10/8/01  
LATEST RIG WORKOVER:  
DIAGRAM REVISED: 10/06/09 by D. McPherson

8 3/4" @ 1500', cmt w/ 665 sx

DV tool @ 3874'

DV tool @ 5339'

Packer @ 6400'±

PERFS 6460-66', 6492-96', 6510-14'  
PERFS 6535-38', 6601-04', 6667-71'

Composite plug @ 6700'±

Drinkard  
PERFS 6789-93', 6806-10', 6816-19'  
PERFS 6827-29', 6836-38', 6844-47'

CIBP @ 7500'± w/ 35' cement on top

Perfs: 7700-7704', 7726-7738' (4 SPF)  
Acid frac'd w/ 23,100 gals 20% HCL NEFE  
5 1/2" @ 7950' cmt w/ 990 sxs

### CASING LINER TUBING

Hole Size	12 1/4"	7 7/8"			
Pipe Size	8 3/4"	5 1/2"			
Weight	24#	17#			
Grade	J-55	J-55			
Thread	ST&C	LT&C			
Depth	1500'	7950'			

ELEVATION: GR 3500', KB 3511'  
TREE CONNECTION:

### COMMENTS

TD

7950'

# HARDY 36 STATE #31

## PROPOSED WELLBORE DIAGRAM

API #: 30-025-35485

FIELD: North Hardy Strawn

CO ST: Lea, NM

AREA: Hobbs East

SECTION: 36

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RANGE: 37E

LOCATION: 1900' FNL & 2310' FWL

DATES: SPUD: 6/5/01

IC: 10/8/01

LATEST RIG WORKOVER:

DIAGRAM REVISED: 10/06/09 by D. McPherson

8 5/8" @ 1500', cmt w/ 665 sx

DV tool @ 3874'

DV tool @ 5339'

TAC @ 6410'±

PERFS 6460-66', 6492-96', 6510-14'

PERFS 6535-38', 6601-04', 6667-71'

Drinkard

PERFS 6789-93', 6806-10', 6816-19'

PERFS 6827-29', 6836-38', 6844-47'

EOT @ 6875'±

CIBP @ 7500'± w/ 35' cement on top

Perfs 7700-7704', 7726-7738' (4 SPF)

Acid frac'd w/ 23,100 gals 20% HCL NEFE

5 1/2" @ 7950' cmt w/ 990 sxs

	CASING		LINER	TUBING
Hole Size	12 1/4"	7 1/4"	:	:
Pipe Size	8 5/8"	5 1/2"	:	2 7/8"
Weight	24#	17#	:	6 5#
Grade	J-55	J-55	:	L-80
Thread	ST&C	LT&C	:	8 rd
Depth	1500'	7950'	:	6875'±

ELEVATION GR 3500', KB 3511'

TREE CONNECTION

## COMMENTS

TD

7950'