

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
May 27, 2004

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, PLUG BACK, OR ADD A ZONE

¹ Operator Name and Address Devon Energy Production Company L.P. 20 North Broadway OKC, OK 73102-8260		² OGRID Number 6137
³ Property Code 28723	⁴ Property Name Hackberry 31 State	⁵ API Number 30-015-34782
⁹ Proposed Pool 1 Sheep Draw; Morrow (Gas)		¹⁰ Proposed Pool 2

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	22S	26E		920	South	1310	East	Eddy

⁸ 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
P	31	22S	26E		660	South	680	East	Eddy

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code G	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3381'
¹⁶ Multiple N	¹⁷ Proposed Depth MD 11,761 TVD 11,675'	¹⁸ Formation Sheep Draw; Morrow (Gas)	¹⁹ Contractor	²⁰ Spud Date
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
²¹ Proposed Casing and Cement Program				

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	48#	450'	427 sx CLC	Surface
12 1/2"	9 5/8"	36#	1600'	754 sx CLC	Surface
8 3/4"	5 1/2"	17#	11761'	1375 sx CLC	4500'

²² 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.

Devon respectfully requests permission to change from a vertical well to a directional well. Will drill to a total depth of 11,761' and complete as a Morrow gas development well. If it is deemed non-commercial then it will be plugged and abandoned in accordance with the rules and regulations established by the New Mexico OCD or converted to salt water disposal after installing production casing and obtaining the necessary disposal permits.

No H2S is expected to be encountered; H2S plan provided. 5000 psi Double and Hydril with drilling spool & rotating head to be used.

City of Carlsbad Sheep Draw Wellfield Protection Area Permit filed with Dave Hennard (RESPEC) & Richard Aguilar (City of Carlsbad). Copy of OCD form C-101 provided to both agencies. Approved 7/13/06. Permit amended for 9 5/8" casing set @ 1600' per variance exception granted.

Directional Survey attached.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☒, or an (attached) alternative OCD-approved plan ☐.

Printed name: Stephanie A. Ysasaga

Title: Sr. Staff Engineering Technician

E-mail Address: Stephanie.Ysasaga@dvr.com

Date: 11/28/06

Phone: (405)-552-7802

OIL CONSERVATION DIVISION

Approved by:

BRYAN G. ARRAUT

DISTRICT II GEOLOGIST

Approval Date: DEC 01 2006

Expiration Date: DEC 01 2007

Conditions of Approval Attached ☐

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2086

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-34782	Pool Code	Pool Name Sheep Draw; Morrow (Gas)
Property Code	Property Name HACKBERRY "31" STATE	Well Number 2
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.	Elevation 3381'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	22 S	26 E		920	SOUTH	1310	EAST	EDDY

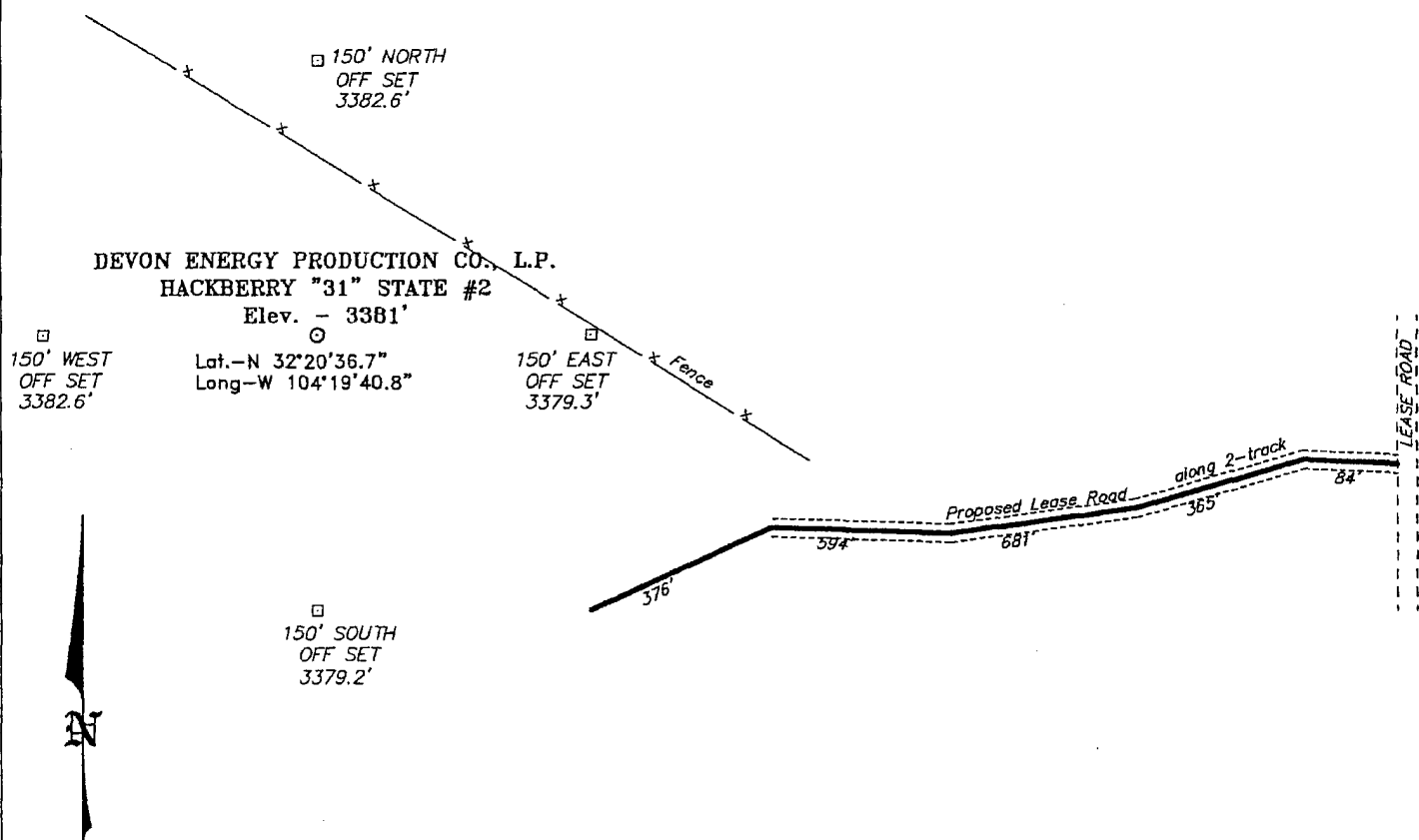
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	22S	26E		660	SOUTH	680	EAST	EDDY
Dedicated Acres 320	Joint or Infill	Consolidation Code	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

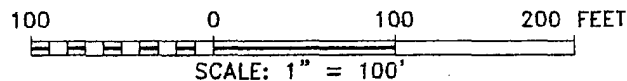
						OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>[Signature]</i> Signature Stephanie A. Ysasaga Printed Name Sr. Staff Engineering Tech Title 04/10/06 Date
Lat - N32°20'36.7" Long - W104°19'40.8" SL 1310' 680' 660' BHL						SURVEYOR CERTIFICATION 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. MARCH 17, 2006 Date Surveyed <i>[Signature]</i> Signature & Seal of Professional Surveyor W.O. No. 8259 Certificate No. Gary L. Jones 7977 BASIN SURVEYS

SECTION 31, TOWNSHIP 22 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



Directions to Location:

FROM THE JUNCTION OF US HWY 62/180 AND CO.
RD. 672, GO EAST ON 672 FOR 5.5 MILES TO
LEASE ROAD; THENCE NORTH ON LEASE ROAD FOR
APPROX. 0.5 MILE TO PROPOSED LEASE ROAD
ALONG 2-TRACK ROAD.



DEVON ENERGY PROD. CO., L.P.

REF: HACKBERRY "31" STATE No. 2 / Well Pad Topo

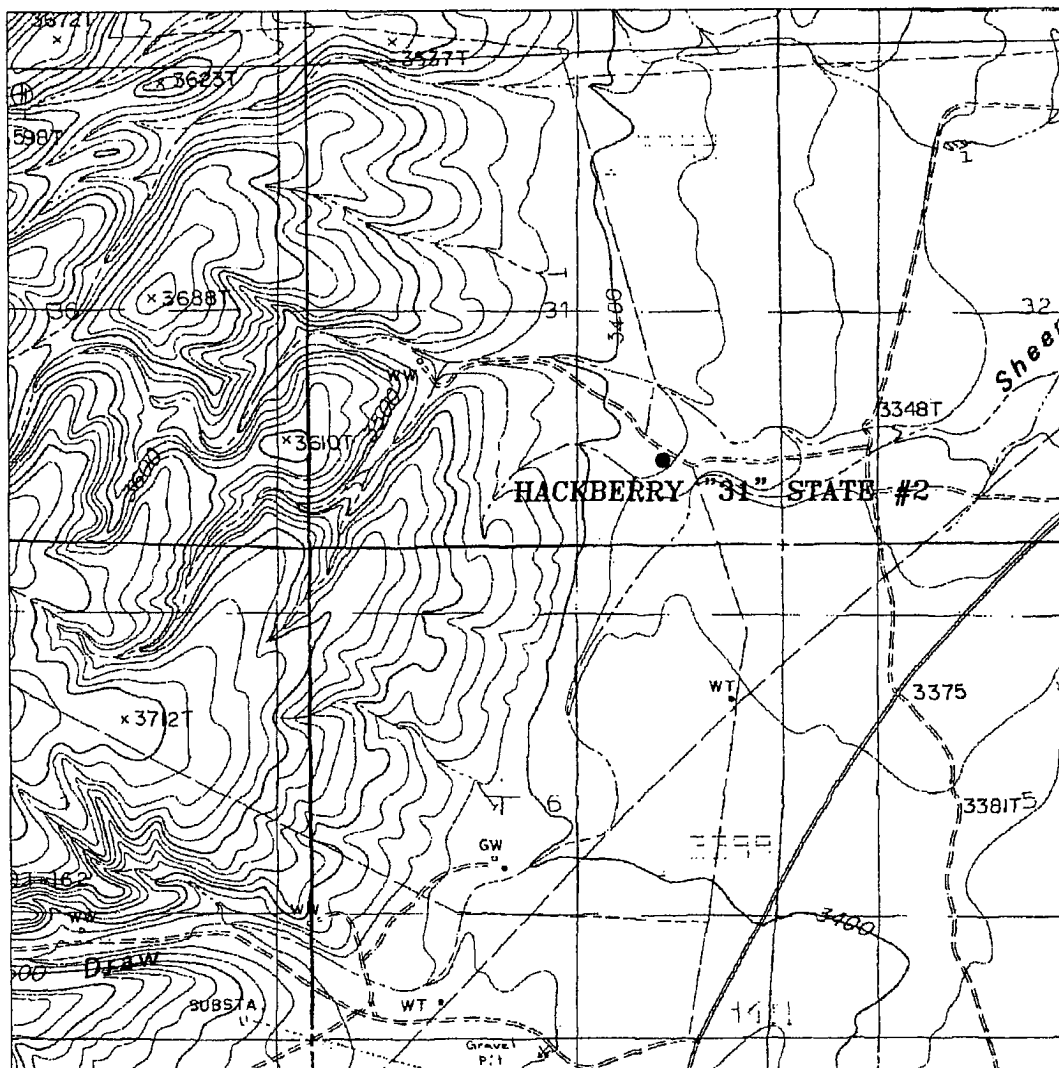
THE HACKBERRY "31" STATE No. 2 LOCATED 920' FROM
THE SOUTH LINE AND 1310' FROM THE EAST LINE OF
SECTION 31, TOWNSHIP 22 SOUTH, RANGE 26 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 6359 Drawn By: K. GOAD

Date: 03-20-2006 Disk: KJG CD#4 - 6359A.DWG

Survey Date: 03-17-2006 Sheet 1 of 1 Sheets



HACKBERRY "31" STATE #2

Located at 920' FSL AND 1310' FEL
Section 31, Township 22 South, Range 26 East,
N.M.P.M., Eddy County, New Mexico.

basin
surveys

focused on excellence
in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(505) 393-7316 - Office
(505) 392-3074 - Fax
basinsurveys.com

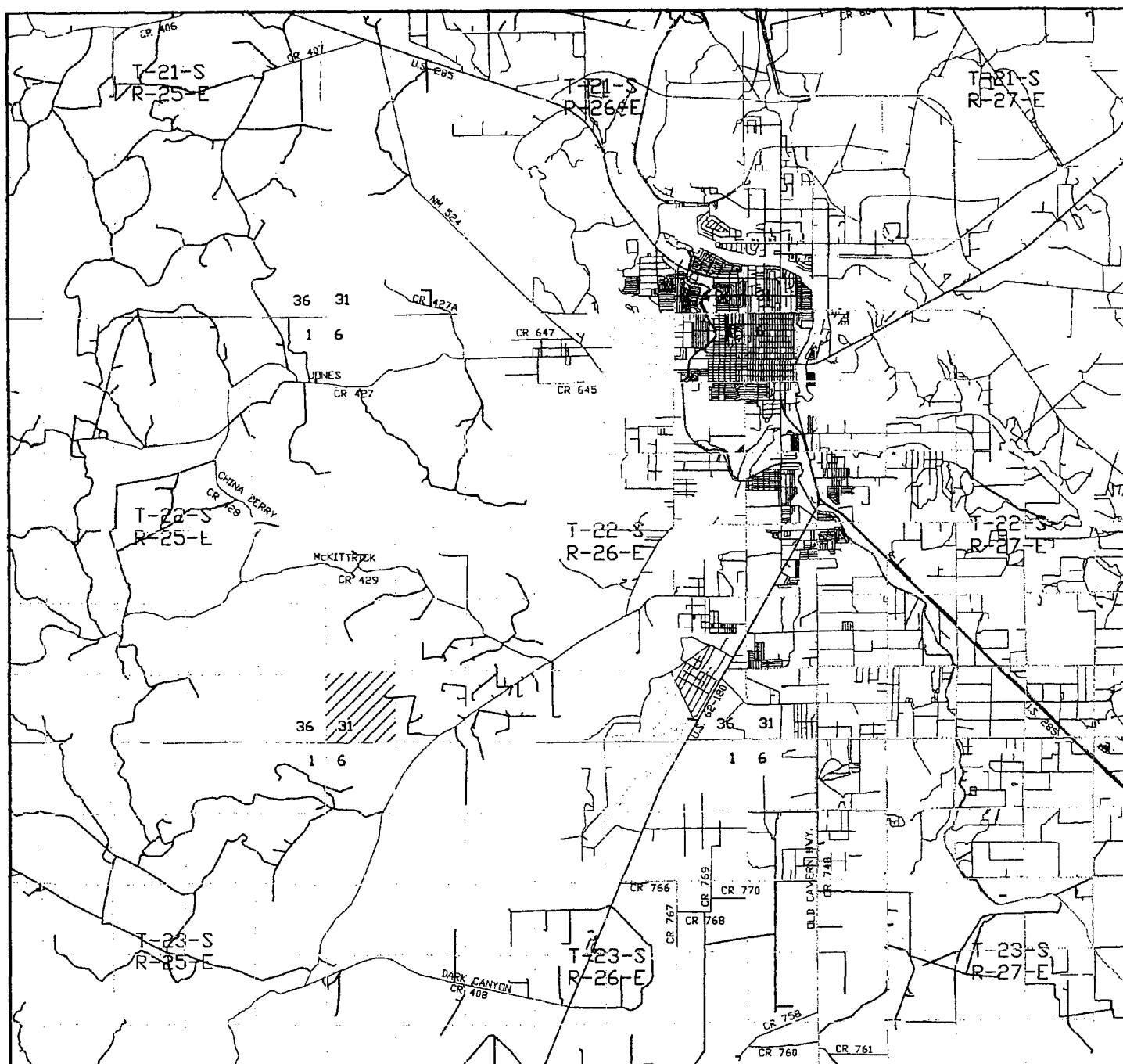
W.O. Number: 6359AA - KJG CD#4

Survey Date: 03-17-2006

Scale: 1" = 2000'

Date: 03-20-2006

DEVON ENERGY
PROD. CO., L.P.



HACKBERRY "31" STATE #2
 Located at 920' FSL AND 1310' FEL
 Section 31, Township 22 South, Range 26 East,
 N.M.P.M., Eddy County, New Mexico.

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 Hobbs, New Mexico 88241
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 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: 6359AA - KJG CD#4

Survey Date: 03-17-2006

Scale: 1" = 2 MILES

Date: 03-20-2006

DEVON ENERGY
PROD. CO., L.P.



Planned Wellpath Report

Plan #1
Page 1 of 3



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	#1_SHL
Area	Eddy County, NM	Well	Hackberry 31 State #2
Field	Section 31 T22S R26E	Wellbore	#1 PWB
Facility	Hackberry 31 State		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect™ 1.2
North Reference	True	User	Gomeoscr
Scale	1.0002	Report Generated	11/03/06 at 09:28:03
Wellbore last revised	11/03/06	Database/Source file	WellArchitectDB/#1_PV

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	0.00	0.00	0.00	0.00	30 59 24.512N	105 55 44.137W
Facility Reference Pt			0.00	0.00	30 59 24.512N	105 55 44.137W
Field Reference Pt			0.00	0.00	30 59 24.512N	105 55 44.137W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on #1_SHL (RT) to Facility Vertical Datum	0.00 feet
Horizontal Reference Pt	Slot	Rig on #1_SHL (RT) to Mean Sea Level	0.00 feet
Vertical Reference Pt	Rig on #1_SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Rig on #1_SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	112.43°



Planned Wellpath Report

Plan #1
Page 2 of 3



REFERENCE WELLPATH IDENTIFICATION			
Operator	Devon Energy	Slot	#1_SHL
Area	Eddy County, NM	Well	Hackberry 31 State #2
Field	Section 31 T22S R26E	Wellbore	#1_PWB
Facility	Hackberry 31 State		

WELLPATH DATA (61 stations) † = interpolated/extrapolated station								
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments
0.00	0.000	112.426	0.00	0.00	0.00	0.00	0.00	Tie On
6200.00†	0.000	0.000	6200.00	0.00	0.00	0.00	0.00	
6300.00	0.000	112.426	6300.00	0.00	0.00	0.00	0.00	KOP
6400.00†	2.500	112.426	6399.97	2.18	-0.83	2.02	2.50	
6500.00†	5.000	112.426	6499.75	8.72	-3.33	8.06	2.50	
6600.00†	7.500	112.426	6599.14	19.61	-7.48	18.12	2.50	
6700.00†	10.000	112.426	6697.97	34.82	-13.28	32.18	2.50	
6800.00†	12.500	112.426	6796.04	54.33	-20.72	50.22	2.50	
6900.00†	15.000	112.426	6893.17	78.09	-29.79	72.19	2.50	
6954.47	16.362	112.426	6945.61	92.81	-35.41	85.80	2.50	EOB
7000.00†	16.362	112.426	6989.30	105.64	-40.30	97.65	0.00	
7100.00†	16.362	112.426	7085.25	133.81	-51.05	123.69	0.00	
7200.00†	16.362	112.426	7181.20	161.98	-61.79	149.73	0.00	
7300.00†	16.362	112.426	7277.15	190.15	-72.54	175.77	0.00	
7400.00†	16.362	112.426	7373.10	218.32	-83.29	201.81	0.00	
7500.00†	16.362	112.426	7469.05	246.49	-94.03	227.85	0.00	
7600.00†	16.362	112.426	7565.00	274.66	-104.78	253.89	0.00	
7700.00†	16.362	112.426	7660.95	302.83	-115.53	279.93	0.00	
7800.00†	16.362	112.426	7756.90	331.00	-126.27	305.97	0.00	
7900.00†	16.362	112.426	7852.85	359.17	-137.02	332.01	0.00	
8000.00†	16.362	112.426	7948.80	387.34	-147.77	358.05	0.00	
8100.00†	16.362	112.426	8044.75	415.51	-158.51	384.09	0.00	
8200.00†	16.362	112.426	8140.70	443.68	-169.26	410.13	0.00	
8300.00†	16.362	112.426	8236.65	471.85	-180.01	436.17	0.00	
8400.00†	16.362	112.426	8332.60	500.02	-190.75	462.21	0.00	
8495.23	16.362	112.426	8423.98	526.85	-200.99	487.01	0.00	EOH/Start Drop
8500.00†	16.290	112.426	8428.55	528.19	-201.50	488.25	1.50	
8600.00†	14.790	112.426	8524.89	554.98	-211.72	513.01	1.50	
8700.00†	13.290	112.426	8621.90	579.24	-220.97	535.44	1.50	
8800.00†	11.790	112.426	8719.51	600.95	-229.26	555.51	1.50	
8900.00†	10.290	112.426	8817.66	620.10	-236.56	573.21	1.50	
9000.00†	8.790	112.426	8916.27	636.68	-242.88	588.53	1.50	
9100.00†	7.290	112.426	9015.29	650.66	-248.22	601.46	1.50	
9200.00†	5.790	112.426	9114.63	662.05	-252.57	611.98	1.50	
9300.00†	4.290	112.426	9214.25	670.84	-255.92	620.11	1.50	
9400.00†	2.790	112.426	9314.05	677.01	-258.27	625.81	1.50	
9500.00†	1.290	112.426	9413.99	680.57	-259.63	629.10	1.50	
9586.02	0.000	112.426	9500.00	681.54	-260.00	630.00	1.50	EOD
9600.00†	0.000	0.000	9513.98	681.54	-260.00	630.00	0.00	
9700.00†	0.000	0.000	9613.98	681.54	-260.00	630.00	0.00	



Planned Wellpath Report

Plan #1
Page 3 of 3



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Devon Energy	Slot	#1_SHL
Area	Eddy County, NM	Well	Hackberry 31 State #2
Field	Section 31 T22S R26E	Wellbore	#1 PWB
Facility	Hackberry 31 State		

WELLPATH DATA (61 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments
9800.00†	0.000	0.000	9713.98	681.54	-260.00	630.00	0.00	
9900.00†	0.000	0.000	9813.98	681.54	-260.00	630.00	0.00	
10000.00†	0.000	0.000	9913.98	681.54	-260.00	630.00	0.00	
10100.00†	0.000	0.000	10013.98	681.54	-260.00	630.00	0.00	
10200.00†	0.000	0.000	10113.98	681.54	-260.00	630.00	0.00	
10300.00†	0.000	0.000	10213.98	681.54	-260.00	630.00	0.00	
10400.00†	0.000	0.000	10313.98	681.54	-260.00	630.00	0.00	
10500.00†	0.000	0.000	10413.98	681.54	-260.00	630.00	0.00	
10600.00†	0.000	0.000	10513.98	681.54	-260.00	630.00	0.00	
10700.00†	0.000	0.000	10613.98	681.54	-260.00	630.00	0.00	
10800.00†	0.000	0.000	10713.98	681.54	-260.00	630.00	0.00	
10900.00†	0.000	0.000	10813.98	681.54	-260.00	630.00	0.00	
11000.00†	0.000	0.000	10913.98	681.54	-260.00	630.00	0.00	
11100.00†	0.000	0.000	11013.98	681.54	-260.00	630.00	0.00	
11200.00†	0.000	0.000	11113.98	681.54	-260.00	630.00	0.00	
11300.00†	0.000	0.000	11213.98	681.54	-260.00	630.00	0.00	
11400.00†	0.000	0.000	11313.98	681.54	-260.00	630.00	0.00	
11500.00†	0.000	0.000	11413.98	681.54	-260.00	630.00	0.00	
11600.00†	0.000	0.000	11513.98	681.54	-260.00	630.00	0.00	
11700.00†	0.000	0.000	11613.98	681.54	-260.00	630.00	0.00	
11761.02	0.000	112.426	11675.00 ¹	681.54	-260.00	630.00	0.00	#1 PBHL

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) #1 PBHL	11761.02	11675.00	-260.00	630.00	626.33	-269.06	30 59 21.938N	105 55 36.900W	point



Devon Energy

Location: Eddy County, NM
Field: Section 31 T22S R26E
Facility: Hackberry 31 State
Slot: #1_SHL
Well: Hackberry 31 State #2
Wellbore: #1 PWB



Well Profile Data

Design/Comment	MD (ft)	Inc (")	As (")	TV2 (ft)	Local N (ft)	Local E (ft)	DLS (ft/100ft)	VS (ft)
Tie On	0.00	0.000	112.426	0.00	0.00	0.00	0.00	0.00
KOP	5300.00	0.000	112.426	5300.00	0.00	0.00	0.00	0.00
EOB	6954.47	16.36	112.426	6945.61	-35.41	65.50	2.50	52.97
EOH/Start Drop	8423.98	15.32	112.426	8423.98	-200.98	487.01	0.00	526.65
EOD	9586.02	0.000	112.426	9500.00	-260.00	630.00	1.50	881.54
#1 PBHL	11761.02	0.000	112.426	11675.00	-260.00	630.00	0.00	881.54

Plot reference wellpath is Plan #1

True vertical depths are referenced to Rig on #1_SHL (RT)	Grid System: NAD27 / TM New Mexico State Plane, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on #1_SHL (RT)	North Reference: True north
Rig on #1_SHL (RT) to Mean Sea Level: 0 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - Hackberry 31 State): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gomes on 11/22/2006

