

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
[B] ☐ Offset Operators, Leaseholders or Surface Owner
[C] ☐ Application is One Which Requires Published Legal Notice
[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate and complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name

Signature

Title

Date

e-mail Address

devon

Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260

FAX

To: MIKE STOGNER

From: KEN GRAY

Fax: 505-476-3462

Date: 6/22/05

Phone:

Pages: 9 (including cover page)

Re: APACHE 13 FED # 8H

CC:

☐ Urgent☒ For Review☐ Please Comment☐ Please Reply☐ Please Recycle

• Comments:



Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260
Fax 405-552-8113

June 22, 2005

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Michael Stogner

RE: Apache 13 Federal #8H
Section 13-T22S-R30E
Eddy County, New Mexico

Gentlemen:

Devon Energy Production Company, L.P. ("Devon"), as Operator, intends to drill the referenced horizontal Delaware well to a total vertical depth of 6,780' with a total measured depth of 10,010'. As reflected on the attached C-102, the well has been permitted at a surface location of 330' FEL and 2,530' FNL with a permitted bottom hole location of 1,650' FNL and 1650' FWL of Section 13. The initial portion of the open hole (and potentially productive) horizontal section of the well will be located 821' FEL and 2,400' FNL which is an unorthodox location.

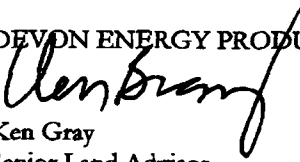
Inasmuch as the initial portion of the open hole horizontal section of the referenced well is located at an unorthodox location from that permitted by the Statewide Pool Rules, Devon respectfully requests that the Commission administratively approve this application for an unorthodox location in accordance with Division Rule 104(F)(3). This unorthodox location affects the leasehold owner in Unit letters G, H, I & J. Devon is the owner of 100% Record Title of Federal Lease NM 89051 which covers Unit letters G, H, I & J, among other lands. Therefore, no additional notification of this application should be required as this unorthodox location will affect Devon leasehold only.

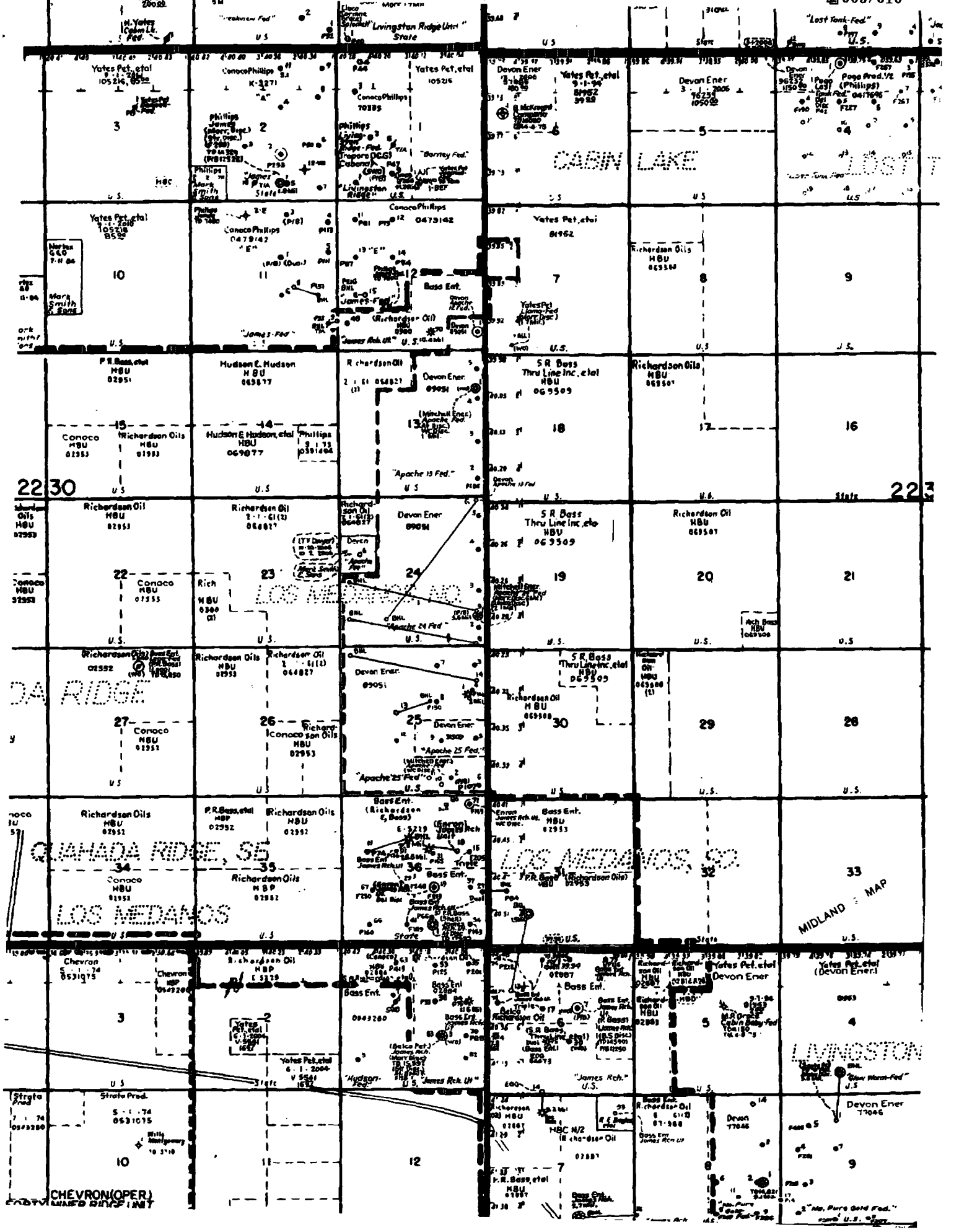
Attached for your review you will find a land plat reflecting Devon as the only affected party, a structure map covering the Lower Brushy Canyon, a State of New Mexico form C-102, and a Well Profile Planning Report prepared by Pathfinder Energy Services..

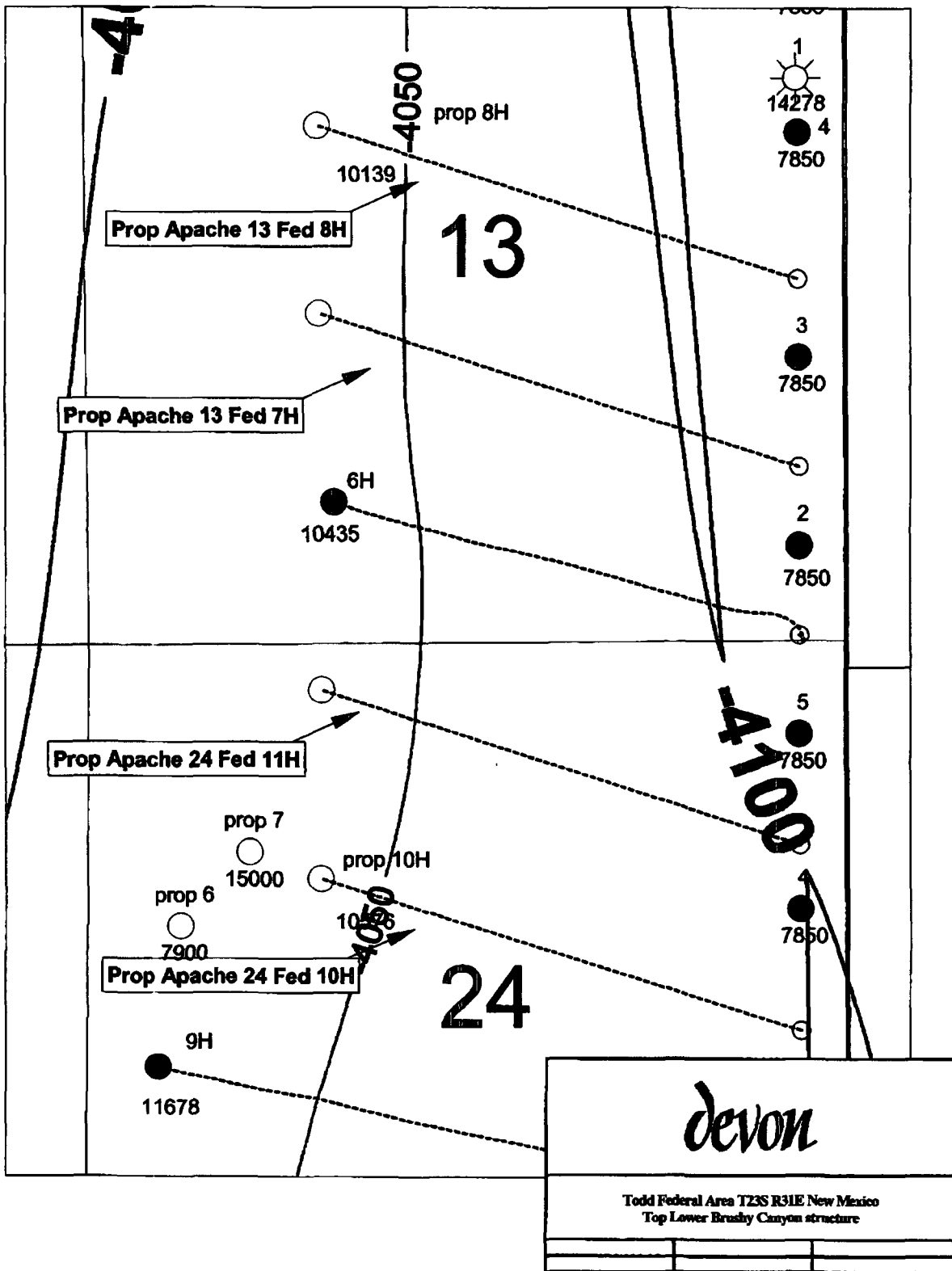
Feel free to contact the undersigned at (405) 552-4633 if there are any concerns or questions regarding this application.

Yours very truly,

DEVON ENERGY PRODUCTION COMPANY, L.P.


Ken Gray
Senior Land Advisor
KG\Apache 13-8 UL
Enclosure





DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised March 17, 1999

DISTRICT II

811 South First, Artesia, NM 88210

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

2040 South Pacheco

DISTRICT IV

2040 South Pacheco, Santa Fe, NM 87505

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Quahada Ridge SE (Delaware)
Property Code	Property Name	Well Number
	APACHE "13" FEDERAL	8
OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION CO., L.P.	3347'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	13	22 S	30 E		2530	NORTH	330	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
F	13	22 S	30 E		1650	NORTH	1650	WEST	EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
120									

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. Signature Norvella Adams Printed Name Sr. Staff Eng. Tech. Title March 30, 2005 Date
	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 8, 2005 Date Surveyed
	Lot - N32°23'32.8" Long - W103°49'35.9"



Company: Apache Energy Field: Apache - Section 22, T22-S, R30-E Site: Apache 13 Federal #8H Well: Apache 13 Federal #8H Wellpath: Original Hole	Date: 6/10/2005 Coordinate(NE) Reference: Site Apache 13 Federal #8H, True North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well 03 DMS 101E-284.93 km Plan: Plan #3 081005
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Field: Apache - Section 13, T22-S, R30-E Eddy County, New Mexico	Map System: US State Plane Coordinate System 1927 Geo Datum: NAD27 (Clarke 1866) Sys Datum: Mean Sea Level
Map Zone: New Mexico, Eastern Zone Coordinate System: Site Centre Geomagnetic Model: Igrf2005	

Site: Apache 13 Federal #8H	
Eddy County, New Mexico	
Site Position: From: Geographic Position Uncertainty: Ground Level:	Northing: 506571.20 ft Easting: 656555.62 ft 0.00 ft 3347.00 ft
	Latitude: 32 23 29.970 N Longitude: 103 49 34.110 W North Reference: True Grid Convergence: 0.27 deg

Well: Apache 13 Federal #8H	Slot Name:
Well Position: +N/-S 0.00 ft Northing: 506571.20 ft +E/-W 0.00 ft Easting : 656555.62 ft	Latitude: 32 23 29.970 N Longitude: 103 49 34.110 W
Position Uncertainty: 0.00 ft	

Wellpath: Original Hole	Drilled From: Surface
Current Datum: SITE Height 0.00 ft	Tie-on Depth: 0.00 ft
Magnetic Data: 6/10/2005	Above System Datum: Mean Sea Level
Field Strength: 49330 nT	Declination: 8.42 deg
Vertical Section: Depth From (TVD) +N/-S ft	Mag Dip Angle: 60.45 deg +E/-W Direction ft deg
6780.00 0.00	0.00 284.93

Plan: Plan #3 081005	Date Composed: 6/10/2005
Principal: No	Version: 1 Tied-to: From Surface

MD	Dip	Angle	TVD	+N/-S	+E/-W	DLS	Built	Turn	TFO	Target
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6322.50	0.00	0.00	6322.50	0.00	0.00	0.00	0.00	0.00	0.00	
7072.56	90.00	284.93	6800.00	123.02	-461.38	12.00	12.00	0.00	284.93	
7085.59	90.39	284.93	6799.96	126.38	-473.97	3.00	3.00	0.01	0.24	
10010.44	90.39	284.93	6780.00	880.00	-3300.00	0.00	0.00	0.00	0.00	Apache 13-8 PBHL

MD	Dip	Angle	TVD	+N/-S	+E/-W	YS	DLS	Built	Turn	True/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1400										



PathFinder Planning Report

Company: Devon Energy	Date: 6/10/2005	Time: 14:26:47	Page: 2
Asset: Section 13, T22S, R38E	Co. and Map (N): Federal	Site: Section 13 Federal 1001 Five North	
Survey: Aerial 1994	Vertical (VD): 12/4/2004	SLIC: 8.0	
Segment: Section 13	Section (N): Reference	Well (G): 0040, 005, 284, 006, 007	
Wellpath: 010001100	Plan:	Plan: 81-081505	

Survey

Start E	End E	Start N	End N	Start W	End W	Start S	End S	Start E	End E
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	0.00
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	0.00
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00	0.00
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	0.00
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	0.00
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	0.00
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	0.00
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	0.00
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	0.00
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	0.00
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	0.00
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	0.00	0.00
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	0.00
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	0.00
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	0.00	0.00
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	0.00	0.00
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	0.00
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	0.00	0.00
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00	0.00
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00	0.00
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	0.00	0.00
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	0.00
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00	0.00
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00	0.00
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	0.00	0.00
4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	0.00
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	0.00	0.00
4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00
4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	0.00	0.00
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00	0.00
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	0.00	0.00
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	0.00
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	0.00	0.00
5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	0.00	0.00
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	0.00
5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	0.00	0.00
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	0.00	0.00
5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	0.00	0.00
5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	0.00	0.00
6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	0.00	0.00
6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	0.00	0.00
6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	0.00	0.00	0.00
6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	0.00	0.00	0.00
6322.50	0.00	0.00	6322.50	0.00	0.00	0.00	0.00	0.00	0.00
6325.00	0.30	284.93	6325.00	0.00	-0.01	0.01	12.00	12.00	0.00
6350.00	3.30	284.93	6349.98	0.20	-0.76	0.79	12.00	12.00	0.00
6375.00	6.30	284.93	6374.89	0.74	-2.79	2.88	12.00	12.00	0.00
6400.00	9.30	284.93	6399.66	1.62	-6.06	6.28	12.00	12.00	0.00
6425.00	12.30	284.93	6424.21	2.82	-10.59	10.96	12.00	12.00	0.00

KOP w/12" Build Rates



PathFinder Planning Report

[illegible]



PathFinder Planning Report

Company: Devon Energy	Date: 6/10/2005	Time: 10:05:37	Page: 2/2
Plan: Apache - Section 13, T25S, R30E	Current (P) Reference: Spt. Apache 13 Federal BHL True North		
Site: Apache 13 Federal BHL	Vertical (V) Reference: SPT 2.0		
Well: Apache 13 Federal BHL	Section (VS) Reference: Well 02.00N 0.00E 284.8022		
Wellbore: Original Hole	Plan: 53.081005		

Survey

Sta ft	Incl deg	Area deg	EVD ft	NE-S ft	EW-W ft	VS ft	OLS deg/100ft	Total deg/100ft	Turn deg/100ft	100' Comment
9700.00	90.39	284.93	6782.12	800.01	-3000.05	3104.88	0.00	0.00	0.00	
9800.00	90.39	284.93	6781.44	825.78	-3096.67	3204.88	0.00	0.00	0.00	
9900.00	90.39	284.93	6780.75	851.54	-3193.29	3304.88	0.00	0.00	0.00	
10000.00	90.39	284.93	6780.07	877.31	-3289.91	3404.88	0.00	0.00	0.00	
10010.44	90.39	284.93	6780.00	880.00	-3300.00	3415.32	0.00	0.00	0.00	Apache 13-8 PBHL

Targets

Name	Description	Sta ft	NE-S ft	EW-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
Apache 13-8 PBHL		6780.00	880.00	-3300.00	507435.54	653251.48	32 23 38.877 N	103 50 12.598 W

Annotation

Sta ft	EVD ft	Description
6322.50	6322.50	KOP w/12" Build Rates
7072.56	6800.00	End of Curve @ 90° Inclination
7085.59	6799.96	End of Build @ 90.39° Inclination

PATHFINDER ENERGY SERVICES

COMPANY DETAILS

Devon Energy, 1800
Reliance City, OK 73102
Calculation Method: Williams Chart
Error System: Elevation Ellipse
Base Method: Chord of Curves 3D
Base Unit: Feet
Warning Method: True Radius

Devon Energy Apache '13' Federal #8H Section 13, T22-S, R30-E Eddy County, New Mexico Plan #3 - 061005

NO FINISH
Apache '13' Federal #8H
Eddy County, New Mexico
Net Curve Length: 1847.99 ft
Curve Length: 1847.99 ft
Ground Level: 5461.00
Permitted: 0.00
Cross section: 0.27

ANNOTATIONS

No. LVD MID Asymptote
1 6322.50 6322.50 EOP=12' Total Base
2 7072.56 7072.56 End of Curve=30' Intersection
3 6799.96 6799.96 End of Build @ 90.37' Intersection

WELL DETAILS

Well:
Apache '13' Federal #8H
+N-S 0.00 0.00 0.00 65655.62 37°13'29.978N 103°47'24.110W N/A

SECTION DETAILS

Sec	MD	Inc	Asl	TVD	+N-S	+E-W	DL-9	TP-90	VSS	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6322.50	0.00	0.00	6322.50	0.00	0.00	0.00	0.00	0.00	
3	7072.56	90.00	284.93	6880.00	123.02	-461.38	12.00	284.93	477.50	
4	7072.56	90.00	284.93	6799.96	126.38	-472.97	3.00	0.24	490.53	
5	10014.44	90.37	284.93	6799.96	180.00	-530.00	0.00	0.00	3413.32	Apache 13-R PBHL

FIELD DETAILS

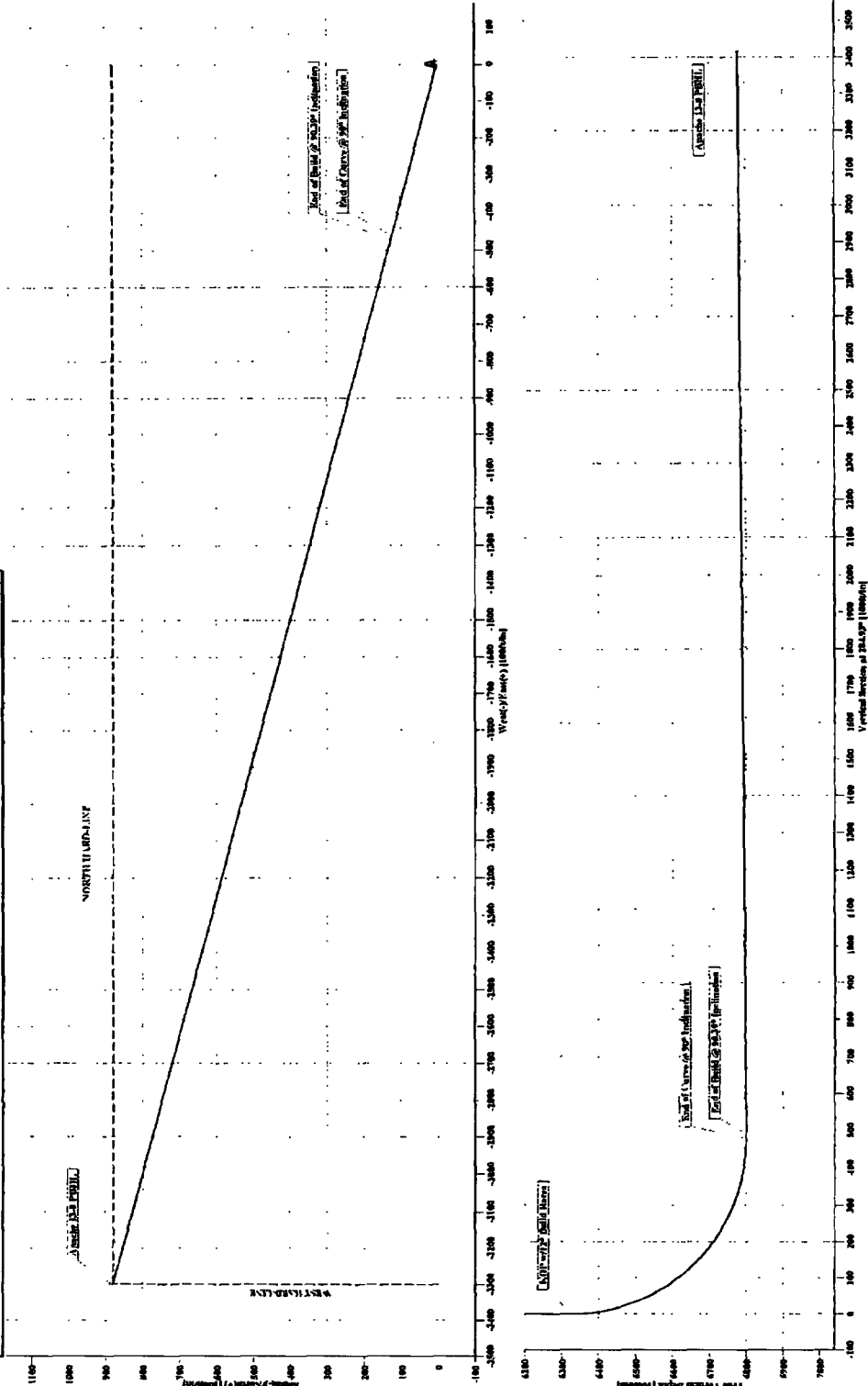
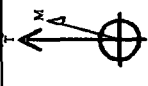
Apache - Section 13, T22-S, R30-E
Eddy County, New Mexico
Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGR2000
System Datum: Mean Sea Level
Local North: True North

TARGET DETAILS

Name: Apache 13-R PBHL
TYD: 6799.00
+N-S: 180.00
+E-W: -530.00
Shape: Point

LEGEND
Plan #3 of 1003

Asymptote to True North
Magnetic North: 3.42°
Magnetic Field
Success: 403.00 ft
Dip Angle: 66.43°
Date: 6/10/2005
Model: IGR2000



The well path shown is a theoretical calculation.
It is not a physical well.



Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260
Fax 405-552-8113

June 22, 2005

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Michael Stogner

RE: Apache 13 Federal #8H
Section 13-T22S-R30E
Eddy County, New Mexico

RECEIVED

JUN 29 2005

OIL CONSERVATION
DIVISION

Gentlemen:

Devon Energy Production Company, L.P. ("Devon"), as Operator, intends to drill the referenced horizontal Delaware well to a total vertical depth of 6,780' with a total measured depth of 10,010'. As reflected on the attached C-102, the well has been permitted at a surface location of 330' FEL and 2,530' FNL with a permitted bottom hole location of 1,650' FNL and 1650' FWL of Section 13. The initial portion of the open hole (and potentially productive) horizontal section of the well will be located 821' FEL and 2,400' FNL which is an unorthodox location.

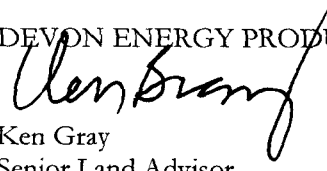
Inasmuch as the initial portion of the open hole horizontal section of the referenced well is located at an unorthodox location from that permitted by the Statewide Pool Rules, Devon respectfully requests that the Commission administratively approve this application for an unorthodox location in accordance with Division Rule 104(F)(3). This unorthodox location affects the leasehold owner in Unit letters G, H, I & J. Devon is the owner of 100% Record Title of Federal Lease NM 89051 which covers Unit letters G, H, I & J, among other lands. Therefore, no additional notification of this application should be required as this unorthodox location will affect Devon leasehold only.

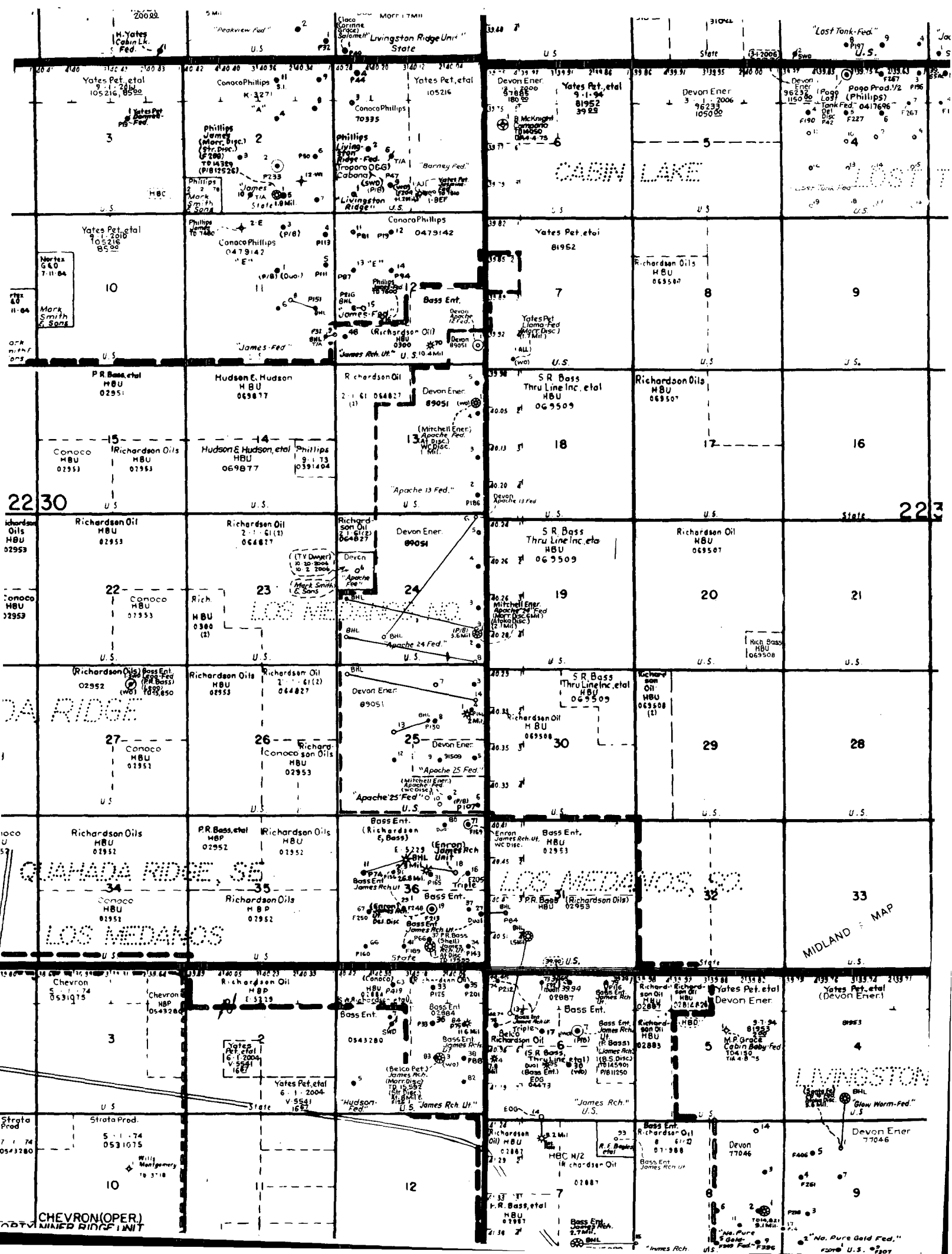
Attached for your review you will find a land plat reflecting Devon as the only affected party, a structure map covering the Lower Brushy Canyon, a State of New Mexico form C-102, and a Well Profile Planning Report prepared by Pathfinder Energy Services..

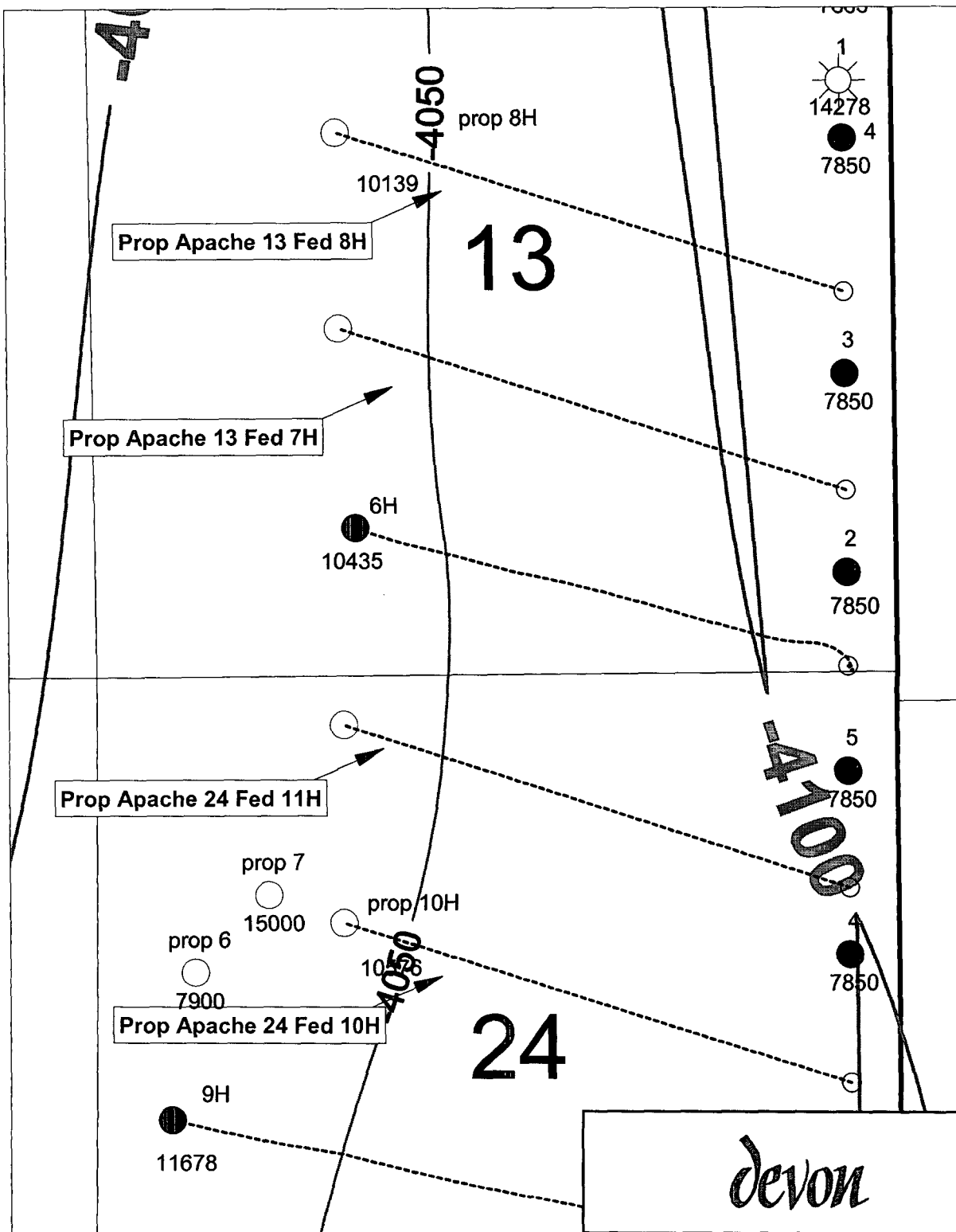
Feel free to contact the undersigned at (405) 552-4633 if there are any concerns or questions regarding this application.

Yours very truly,

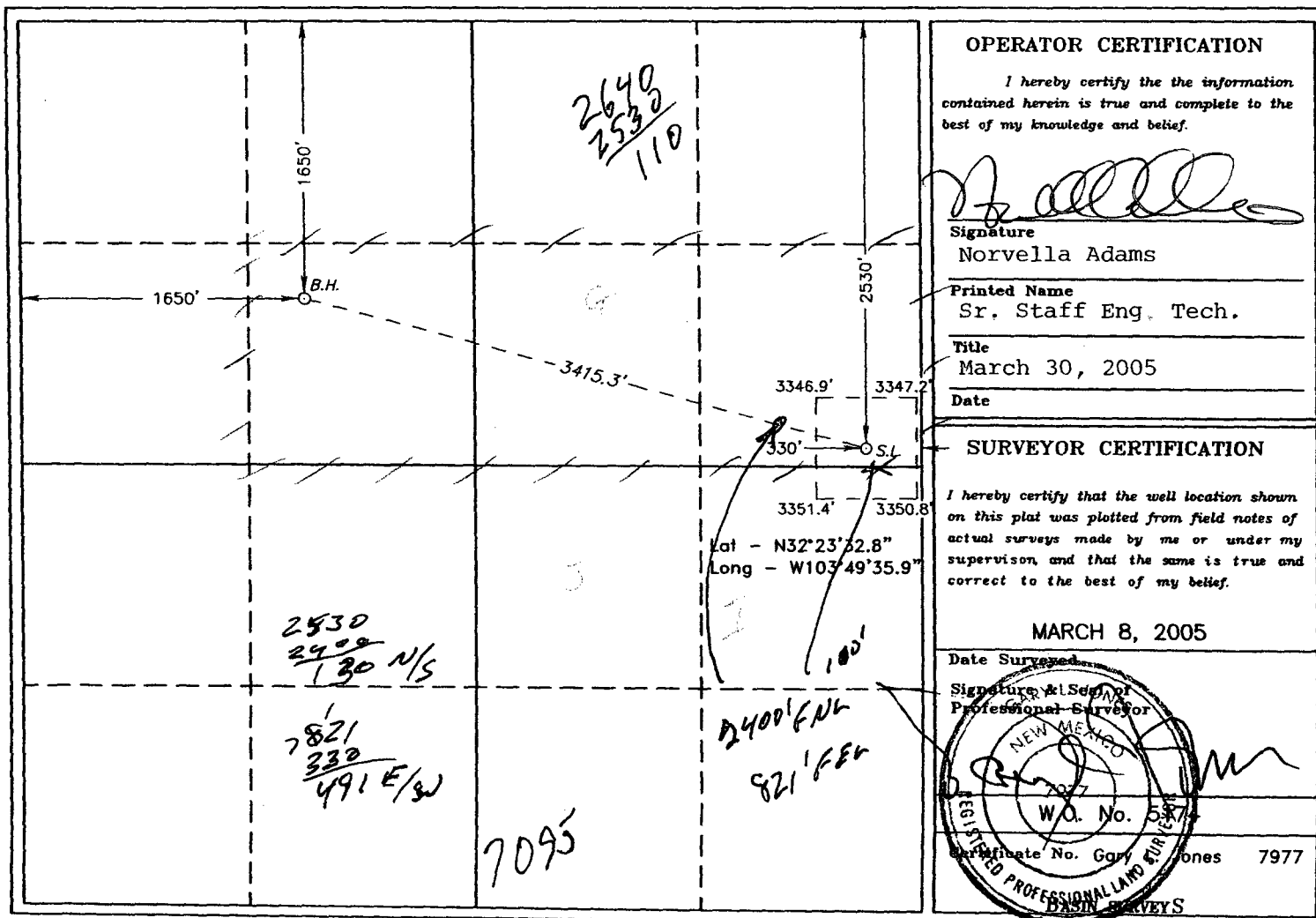
DEVON ENERGY PRODUCTION COMPANY, L.P.


Ken Gray
Senior Land Advisor
KG\Apache 13-8 UL
Enclosure





Todd Federal Area T23S R31E New Mexico
Top Lower Brushy Canyon structure





PathFinder Planning Report

Company: Devon Energy		Date: 6/10/2005		Time: 14:35:47		Page: 1	
Field: Apache - Section 13, T22-S, R30-E		Co-ordinate(NE) Reference: Site: Apache 13 Federal #8H, True North					
Site: Apache 13 Federal #8H		Vertical (TVD) Reference: SITE 0.0					
Well: Apache 13 Federal #8H		Section (VS) Reference: Well (0.00N,0.00E,284.93Azi)					
Wellpath: Original Hole		Plan: Plan #3 061005					

Field: Apache - Section 13, T22-S, R30-E Eddy County, New Mexico		Map System: US State Plane Coordinate System 1927		Map Zone: New Mexico, Eastern Zone	
Geo Datum: NAD27 (Clarke 1866)		Coordinate System: Site Centre		Geomagnetic Model: igrf2005	
Sys Datum: Mean Sea Level					

Site: Apache 13 Federal #8H Eddy County, New Mexico					
Site Position:	Northing: 506571.20 ft	Latitude:	32	23	29.970 N
From: Geographic	Easting: 656555.62 ft	Longitude:	103	49	34.110 W
Position Uncertainty: 0.00 ft		North Reference:	True		
Ground Level: 3347.00 ft		Grid Convergence:	0.27 deg		

Well: Apache 13 Federal #8H		Slot Name:			
Well Position:	+N/-S 0.00 ft	Northing: 506571.20 ft	Latitude:	32	23 29.970 N
+E/-W 0.00 ft	Easting : 656555.62 ft	Longitude:	103	49	34.110 W
Position Uncertainty: 0.00 ft					

Wellpath: Original Hole		Drilled From: Surface			
		Tie-on Depth: 0.00 ft			
Current Datum: SITE	Height 0.00 ft	Above System Datum: Mean Sea Level			
Magnetic Data: 6/10/2005		Declination: 8.42 deg			
Field Strength: 49330 nT		Mag Dip Angle: 60.45 deg			
Vertical Section: Depth From (TVD)	+N/-S	+E/-W	Direction		
ft	ft	ft	deg		
6780.00	0.00	0.00	284.93		

Plan: Plan #3 061005		Date Composed: 6/10/2005			
		Version: 1			
Principal: No		Tied-to: From Surface			

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6322.50	0.00	0.00	6322.50	0.00	0.00	0.00	0.00	0.00	0.00	
7072.56	90.00	284.93	6800.00	123.02	-461.38	12.00	12.00	0.00	284.93	
7085.59	90.39	284.93	6799.96	126.38	-473.97	3.00	3.00	0.01	0.24	
10010.44	90.39	284.93	6780.00	880.00	-3300.00	0.00	0.00	0.00	0.00	Apache 13-8 PBHL

Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	0.00	1200.00	0.00						

PathFinder

Planning Report

Company: Devon Energy
 Field: Apache - Section 13, T22-S, R30-E
 Site: Apache 13 Federal #8H
 Well: Apache 13 Federal #8H
 Wellpath: Original Hole

Date: 6/10/2005 Time: 14:35:47 Page: 2
 Co-ordinate(NE) Reference: Site: Apache 13 Federal #8H, True North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,284.93Azi)
 Plan: Plan #3 061005

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	0.00	0.00	
4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	
4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	0.00	0.00	
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	0.00	0.00	
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	0.00	0.00	
5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	0.00	0.00	
5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	0.00	0.00	
6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	0.00	0.00	
6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	0.00	0.00	0.00	
6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	0.00	0.00	0.00	
6322.50	0.00	0.00	6322.50	0.00	0.00	0.00	0.00	0.00	0.00	KOP w/12° Build Rates
6325.00	0.30	284.93	6325.00	0.00	-0.01	0.01	12.00	12.00	0.00	
6350.00	3.30	284.93	6349.98	0.20	-0.76	0.79	12.00	12.00	0.00	
6375.00	6.30	284.93	6374.89	0.74	-2.79	2.88	12.00	12.00	0.00	
6400.00	9.30	284.93	6399.66	1.62	-6.06	6.28	12.00	12.00	0.00	
6425.00	12.30	284.93	6424.21	2.82	-10.59	10.96	12.00	12.00	0.00	

PathFinder

Planning Report

Company: Devon Energy
 Field: Apache - Section 13, T22-S, R30-E
 Site: Apache 13 Federal #8H
 Well: Apache 13 Federal #8H
 Wellpath: Original Hole

Date: 6/10/2005 Time: 14:35:47 Page: 3
 Co-ordinate(NE) Reference: Site, Apache 13 Federal #8H, True North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,284.93Azi)
 Plan: Plan #3 061005

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6450.00	15.30	284.93	6448.49	4.36	-16.35	16.92	12.00	12.00	0.00	
6475.00	18.30	284.93	6472.42	6.22	-23.33	24.15	12.00	12.00	0.00	
6500.00	21.30	284.93	6495.94	8.40	-31.51	32.61	12.00	12.00	0.00	
6525.00	24.30	284.93	6518.98	10.90	-40.87	42.30	12.00	12.00	0.00	
6550.00	27.30	284.93	6541.49	13.70	-51.38	53.18	12.00	12.00	0.00	
6575.00	30.30	284.93	6563.40	16.80	-63.02	65.22	12.00	12.00	0.00	
6600.00	33.30	284.93	6584.64	20.20	-75.74	78.39	12.00	12.00	0.00	
6625.00	36.30	284.93	6605.17	23.87	-89.53	92.66	12.00	12.00	0.00	
6650.00	39.30	284.93	6624.92	27.82	-104.33	107.98	12.00	12.00	0.00	
6675.00	42.30	284.93	6643.84	32.03	-120.11	124.31	12.00	12.00	0.00	
6700.00	45.30	284.93	6661.89	36.48	-136.83	141.61	12.00	12.00	0.00	
6725.00	48.30	284.93	6679.00	41.18	-154.43	159.83	12.00	12.00	0.00	
6750.00	51.30	284.93	6695.14	46.10	-172.88	178.92	12.00	12.00	0.00	
6775.00	54.30	284.93	6710.25	51.23	-192.12	198.83	12.00	12.00	0.00	
6800.00	57.30	284.93	6724.30	56.55	-212.10	219.51	12.00	12.00	0.00	
6825.00	60.30	284.93	6737.25	62.06	-232.75	240.89	12.00	12.00	0.00	
6850.00	63.30	284.93	6749.07	67.74	-254.04	262.92	12.00	12.00	0.00	
6875.00	66.30	284.93	6759.71	73.56	-275.89	285.53	12.00	12.00	0.00	
6900.00	69.29	284.93	6769.16	79.53	-298.26	308.68	12.00	12.00	0.00	
6925.00	72.29	284.93	6777.38	85.61	-321.06	332.28	12.00	12.00	0.00	
6950.00	75.29	284.93	6784.36	91.79	-344.26	356.29	12.00	12.00	0.00	
6975.00	78.29	284.93	6790.07	98.06	-367.77	380.62	12.00	12.00	0.00	
7000.00	81.29	284.93	6794.50	104.40	-391.54	405.22	12.00	12.00	0.00	
7025.00	84.29	284.93	6797.63	110.79	-415.51	430.02	12.00	12.00	0.00	
7050.00	87.29	284.93	6799.47	117.21	-439.59	454.95	12.00	12.00	0.00	
7072.56	90.00	284.93	6800.00	123.02	-461.38	477.50	12.00	12.00	0.00	End of Curve @ 90° Incln
7085.59	90.39	284.93	6799.96	126.38	-473.97	490.53	3.00	3.00	0.01	End of Build @ 90.39° Inc
7100.00	90.39	284.93	6799.86	130.09	-487.90	504.94	0.00	0.00	0.00	15' PERF
7200.00	90.39	284.93	6799.17	155.86	-584.52	604.94	0.00	0.00	0.00	2400' FNL + 821' FEL
7300.00	90.39	284.93	6798.49	181.63	-681.14	704.94	0.00	0.00	0.00	
7400.00	90.39	284.93	6797.81	207.39	-777.76	804.94	0.00	0.00	0.00	
7500.00	90.39	284.93	6797.13	233.16	-874.38	904.94	0.00	0.00	0.00	
7600.00	90.39	284.93	6796.45	258.92	-971.00	1004.93	0.00	0.00	0.00	
7700.00	90.39	284.93	6795.76	284.69	-1067.62	1104.93	0.00	0.00	0.00	
7800.00	90.39	284.93	6795.08	310.46	-1164.25	1204.93	0.00	0.00	0.00	
7900.00	90.39	284.93	6794.40	336.22	-1260.87	1304.93	0.00	0.00	0.00	
8000.00	90.39	284.93	6793.72	361.99	-1357.49	1404.92	0.00	0.00	0.00	
8100.00	90.39	284.93	6793.03	387.75	-1454.11	1504.92	0.00	0.00	0.00	
8200.00	90.39	284.93	6792.35	413.52	-1550.73	1604.92	0.00	0.00	0.00	
8300.00	90.39	284.93	6791.67	439.29	-1647.35	1704.92	0.00	0.00	0.00	
8400.00	90.39	284.93	6790.99	465.05	-1743.97	1804.91	0.00	0.00	0.00	
8500.00	90.39	284.93	6790.31	490.82	-1840.59	1904.91	0.00	0.00	0.00	
8600.00	90.39	284.93	6789.62	516.58	-1937.22	2004.91	0.00	0.00	0.00	
8700.00	90.39	284.93	6788.94	542.35	-2033.84	2104.91	0.00	0.00	0.00	
8800.00	90.39	284.93	6788.26	568.12	-2130.46	2204.90	0.00	0.00	0.00	
8900.00	90.39	284.93	6787.58	593.88	-2227.08	2304.90	0.00	0.00	0.00	
9000.00	90.39	284.93	6786.89	619.65	-2323.70	2404.90	0.00	0.00	0.00	
9100.00	90.39	284.93	6786.21	645.41	-2420.32	2504.90	0.00	0.00	0.00	
9200.00	90.39	284.93	6785.53	671.18	-2516.94	2604.90	0.00	0.00	0.00	
9300.00	90.39	284.93	6784.85	696.95	-2613.56	2704.89	0.00	0.00	0.00	
9400.00	90.39	284.93	6784.16	722.71	-2710.18	2804.89	0.00	0.00	0.00	
9500.00	90.39	284.93	6783.48	748.48	-2806.81	2904.89	0.00	0.00	0.00	
9600.00	90.39	284.93	6782.80	774.25	-2903.43	3004.89	0.00	0.00	0.00	

PathFinder

Planning Report

Company: Devon Energy	Date: 6/10/2005	Time: 14:35:47	Page: 4
Field: Apache - Section 13, T22-S, R30-E	Co-ordinate(NE) Reference: Site: Apache 13 Federal #8H, True North		
Site: Apache 13 Federal #8H	Vertical (TVD) Reference: SITE 0.0		
Well: Apache 13 Federal #8H	Section (VS) Reference: Well (0.00N,0.00E,284.93Azi)		
Wellpath: Original Hole	Plan: Plan #3 061005		

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
9700.00	90.39	284.93	6782.12	800.01	-3000.05	3104.88	0.00	0.00	0.00	
9800.00	90.39	284.93	6781.44	825.78	-3096.67	3204.88	0.00	0.00	0.00	
9900.00	90.39	284.93	6780.75	851.54	-3193.29	3304.88	0.00	0.00	0.00	
10000.00	90.39	284.93	6780.07	877.31	-3289.91	3404.88	0.00	0.00	0.00	
10010.44	90.39	284.93	6780.00	880.00	-3300.00	3415.32	0.00	0.00	0.00	Apache 13-8 PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
Apache 13-8 PBHL			6780.00	880.00	-3300.00	507435.54	653251.48	32	23	38.677 N	103	50	12.598 W

Annotation

MD ft	TVD ft	
6322.50	6322.50	KOP w/12° Build Rates
7072.56	6800.00	End of Curve @ 90° Inclination
7085.59	6799.96	End of Build @ 90.39° Inclination

Devon Energy

Apache '13' Federal #8H

Section 13, T22-S, R30-E

Eddy County, New Mexico

Plan #3 - 061005

COMPANY DETAILS
 Devon Energy
 30 N. Broadway, Suite 1500
 Oklahoma City, OK 73102

Calculator Method: Minimum Curvature
 Error Method: Closest Approach (D)
 Warning Method: Error Bars

SITE DETAILS
 Apache 13 Federal #8H
 Eddy County, New Mexico
 Site Curve Latitude: 32°22'29.970N
 Longitude: 103°49'34.110W
 Ground Level: 5147.00
 Positional Uncertainty: 0.00
 Convergence: 0.27

ANNOTATIONS
 No. TVD MD
 1 6322.50 6322.50 KOP w/ 12' Build Rates
 2 6800.00 7072.56 End of Curve @ 90° Inclination
 3 6799.96 7085.59 End of Build @ 90.39° Inclination

WELL DETAILS									
Name	+N/S	+E/W	Northing	Easting	Latitude	Longitude	Slot		
Apache 13 Federal #8H	0.00	0.00	506571.20	636555.62	32°22'29.970N	103°49'34.110W	N/A		

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/S	+E/W	DLag	TFace	VSec Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	6322.50	0.00	0.00	6322.50	0.00	0.00	0.00	0.00	0.00
3	7072.56	90.00	284.93	6800.00	123.02	-461.38	12.00	284.93	477.50
4	7085.59	90.39	284.93	6799.96	126.38	-473.97	3.00	0.24	490.55
5	10010.44	90.39	284.93	6780.00	880.00	-5300.00	0.00	0.00	3415.32

Apache 13.8 PBHL

FIELD DETAILS
 Apache - Section 13, T22-S, R30-E
 Eddy County, New Mexico
 Geodetic System: US State Plane Coordinate System 1927
 Ellipsoid: NAD27 (Clarke 1866)
 Zone: New Mexico Eastern Zone
 Magnetic Model: IGR2005
 System Datum: Mean Sea Level
 Local North: True North

TARGET DETAILS
 Name: Apache 13.8 PBHL
 TVD: 6780.00
 +N/S: 880.00
 +E/W: -5300.00
 Shape: Point

LEGEND
 Plan #3 061005

