

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

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

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒
Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Cimarex Energy Co. of Colorado</u> Telephone: <u>972-401-3111</u> e-mail address: <u>zfarris@cimarex.com</u>		
Address: <u>PO Box 140907; Irving, TX 75014-0907</u>		
Facility or well name <u>Bunker Hill 32 State Com No. 3</u> API #: <u>30-005-28024</u> U/L or Qtr/Qtr <u>I</u> Sec <u>32</u> T <u>15S</u> R <u>31E</u>		
County: <u>Chaves</u> Latitude <u>32° 58' 13.91 N</u> Longitude <u>103° 50' 11.46 W</u> NAD: 1927 ☐ 1983 ☒		
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐		
Pit Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☐ Liner type: Synthetic ☐ Thickness <u> </u> mil Clay ☐ Pit Volume <u> </u> bbl closed system, cuttings hauled	Below-grade tank Volume: <u> </u> bbl Type of fluid: <u> </u> Construction material: <u> </u> Double-walled, with leak detection? Yes ☐ If not, explain why not: <u> </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <u>300'</u>	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) <u>100 feet or more</u> (0 points)	
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) <u>No</u> (0 points)	
Distance to surface water. (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) <u>1000 feet or more</u> (0 points)	
Ranking Score (Total Points)		0

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility: . (3) Attach a general description of remedial action taken including remediation start date and end date (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface ft. and attach sample results.
(5) Attach soil sample results and a diagram of sample locations and excavations

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 05.06.08

Printed Name/Title Zeno Farris - Manager Operations Administration Signature Zeno Farris

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: [Signature] PETROLEUM ENGINEER
Printed Name/Title Signature

Date: MAY 08 2008

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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 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

API Number 3D-005-28024	Pool Code ✓	Pool Name Abo Wildcat
Property Code 37156	Property Name BUNKER HILL "32" STATE COM	Well Number 3
UGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 4412'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	32	15 S	31 E		1980	SOUTH	330	EAST	CHAVES

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
L	32	15 S	31 E		1980	SOUTH	330	WEST	CHAVES
Dedicated Acres 160	Joint or Infill	Consolidation Code P	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

BOTTOM HOLE LOCATION Lot - N32°58'13.95" Long - W103°51'05.30" NMSPC - N 717157.716 E 689115.105 (NAD-83)		SURFACE LOCATION Lot - N32°58'13.91" Long - W103°50'11.46" NMSPC - N 717174.5 E 693701.6 (NAD-83)		OPERATOR CERTIFICATION 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 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. <u>Zeno Farris</u> 05-05-08 Signature Date Zeno Farris Printed Name	
E0-8665-0002		VB-1226-0001		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. APRIL 11, 2008 Date Surveyed <u>GARY L. JONES</u> Signature Professional Surveyor W. H. AND. 1928 Certificate No. Gary L. Jones 7977 BASIN SURVEYS	



Cimarex Energy Co. of Colorado

5215 North O'Connor Blvd. ♦ Suite 1500 ♦ Irving, TX 75039 ♦ (972) 401-3111 ♦ Fax (972) 443-6486
Mailing Address: P.O. Box 140907 ♦ Irving, TX 75014-0907
A subsidiary of Cimarex Energy Co. ♦ A NYSE Listed Company ♦ "XEC"

May 6, 2008

Oil Conservation Division
District I Office
1625 N. French Drive
Hobbs, New Mexico 88240
Attn: Ms. Donna Mull

30-005-28024

Re: Statewide Rule 118
Hydrogen Sulfide Gas Contingency Plan
Proposed Bunker Hill 32 State Com No. 3 Well

Dear Ms. Mull:

In accordance with NMAC 19.15.3.118 C. (1) governing the determination of the hydrogen sulfide concentration in gaseous mixtures in each of its operations, Cimarex Energy Co. of Colorado does not anticipate that there will be enough H₂S from the surface to the Abo formations to meet the OCD's minimum requirements for the submission of a contingency plan for the drilling and completion of the following test(s):

Bunker Hill 32 State Com No. 3
32-15S-31E
SHL 1980' FSL & 330' FEL
BHL 1980' FSL & 330' FWL
Chaves County, NM

If anything further is needed regarding this issue, or if you have any questions, please feel free to contact the undersigned at 972-443-6489.

Yours truly,

Zeno Farris
Manager Operations Administration



Planned Wellpath Report

Preliminary
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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Bunker) Section 32, T15S, R31E	Wellbore	No. 3H PWB
Facility	Bunker Hill 32 ST COM No. 3H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999936	Report Generated	4/24/2008 at 10:01:41 AM
Convergence at slot	0.27° East	Database/Source file	WA_Midland/No. 3H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	693701.60	717174.50	32°58'13.913"N	103°50'11.456"W
Facility Reference Pt			693701.60	717174.50	32°58'13.913"N	103°50'11.456"W
Field Reference Pt			689064.10	718476.10	32°58'27.005"N	103°51'05.822"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 3H SHL (RT) to Facility Vertical Datum	18.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 3H SHL (RT) to Mean Sea Level	4430.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.79°





Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

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Field	(Bunker) Section 32, T15S, R31E	Wellbore	No. 3H PWB
Facility	Bunker Hill 32 ST COM No. 3H		

WELLPATH DATA (55 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	269.790	0.00	0.00	0.00	0.00	0.00	Tie On
2312.00†	0.000	269.790	2312.00	0.00	0.00	0.00	0.00	YATES
3090.00†	0.000	269.790	3090.00	0.00	0.00	0.00	0.00	QUEEN
3940.00†	0.000	269.790	3940.00	0.00	0.00	0.00	0.00	SAN ANDRES
7340.00†	0.000	269.790	7340.00	0.00	0.00	0.00	0.00	ABO SHALE
8395.00	0.000	269.790	8395.00	0.00	0.00	0.00	0.00	KOP
8495.00†	30.000	269.790	8490.49	25.59	-0.09	-25.59	30.00	
8595.00†	60.000	269.790	8560.40	95.49	-0.35	-95.49	30.00	
8675.59†	84.176	269.790	8585.00	171.60	-0.63	-171.60	30.00	LOWER ABO DOLOMITE
8694.52†	89.856	269.790	8585.99	190.51	-0.70	-190.51	30.00	EOC
8695.00†	89.856	269.790	8585.99	190.99	-0.70	-190.98	0.00	
8795.00†	89.856	269.790	8586.24	290.99	-1.06	-290.98	0.00	
8895.00†	89.856	269.790	8586.49	390.99	-1.43	-390.98	0.00	
8995.00†	89.856	269.790	8586.74	490.98	-1.80	-490.98	0.00	
9095.00†	89.856	269.790	8586.99	590.98	-2.16	-590.98	0.00	
9195.00†	89.856	269.790	8587.24	690.98	-2.53	-690.98	0.00	
9295.00†	89.856	269.790	8587.49	790.98	-2.89	-790.98	0.00	
9395.00†	89.856	269.790	8587.74	890.98	-3.26	-890.98	0.00	
9495.00†	89.856	269.790	8587.99	990.98	-3.63	-990.98	0.00	
9595.00†	89.856	269.790	8588.24	1090.98	-3.99	-1090.98	0.00	
9695.00†	89.856	269.790	8588.49	1190.98	-4.36	-1190.97	0.00	
9795.00†	89.856	269.790	8588.74	1290.98	-4.72	-1290.97	0.00	
9895.00†	89.856	269.790	8588.99	1390.98	-5.09	-1390.97	0.00	
9995.00†	89.856	269.790	8589.24	1490.98	-5.46	-1490.97	0.00	
10095.00†	89.856	269.790	8589.49	1590.98	-5.82	-1590.97	0.00	
10195.00†	89.856	269.790	8589.74	1690.98	-6.19	-1690.97	0.00	
10295.00†	89.856	269.790	8590.00	1790.98	-6.55	-1790.97	0.00	
10395.00†	89.856	269.790	8590.25	1890.98	-6.92	-1890.97	0.00	
10495.00†	89.856	269.790	8590.50	1990.98	-7.29	-1990.97	0.00	
10595.00†	89.856	269.790	8590.75	2090.98	-7.65	-2090.97	0.00	
10695.00†	89.856	269.790	8591.00	2190.98	-8.02	-2190.96	0.00	
10795.00†	89.856	269.790	8591.25	2290.98	-8.38	-2290.96	0.00	
10895.00†	89.856	269.790	8591.50	2390.98	-8.75	-2390.96	0.00	
10995.00†	89.856	269.790	8591.75	2490.98	-9.12	-2490.96	0.00	
11095.00†	89.856	269.790	8592.00	2590.98	-9.48	-2590.96	0.00	
11195.00†	89.856	269.790	8592.25	2690.98	-9.85	-2690.96	0.00	
11295.00†	89.856	269.790	8592.50	2790.98	-10.21	-2790.96	0.00	
11395.00†	89.856	269.790	8592.75	2890.98	-10.58	-2890.96	0.00	
11495.00†	89.856	269.790	8593.00	2990.98	-10.95	-2990.96	0.00	
11595.00†	89.856	269.790	8593.25	3090.98	-11.31	-3090.96	0.00	
11695.00†	89.856	269.790	8593.50	3190.98	-11.68	-3190.96	0.00	
11795.00†	89.856	269.790	8593.75	3290.98	-12.04	-3290.95	0.00	
11895.00†	89.856	269.790	8594.00	3390.98	-12.41	-3390.95	0.00	
11995.00†	89.856	269.790	8594.25	3490.98	-12.77	-3490.95	0.00	
12095.00†	89.856	269.790	8594.50	3590.98	-13.14	-3590.95	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Bunker) Section 32, T15S, R31E	Wellbore	No. 3H PWB
Facility	Bunker Hill 32 ST COM No. 3H		

WELLPATH DATA (55 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
12195.00†	89.856	269.790	8594.76	3690.97	-13.51	-3690.95	0.00	
12295.00†	89.856	269.790	8595.01	3790.97	-13.87	-3790.95	0.00	
12395.00†	89.856	269.790	8595.26	3890.97	-14.24	-3890.95	0.00	
12495.00†	89.856	269.790	8595.51	3990.97	-14.60	-3990.95	0.00	
12595.00†	89.856	269.790	8595.76	4090.97	-14.97	-4090.95	0.00	
12695.00†	89.856	269.790	8596.01	4190.97	-15.34	-4190.95	0.00	
12795.00†	89.856	269.790	8596.26	4290.97	-15.70	-4290.94	0.00	
12895.00†	89.856	269.790	8596.51	4390.97	-16.07	-4390.94	0.00	
12995.00†	89.856	269.790	8596.76	4490.97	-16.43	-4490.94	0.00	
13090.86	89.856	269.790	8597.00 ¹	4586.83	-16.79	-4586.80	0.00	No. 3H BHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 3H BHL	13090.86	8597.00	-16.79	-4586.80	689115.10	717157.72	32°58'13.957"N	103°51'05.294"W	point

SURVEY PROGRAM Ref Wellbore: No. 3H PWB Ref Wellpath: Preliminary

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	13090.86	NaviTrak (Standard)		No. 3H PWB



Cimarex Energy Co.

Location Chaves County, NM
Field (Bunker) Section 32, T15S, R31E
Facility Bunker Hill 32 ST COM No. 3H

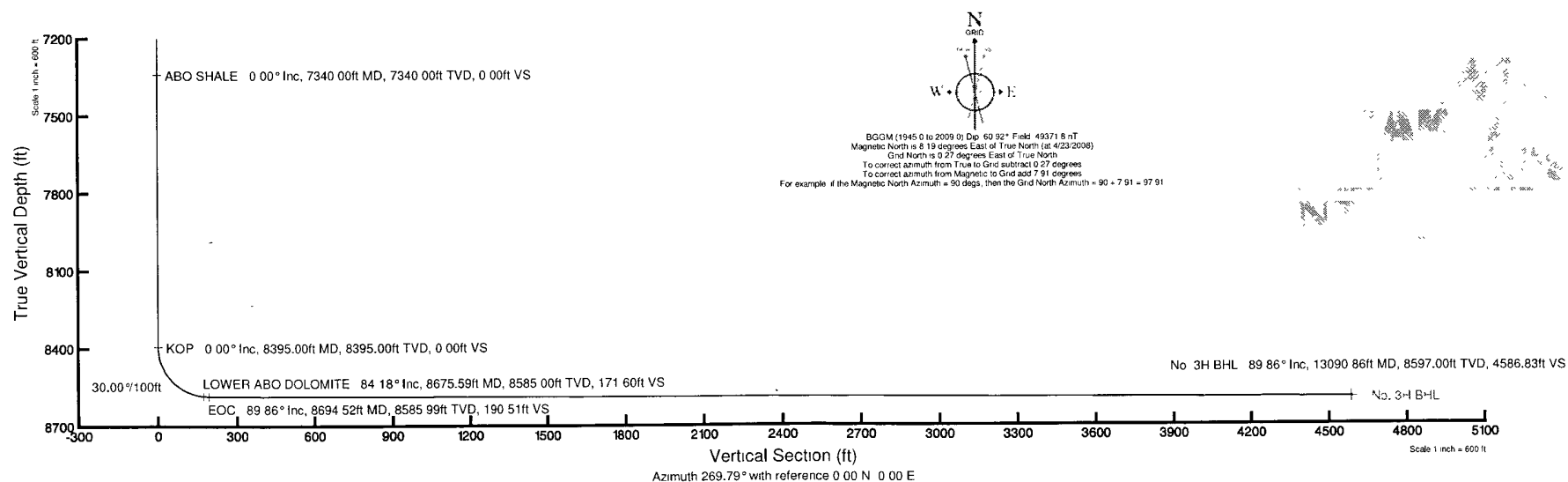
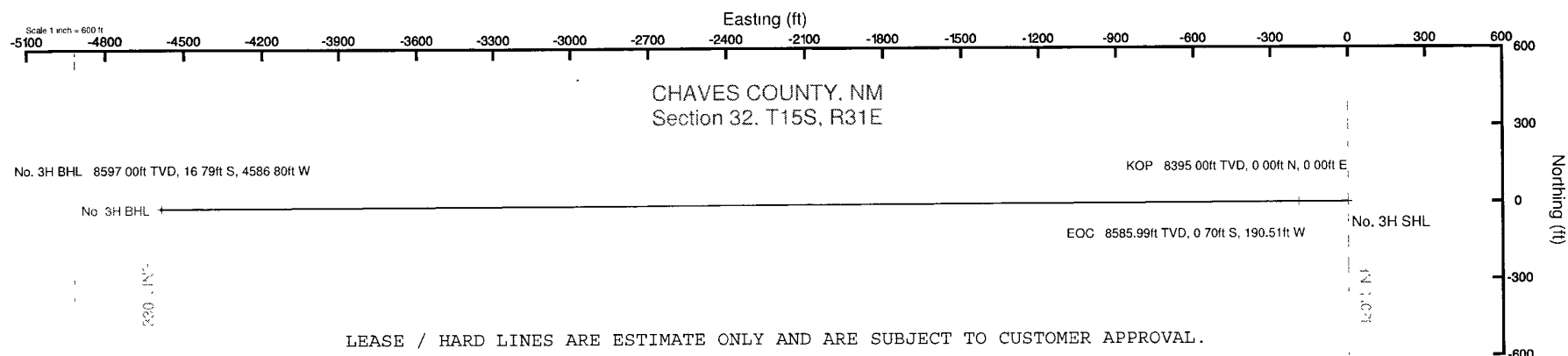
Slot No. 3H SHL
Well No. 3H
Wellbore No. 3H PWB

Notes and Remarks: P. 10/00/00	
True vertical depths are referenced to the top of No. 3H SHL (RT)	Grid System: NAD83 / TM New Mexico State Plane, East Zone (2011) US' 84
Measured depths are referenced to the top of No. 3H SHL (RT)	Northings are Grid North
R 2 on No. 3H SHL (RT) is Mean Sea Level +430 feet	Scale: True Distance
Mean True Level to Mean Sea Level (Bunker Hill 32 ST COM No. 3H) is 4412 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by: Victor Hernandez on 4/23/2008



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	269.790	0.00	0.00	0.00	0.00	0.00
KOP	8395.00	0.000	269.790	8395.00	0.00	0.00	0.00	0.00
EOC	8694.52	89.856	269.790	8585.99	-0.70	-190.51	30.00	190.51
No. 3H BHL	13090.86	89.856	269.790	8597.00	-16.79	-4586.80	0.00	4586.83



PROPOSED WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ
Software System: WellArchitect®2.0

REFERENCE WELLPATH IDENTIFICATION

Operator Cimarex Energy Co.
Area Chaves County, NM
Field (Bunker) Section 32, T15S, R31E
Facility Bunker Hill 32 ST COM No 3
Slot No. 3 SHL
Well No 3
Wellbore No 3 PWB
Wellpath Preliminary
Sidetrack (none)

REPORT SETUP INFORMATION

Projection NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
North Refe Grid
Scale 0.999936
Converger 0.27° East
Software S WellArchitect®
User Victor Hernandez
Report Gen 4/23/2008 at 4:50:39 PM
DataBase/ WA_Midland/ev7273.xml

WELLPAT	Local North	Local East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]		
Slot Location	0	0	693701.6	717174.5	32°58'13.9	103°50'11.456"W
Facility Ref			693701.6	717174.5	32°58'13.9	103°50'11.456"W
Field Refer			689064.1	718476.1	32°58'27.0	103°51'05.822"W

WELLPATH DATUM

Calculator Minimum curvature
Horizontal Facility Center
Vertical Refe Rig on No 3 SHL (RT)
MD Refere Rig on No 3 SHL (RT)
Field Vertical Mean Sea Level
Rig on No 18.00ft
Rig on No 4430.00ft
Facility Vertical 0.00ft
Section Or 0.00ft
Section Or 0.00ft
Section Az 269.79°

WELLPATH DATA	Wellbore: No. 3 PWB	Wellpath: Preliminary	† = interpolated/extrapolated station										
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	DLS	Comments			
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]	[°/100ft]				
0	0	269.79	0	0	0	0	0 693701.6	717174.5	0	Tie On			
† 100	0	269.79	100	0	0	0	0 693701.6	717174.5	0				
† 200	0	269.79	200	0	0	0	0 693701.6	717174.5	0				
† 300	0	269.79	300	0	0	0	0 693701.6	717174.5	0				
† 400	0	269.79	400	0	0	0	0 693701.6	717174.5	0				
† 500	0	269.79	500	0	0	0	0 693701.6	717174.5	0				
† 600	0	269.79	600	0	0	0	0 693701.6	717174.5	0				
† 700	0	269.79	700	0	0	0	0 693701.6	717174.5	0				
† 800	0	269.79	800	0	0	0	0 693701.6	717174.5	0				
† 900	0	269.79	900	0	0	0	0 693701.6	717174.5	0				
† 1000	0	269.79	1000	0	0	0	0 693701.6	717174.5	0				
† 1100	0	269.79	1100	0	0	0	0 693701.6	717174.5	0				
† 1200	0	269.79	1200	0	0	0	0 693701.6	717174.5	0				
† 1300	0	269.79	1300	0	0	0	0 693701.6	717174.5	0				
† 1400	0	269.79	1400	0	0	0	0 693701.6	717174.5	0				
† 1500	0	269.79	1500	0	0	0	0 693701.6	717174.5	0				
† 1600	0	269.79	1600	0	0	0	0 693701.6	717174.5	0				
† 1700	0	269.79	1700	0	0	0	0 693701.6	717174.5	0				
† 1800	0	269.79	1800	0	0	0	0 693701.6	717174.5	0				
† 1900	0	269.79	1900	0	0	0	0 693701.6	717174.5	0				
† 2000	0	269.79	2000	0	0	0	0 693701.6	717174.5	0				
† 2100	0	269.79	2100	0	0	0	0 693701.6	717174.5	0				
† 2200	0	269.79	2200	0	0	0	0 693701.6	717174.5	0				
† 2300	0	269.79	2300	0	0	0	0 693701.6	717174.5	0				
† 2312	0	269.79	2312	0	0	0	0 693701.6	717174.5	0	YATES			

†	2400	0	269.79	2400	0	0	0	693701.6	717174.5	0	
†	2500	0	269.79	2500	0	0	0	693701.6	717174.5	0	
†	2600	0	269.79	2600	0	0	0	693701.6	717174.5	0	
†	2700	0	269.79	2700	0	0	0	693701.6	717174.5	0	
†	2800	0	269.79	2800	0	0	0	693701.6	717174.5	0	
†	2900	0	269.79	2900	0	0	0	693701.6	717174.5	0	
†	3000	0	269.79	3000	0	0	0	693701.6	717174.5	0	
†	3090	0	269.79	3090	0	0	0	693701.6	717174.5	0	QUEEN
†	3100	0	269.79	3100	0	0	0	693701.6	717174.5	0	
†	3200	0	269.79	3200	0	0	0	693701.6	717174.5	0	
†	3300	0	269.79	3300	0	0	0	693701.6	717174.5	0	
†	3400	0	269.79	3400	0	0	0	693701.6	717174.5	0	
†	3500	0	269.79	3500	0	0	0	693701.6	717174.5	0	
†	3600	0	269.79	3600	0	0	0	693701.6	717174.5	0	
†	3700	0	269.79	3700	0	0	0	693701.6	717174.5	0	
†	3800	0	269.79	3800	0	0	0	693701.6	717174.5	0	
†	3900	0	269.79	3900	0	0	0	693701.6	717174.5	0	
†	3940	0	269.79	3940	0	0	0	693701.6	717174.5	0	SAN ANDRES
†	4000	0	269.79	4000	0	0	0	693701.6	717174.5	0	
†	4100	0	269.79	4100	0	0	0	693701.6	717174.5	0	
†	4200	0	269.79	4200	0	0	0	693701.6	717174.5	0	
†	4300	0	269.79	4300	0	0	0	693701.6	717174.5	0	
†	4400	0	269.79	4400	0	0	0	693701.6	717174.5	0	
†	4500	0	269.79	4500	0	0	0	693701.6	717174.5	0	
†	4600	0	269.79	4600	0	0	0	693701.6	717174.5	0	
†	4700	0	269.79	4700	0	0	0	693701.6	717174.5	0	
†	4800	0	269.79	4800	0	0	0	693701.6	717174.5	0	
†	4900	0	269.79	4900	0	0	0	693701.6	717174.5	0	
†	5000	0	269.79	5000	0	0	0	693701.6	717174.5	0	
†	5100	0	269.79	5100	0	0	0	693701.6	717174.5	0	
†	5200	0	269.79	5200	0	0	0	693701.6	717174.5	0	
†	5300	0	269.79	5300	0	0	0	693701.6	717174.5	0	
†	5400	0	269.79	5400	0	0	0	693701.6	717174.5	0	
†	5500	0	269.79	5500	0	0	0	693701.6	717174.5	0	
†	5600	0	269.79	5600	0	0	0	693701.6	717174.5	0	
†	5700	0	269.79	5700	0	0	0	693701.6	717174.5	0	
†	5800	0	269.79	5800	0	0	0	693701.6	717174.5	0	
†	5900	0	269.79	5900	0	0	0	693701.6	717174.5	0	
†	6000	0	269.79	6000	0	0	0	693701.6	717174.5	0	
†	6100	0	269.79	6100	0	0	0	693701.6	717174.5	0	
†	6200	0	269.79	6200	0	0	0	693701.6	717174.5	0	
†	6300	0	269.79	6300	0	0	0	693701.6	717174.5	0	
†	6400	0	269.79	6400	0	0	0	693701.6	717174.5	0	
†	6500	0	269.79	6500	0	0	0	693701.6	717174.5	0	
†	6600	0	269.79	6600	0	0	0	693701.6	717174.5	0	
†	6700	0	269.79	6700	0	0	0	693701.6	717174.5	0	
†	6800	0	269.79	6800	0	0	0	693701.6	717174.5	0	
†	6900	0	269.79	6900	0	0	0	693701.6	717174.5	0	
†	7000	0	269.79	7000	0	0	0	693701.6	717174.5	0	
†	7100	0	269.79	7100	0	0	0	693701.6	717174.5	0	
†	7200	0	269.79	7200	0	0	0	693701.6	717174.5	0	
†	7300	0	269.79	7300	0	0	0	693701.6	717174.5	0	
†	7340	0	269.79	7340	0	0	0	693701.6	717174.5	0	ABO SHALE
†	7400	0	269.79	7400	0	0	0	693701.6	717174.5	0	
†	7500	0	269.79	7500	0	0	0	693701.6	717174.5	0	
†	7600	0	269.79	7600	0	0	0	693701.6	717174.5	0	
†	7700	0	269.79	7700	0	0	0	693701.6	717174.5	0	
†	7800	0	269.79	7800	0	0	0	693701.6	717174.5	0	
†	7900	0	269.79	7900	0	0	0	693701.6	717174.5	0	
†	8000	0	269.79	8000	0	0	0	693701.6	717174.5	0	
†	8100	0	269.79	8100	0	0	0	693701.6	717174.5	0	
†	8200	0	269.79	8200	0	0	0	693701.6	717174.5	0	
†	8300	0	269.79	8300	0	0	0	693701.6	717174.5	0	
†	8395	0	269.79	8395	0	0	0	693701.6	717174.5	0	KOP
†	8400	1.5	269.79	8400	0.07	0	-0.07	693701.5	717174.5	30	
†	8500	31.5	269.79	8494.79	28.14	-0.1	-28.14	693673.5	717174.4	30	
†	8600	61.5	269.79	8562.84	99.86	-0.37	-99.85	693601.8	717174.1	30	
†	8675.59	84.176	269.79	8585	171.6	-0.63	-171.6	693530	717173.9	30	LOWER ABO DOLOMITE
†	8694.52	89.856	269.79	8585.99	190.51	-0.7	-190.51	693511.1	717173.8	30	EOC
†	8700	89.856	269.79	8586	195.99	-0.72	-195.98	693505.6	717173.8	0	
†	8800	89.856	269.79	8586.25	295.99	-1.08	-295.98	693405.6	717173.4	0	
†	8900	89.856	269.79	8586.5	395.99	-1.45	-395.98	693305.6	717173.1	0	
†	9000	89.856	269.79	8586.75	495.98	-1.82	-495.98	693205.7	717172.7	0	

†	9100	89.856	269.79	8587	595.98	-2.18	-595.98	693105.7	717172.3	0
†	9200	89.856	269.79	8587.25	695.98	-2.55	-695.98	693005.7	717172	0
†	9300	89.856	269.79	8587.5	795.98	-2.91	-795.98	692905.7	717171.6	0
†	9400	89.856	269.79	8587.75	895.98	-3.28	-895.98	692805.7	717171.2	0
†	9500	89.856	269.79	8588	995.98	-3.64	-995.98	692705.7	717170.9	0
†	9600	89.856	269.79	8588.25	1095.98	-4.01	-1095.98	692605.7	717170.5	0
†	9700	89.856	269.79	8588.5	1195.98	-4.38	-1195.97	692505.7	717170.1	0
†	9800	89.856	269.79	8588.76	1295.98	-4.74	-1295.97	692405.7	717169.8	0
†	9900	89.856	269.79	8589.01	1395.98	-5.11	-1395.97	692305.7	717169.4	0
†	10000	89.856	269.79	8589.26	1495.98	-5.47	-1495.97	692205.7	717169	0
†	10100	89.856	269.79	8589.51	1595.98	-5.84	-1595.97	692105.7	717168.7	0
†	10200	89.856	269.79	8589.76	1695.98	-6.21	-1695.97	692005.7	717168.3	0
†	10300	89.856	269.79	8590.01	1795.98	-6.57	-1795.97	691905.8	717167.9	0
†	10400	89.856	269.79	8590.26	1895.98	-6.94	-1895.97	691805.8	717167.6	0
†	10500	89.856	269.79	8590.51	1995.98	-7.3	-1995.97	691705.8	717167.2	0
†	10600	89.856	269.79	8590.76	2095.98	-7.67	-2095.97	691605.8	717166.8	0
†	10700	89.856	269.79	8591.01	2195.98	-8.04	-2195.96	691505.8	717166.5	0
†	10800	89.856	269.79	8591.26	2295.98	-8.4	-2295.96	691405.8	717166.1	0
†	10900	89.856	269.79	8591.51	2395.98	-8.77	-2395.96	691305.8	717165.7	0
†	11000	89.856	269.79	8591.76	2495.98	-9.13	-2495.96	691205.8	717165.4	0
†	11100	89.856	269.79	8592.01	2595.98	-9.5	-2595.96	691105.8	717165	0
†	11200	89.856	269.79	8592.26	2695.98	-9.87	-2695.96	691005.8	717164.6	0
†	11300	89.856	269.79	8592.51	2795.98	-10.23	-2795.96	690905.8	717164.3	0
†	11400	89.856	269.79	8592.76	2895.98	-10.6	-2895.96	690805.8	717163.9	0
†	11500	89.856	269.79	8593.01	2995.98	-10.96	-2995.96	690705.8	717163.5	0
†	11600	89.856	269.79	8593.26	3095.98	-11.33	-3095.96	690605.9	717163.2	0
†	11700	89.856	269.79	8593.52	3195.98	-11.7	-3195.96	690505.9	717162.8	0
†	11800	89.856	269.79	8593.77	3295.98	-12.06	-3295.95	690405.9	717162.4	0
†	11900	89.856	269.79	8594.02	3395.98	-12.43	-3395.95	690305.9	717162.1	0
†	12000	89.856	269.79	8594.27	3495.98	-12.79	-3495.95	690205.9	717161.7	0
†	12100	89.856	269.79	8594.52	3595.98	-13.16	-3595.95	690105.9	717161.3	0
†	12200	89.856	269.79	8594.77	3695.97	-13.53	-3695.95	690005.9	717161	0
†	12300	89.856	269.79	8595.02	3795.97	-13.89	-3795.95	689905.9	717160.6	0
†	12400	89.856	269.79	8595.27	3895.97	-14.26	-3895.95	689805.9	717160.2	0
†	12500	89.856	269.79	8595.52	3995.97	-14.62	-3995.95	689705.9	717159.9	0
†	12600	89.856	269.79	8595.77	4095.97	-14.99	-4095.95	689605.9	717159.5	0
†	12700	89.856	269.79	8596.02	4195.97	-15.35	-4195.95	689505.9	717159.2	0
†	12800	89.856	269.79	8596.27	4295.97	-15.72	-4295.94	689405.9	717158.8	0
†	12900	89.856	269.79	8596.52	4395.97	-16.09	-4395.94	689306	717158.4	0
†	13000	89.856	269.79	8596.77	4495.97	-16.45	-4495.94	689206	717158.1	0
	13090.86	89.856	269.79	8597	4586.83	-16.79	-4586.8	689115.1	717157.7	0 No. 3 BHL 1

T A R G E T S

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment	Design Comments
	[ft]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]					
(1) No 3 B	13090.86	8597	-16.79	-4586.8	689115.1	717157.7	32°58'13.9	103°51'05	point		

SURVEY PROGRAM Ref Wellbore. No. 3 PWB Ref Wellpath. Preliminary
Start MD End MD Pos Unc M Log Name; Wellbore
[ft] [ft]
18 13090.86 NaviTrak (Standard) No. 3 PWB