

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised July 18, 2010

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-38394	Pool Code 96210	Pool Name Empire; Glorieta-Yeso
Property Code 38428	Property Name MAYARO "22" STATE	Well Number 4
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3584'

Surface Location

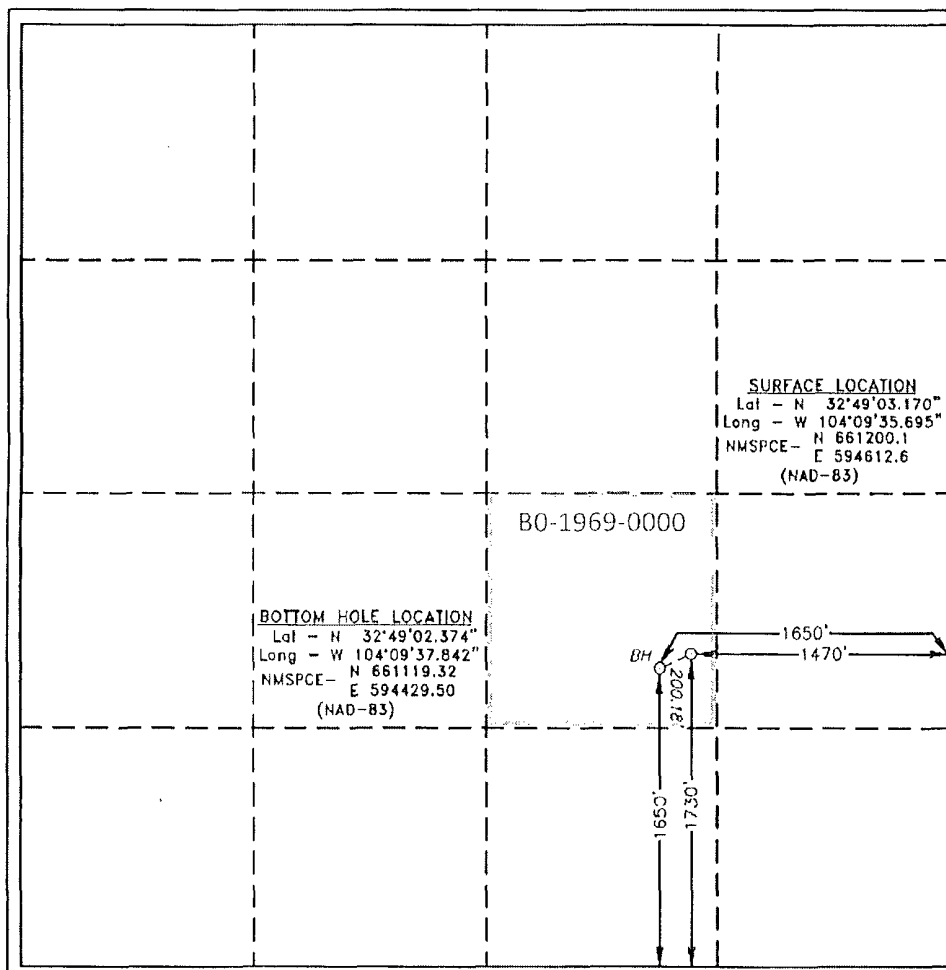
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	22	17 S	28 E		1730	SOUTH	1470	EAST	EDDY

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
J	22	17 S	28 E		1650	SOUTH	1650	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			NSL Pending

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 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. <i>Natalie Krueger</i> 1/4/2011 Signature Date Printed Name nkruieger@cimarex.com Email Address 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. OCTOBER 6, 2010 Date Surveyed Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 BASIN SURVEYS 23459
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Mud, Casing, Cementing, and BOP Attachment
Mayaro 22 State No. 4
 Cimarex Energy Co. of Colorado
 Unit J, Section 22
 T17S-R28E, Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

Location: SHL 1730 FSL & 1470 FEL
 BHL 1650 FSL & 1650 FEL

Elevation above sea level: 3584' GR

Proposed drilling depth: 5010 MD, 5000 TVD

Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 400'	8.4 - 8.6	28	NC	FW
0' to 5010'	10.0	30-32	NC	Brine water

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Casing & Cementing Plan:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	12¼"	0' to 400'	New 8⅝"	24#	STC	J-55
Production	7⅝"	0' to 5010'	New 5½"	17#	LTC	J-55

Cementing Plan:

Surface Lead: 600 sx Class H
 Tail: 500 sx Class H
TOC Surface

Production Lead: 700 sx Class H
Tail: 600 sx Class H
TOC 0'

Fresh water zones will be protected by setting 8⅝" casing at 400 and cementing to surface. Hydrocarbon zones will be protected by setting 5½" casing at 5010 and cementing to surface.

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

Directional Plan:

Drill 7⅝" hole to KOP @ 3000 and then drill to TD @ 5010 MD, 5000 TVD. Run 5½" csg from 0-5010 and cement.

Cimarex Energy Co.

Location: Eddy County, NM
Field: (Mayaro) Sec 22, T17S, R28E
Facility: Mayaro 22 State No.4

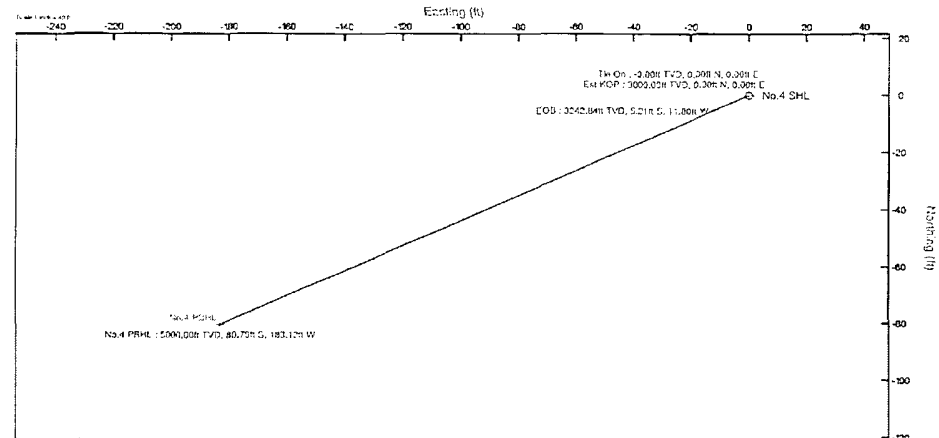
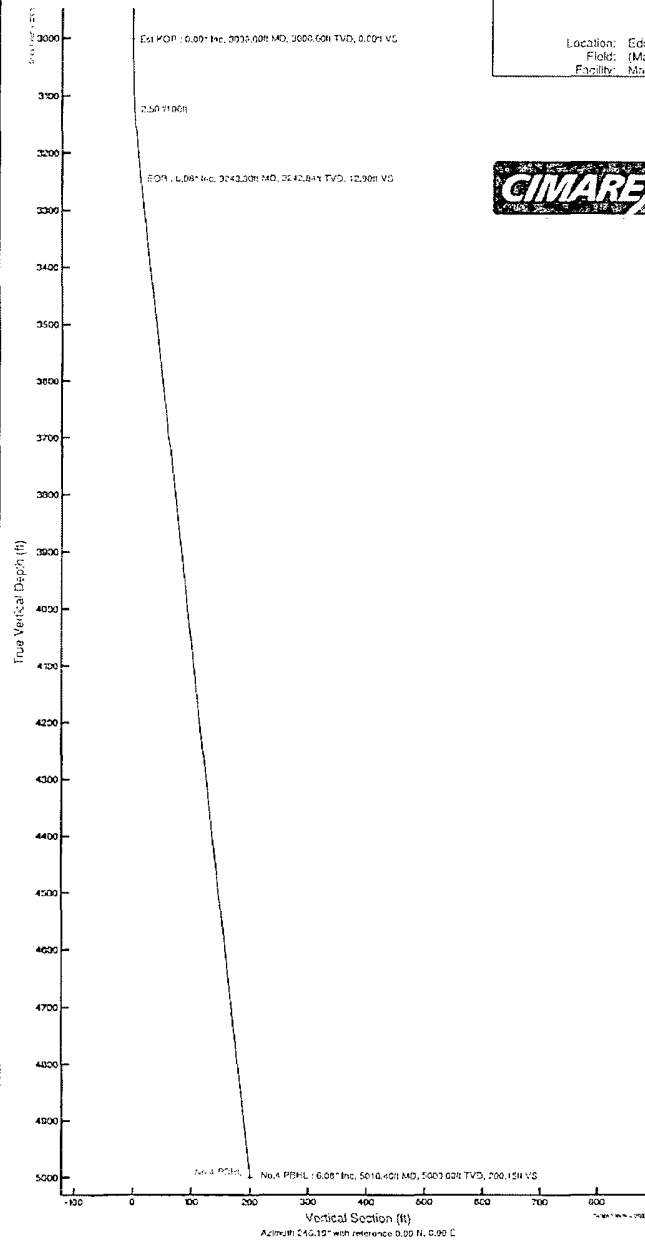
Slot: No.4 SHL
Well: No.4
Wellbore: No.4 PWR

**BAKER
HUGHES**
INTEQ



Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (ft/100ft)
Tie On	0.00	0.00	246.194	0.00	0.00	0.00	0.00
Est KOP	3000.00	0.00	246.194	3000.00	0.00	0.00	0.00
EOB	3243.30	0.00	246.194	3243.30	-5.21	-11.80	0.00
No.4 PBHL	5010.40	0.00	246.194	5000.00	-90.79	-183.12	0.00

Plot reference wellbore is Prohm.	
True vertical depths are referenced to Rig on No.4 SHL (RT)	Grid System: NAD83 / TM New Mexico State Plane, Eastern Zone (3001), US foot
Measured depths are referenced to Rig on No.4 SHL (HT)	North Reference: Grid north
Rig on No.4 SHL (RT) is Mean Sea Level: 2584 feet	Scale: True distance
Mean Sea Level is Mud line (Facility: Mayaro 22 State No.4): -3584 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: geomouse on 12/03/2010





Planned Wellpath Report

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REFERENCE WELL IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Eddy County, NM	Well	No.4
Field	(Mayaro) Sec 22, T17S, R28E	Wellbore	No.4 PWB
Facility	Mayaro 22 State No.4		

RIG/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	Gomeoscr
Scale	0.999912	Report Generated	12/30/2010 at 2:22:31 PM
Convergence at slot	0.09° East	Database/Source file	WA Midland/No.4_PWB.xml

WELL IDENTIFICATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W
Facility Reference Pt			594612.60	661200.10	32°49'03.170"N	104°09'35.695"W
Field Reference Pt			594612.60	661200.10	32°49'03.170"N	104°09'35.695"W

WELL PATH DATA SUMMARY

Calculation method	Minimum curvature	Rig on No.4 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.4 SHL (RT) to Mean Sea Level	3584.00ft
Vertical Reference Pt	Rig on No.4 SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No.4 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	246.19°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Eddy County, NM	Well	No.4
Field	(Mayaro) Sec 22, T17S, R28E	Wellbore	No.4 PWB
Facility	Mayaro 22 State No.4		

WELLPATH DATA (53 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	246.194	0.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	Tie On
100.00†	0.000	246.194	100.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
200.00†	0.000	246.194	200.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
300.00†	0.000	246.194	300.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
400.00†	0.000	246.194	400.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
500.00†	0.000	246.194	500.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
600.00†	0.000	246.194	600.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
700.00†	0.000	246.194	700.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
800.00†	0.000	246.194	800.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
900.00†	0.000	246.194	900.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1000.00†	0.000	246.194	1000.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1100.00†	0.000	246.194	1100.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1200.00†	0.000	246.194	1200.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1300.00†	0.000	246.194	1300.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1400.00†	0.000	246.194	1400.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1500.00†	0.000	246.194	1500.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1600.00†	0.000	246.194	1600.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1700.00†	0.000	246.194	1700.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1800.00†	0.000	246.194	1800.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
1900.00†	0.000	246.194	1900.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2000.00†	0.000	246.194	2000.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2100.00†	0.000	246.194	2100.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2200.00†	0.000	246.194	2200.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2300.00†	0.000	246.194	2300.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2400.00†	0.000	246.194	2400.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2500.00†	0.000	246.194	2500.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2600.00†	0.000	246.194	2600.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2700.00†	0.000	246.194	2700.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2800.00†	0.000	246.194	2800.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
2900.00†	0.000	246.194	2900.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	
3000.00	0.000	246.194	3000.00	0.00	0.00	0.00	594612.60	661200.10	32°49'03.170"N	104°09'35.695"W	0.00	Est KOP
3100.00†	2.500	246.194	3099.97	2.18	-0.88	-2.00	594610.60	661199.22	32°49'03.162"N	104°09'35.718"W	2.50	
3200.00†	5.000	246.194	3199.75	8.72	-3.52	-7.98	594604.62	661196.58	32°49'03.136"N	104°09'35.789"W	2.50	
3243.30	6.083	246.194	3242.84	12.90	-5.21	-11.80	594600.80	661194.89	32°49'03.119"N	104°09'35.833"W	2.50	EOB
3300.00†	6.083	246.194	3299.22	18.91	-7.63	-17.30	594595.30	661192.47	32°49'03.095"N	104°09'35.898"W	0.00	
3400.00†	6.083	246.194	3398.66	29.51	-11.91	-27.00	594585.61	661188.19	32°49'03.053"N	104°09'36.012"W	0.00	
3500.00†	6.083	246.194	3498.10	40.10	-16.19	-36.69	594575.91	661183.91	32°49'03.011"N	104°09'36.125"W	0.00	
3600.00†	6.083	246.194	3597.54	50.70	-20.46	-46.38	594566.22	661179.64	32°49'02.969"N	104°09'36.239"W	0.00	
3700.00†	6.083	246.194	3696.97	61.29	-24.74	-56.08	594556.53	661175.36	32°49'02.926"N	104°09'36.353"W	0.00	
3800.00†	6.083	246.194	3796.41	71.89	-29.02	-65.77	594546.83	661171.08	32°49'02.884"N	104°09'36.466"W	0.00	
3900.00†	6.083	246.194	3895.85	82.49	-33.30	-75.47	594537.14	661166.81	32°49'02.842"N	104°09'36.580"W	0.00	
4000.00†	6.083	246.194	3995.28	93.08	-37.57	-85.16	594527.44	661162.53	32°49'02.800"N	104°09'36.694"W	0.00	
4100.00†	6.083	246.194	4094.72	103.68	-41.85	-94.86	594517.75	661158.25	32°49'02.758"N	104°09'36.807"W	0.00	
4200.00†	6.083	246.194	4194.16	114.27	-46.13	-104.55	594508.06	661153.98	32°49'02.716"N	104°09'36.921"W	0.00	
4300.00†	6.083	246.194	4293.59	124.87	-50.40	-114.25	594498.36	661149.70	32°49'02.673"N	104°09'37.035"W	0.00	



Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.4 SHL
Area	Eddy County, NM	Well	No.4
Field	(Mayaro) Sec 22, T17S, R28E	Wellbore	No.4 PWB
Facility	Mayaro 22 State No.4		

WELLPATH DATA (53 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4400.00†	6.083	246.194	4393.03	135.47	-54.68	-123.94	594488.67	661145.42	32°49'02.631"N	104°09'37.148"W	0.00	
4500.00†	6.083	246.194	4492.47	146.06	-58.96	-133.64	594478.98	661141.15	32°49'02.589"N	104°09'37.262"W	0.00	
4600.00†	6.083	246.194	4591.91	156.66	-63.23	-143.33	594469.28	661136.87	32°49'02.547"N	104°09'37.376"W	0.00	
4700.00†	6.083	246.194	4691.34	167.25	-67.51	-153.02	594459.59	661132.59	32°49'02.505"N	104°09'37.489"W	0.00	
4800.00†	6.083	246.194	4790.78	177.85	-71.79	-162.72	594449.90	661128.32	32°49'02.463"N	104°09'37.603"W	0.00	
4900.00†	6.083	246.194	4890.22	188.45	-76.07	-172.41	594440.20	661124.04	32°49'02.420"N	104°09'37.717"W	0.00	
5000.00†	6.083	246.194	4989.65	199.04	-80.34	-182.11	594430.51	661119.76	32°49'02.378"N	104°09'37.830"W	0.00	
5010.40	6.083	246.194	5000.00†	200.15	-80.79	-183.12	594429.50	661119.32	32°49'02.374"N	104°09'37.842"W	0.00	No.4 PBHL

HOLE & CASING SECTIONS Ref Wellbore: No.4 PWB Ref Wellpath: Prelim_1

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.625in Casing	0.00	400.00	400.00	0.00	400.00	0.00	0.00	0.00	0.00
7.875in Open Hole	4000.00	5010.40	1010.40	3995.28	5000.00	-37.57	-85.16	-80.79	-183.12

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No.4 PBHL	5010.40	5000.00	-80.79	-183.12	594429.50	661119.32	32°49'02.374"N	104°09'37.842"W	point