

District I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S St Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised August 1, 2011

Permit 137726

PLEASE NOTE THIS IS FOR THE
MOTHERBORE

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

Operator Name and Address ENCANA OIL & GAS (USA) INC. 370 17 TH STREET, SUITE 1700 DENVER, CO 80202		OGRID Number 282327
Property Code 38833		API Number 30-043-21117
Property Name LYBROOK H36-2307		Well No. 01H

Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
H	36	23N	7W		1550	NORTH	280	EAST	SANDOVAL

Pool Information

Lybrook Gallup (42289)	OIL CONS. DIV.
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Additional Well Information

Work Type N	Well Type O	Cable/Rotary R	Lease Type S	Ground Level Elevation 7265'
Multiple N/A	Proposed Depth 6710'	Formation MORRISON	Contractor AZTEC	Spud Date 11/01/11
Depth to Ground water UNK	Distance from nearest fresh water well > 5280'	Distance to nearest surface water +/- 2000'		

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
CONDUCTOR	26"	20"	94#	60'	80	SURFACE
SURFACE	17 1/2"	13 3/8"	48#	500'	230	SURFACE
INTERMEDIATE	12 1/4"	9 5/8"	40#	4800'	1585 (50% OH EXCESS)	SURFACE
PRODUCTION	8 1/2"					

Casing/Cement Program: Additional Comments

MOTHERBORE IS VERTICAL PILOT HOLE. WILL DRILL OUT OF 9 5/8" CSG WITH 8 1/2" BIT TO 6575' IN THE MORRISON AFTER CORING AND RUNNING OH LOGS, WILL PLUGBACK WITH CEMENT AND KICKOFF FOR HORIZONTAL LATERAL IN THE GALLUP FORMATION. WILL USE GELLED FRESH WATER MUD SYSTEM IN VERTICAL PILOT.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
ANNULAR	3000	1500	TBD
DOUBLE RAM	3000	3000	TBD

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 NMOC guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.
NO DRILLING PIT WILL BE USED.

Printed name. BRENDA R. LINSTER

Title REGULATORY ADVISOR

E-mail Address. BRENDA.LINSTER@ENCANA.COM

Date: 09-21-2011 Phone 720-876-3989

OIL CONSERVATION DIVISION

Approved By:

Title

Approved Date SEP 28 2011

Expiration Date SEP 28 2012

Conditions of Approval Attached

for Directional Survey and "As Drilled" plat

NOTIFY AZTEC OCD 24 HRS PRIOR TO CASING & CEMENT

Simultaneous Dedication

Hold C104 for Directional Survey and "As Drilled" plat

HOLD C104 FOR NSL Directional Survey & AS DRILLED PLAT

District I
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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised August 1, 2011

Permit 137732

PLEASE NOTE THIS IS FOR THE
SIDEKICK

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

Operator Name and Address ENCANA OIL & GAS (USA) INC. 370 17 th STREET, SUITE 1700 DENVER, CO 80202		OGRID Number 282327
		API Number 30.043.21117
Property Code 38833	Property Name LYBROOK H36-2307	Well No 01H

Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
BA H	36	23N	7W		1550	NORTH	280	EAST	SANDOVAL
E	36	23N	7W		1550	N	330	E	

Pool Information

Lybrook Gallup (42289)

Additional Well Information

Work Type N	Well Type O	Cable/Rotary R	Lease Type S	Ground Level Elevation 7265'
Multiple N/A	Proposed Depth 5609' TVD/9974' MD	Formation GALLUP	Contractor AZTEC	Spud Date 11/01/11
Depth to Ground water UNK		Distance from nearest fresh water well > 5280'		Distance to nearest surface water +/- 2000'

Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
CONDUCTOR	26"	20"	94#	60'	80	SURFACE
SURFACE	17 1/2"	13 3/8"	48#	500'	230	SURFACE
INTERMEDIATE	12 1/4"	9 5/8"	40#	4800'	1585 (50% OH EXCESS)	SURFACE
PRODUCTION	8 1/2"	5 1/2"	17#	4600' - 9974' MD	N/A	N/A

Casing/Cement Program: Additional Comments

HORIZONTAL LATERAL IN THE GALLUP FORMATION. NO CEMENT IN THE PRODUCTION LINER, WILL RUN EXTERNAL SWELL CASING PACKER SYSTEM WILL USE SYNTHETIC OIL BASED MUD SYSTEM FROM KOP TO TD OF HORIZONTAL LATERAL.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
ANNULAR	3000	1500	TBD
DOUBLE RAM	3000	3000	TBD

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 ☐.
NO DRILLING PIT WILL BE USED.

Printed name: BRENDA R. LINSTER

Title REGULATORY ADVISOR

E-mail Address: BRENDA.LINSTER@ENCANA.COM

Date: 09.21.2011 Phone 720-876-3989

OIL CONSERVATION DIVISION

Approved By:

Title:

Approved Date: SEP 28 2011

Expiration Date

SEP 28 2012

Conditions of Approval Attached

Hold C104 for Directional Survey and "As Drilled" plat

Hold C104

NOTIFY AZTEC OCD 24 HRS.
FOR TO CASING & CEMENT

SEP 28 2011

Hold C104
for Directional Survey
and "As Drilled" plat

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

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

District III
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 36-043-21117		*Pool Code 22619-42289	*Pool Name LYBROOK GALLUP
*Property Code 38833	*Property Name LYBROOK H36-2307		*Well Number 01H
*GRID No. 282327	*Operator Name ENCANA OIL & GAS (USA) INC.		*Elevation 7265'

¹⁰ 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	36	23N	7W		1550	NORTH	280	EAST	SANDOVAL

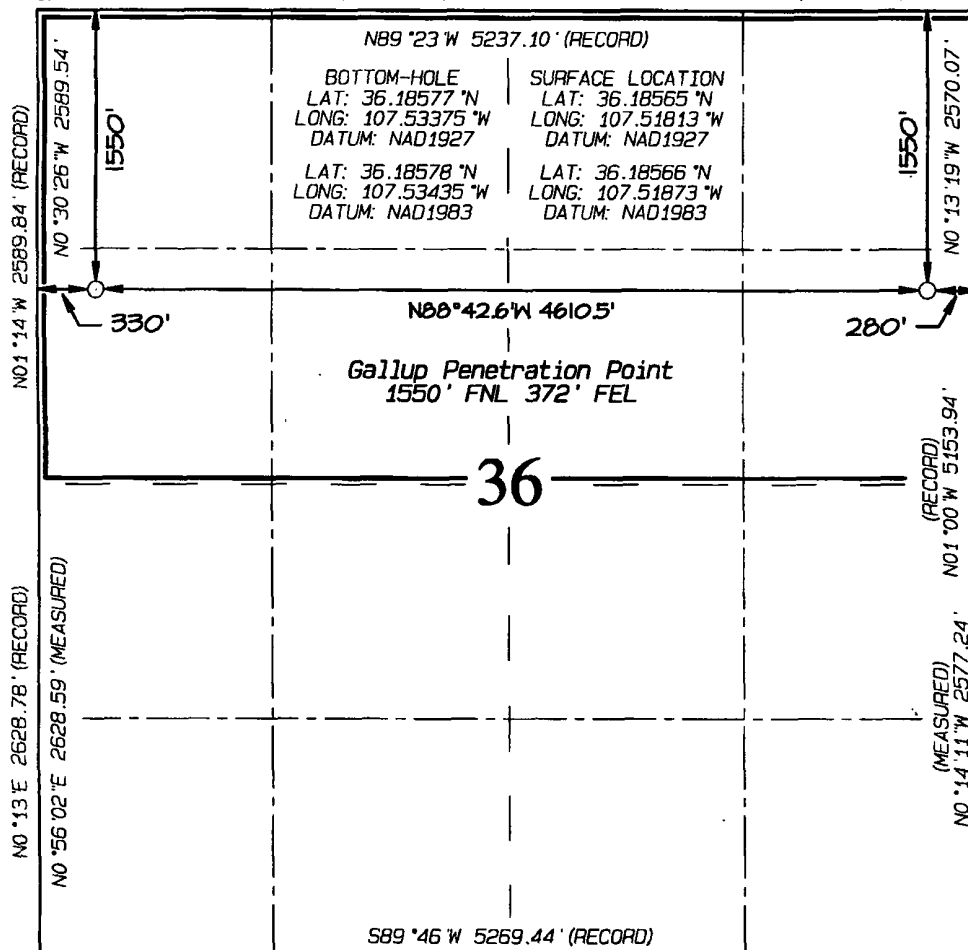
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	36	23N	7W		1550	NORTH	330	WEST	SANDOVAL

¹² Dedicated Acres 320.0 Acres - (N/2)	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

¹⁶ N89°42'00"W 2613.69' (MEASURED) N88°41'24"W 2614.60' (MEASURED)



¹⁷ 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.

Signature Brenda R. Linster Date 09/21/09
Printed Name Brenda R. Linster

¹⁸ 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.

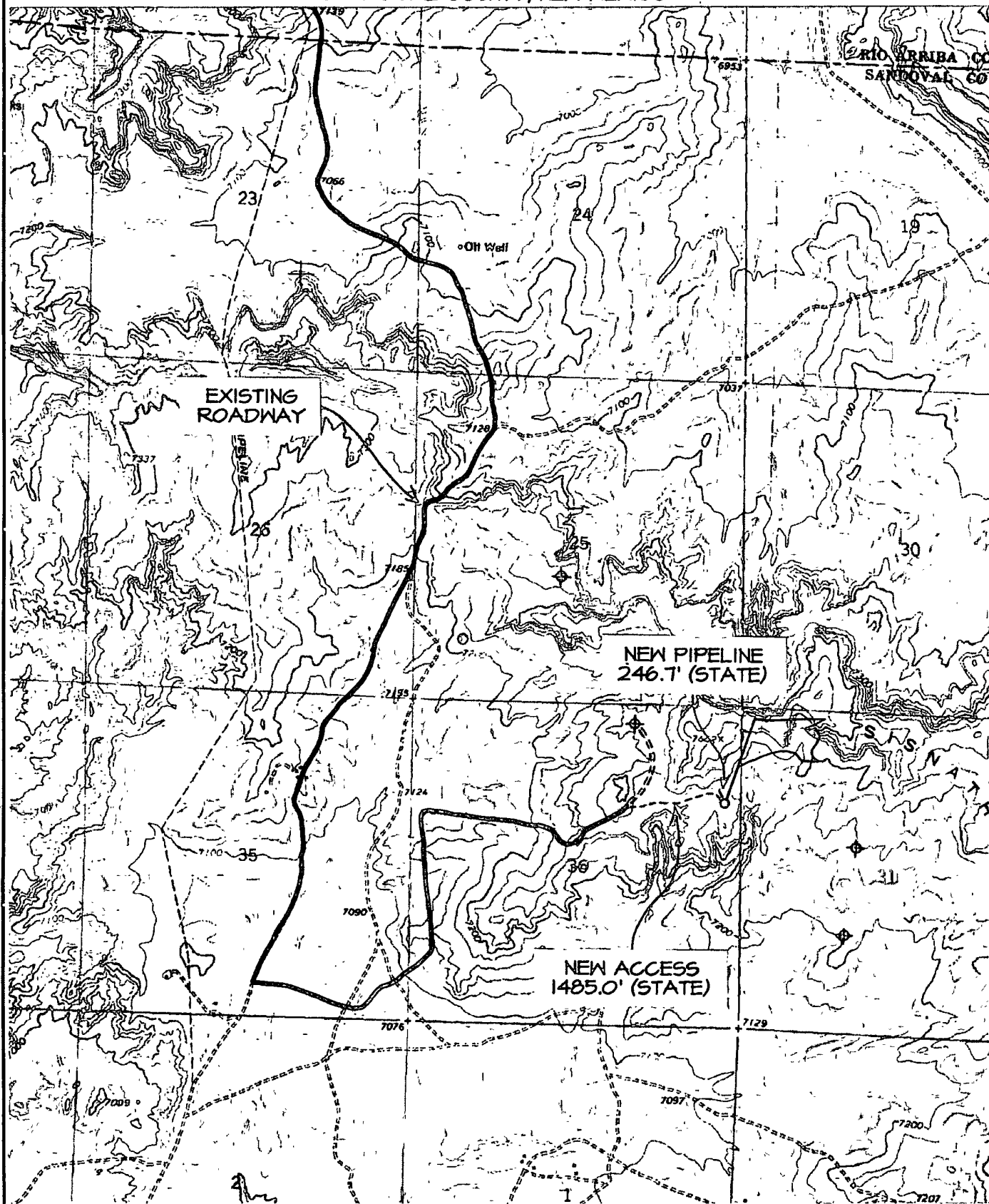
Survey Date: AUGUST 25, 2011

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269

ENCANA OIL & GAS (USA) INC. LYBROOK H36-2307 OIH
1550' FNL & 280' FEL, SECTION 36, T23N, R7W, N.M.P.M.
SANDOVAL COUNTY, NEW MEXICO



NAME OF TOPO : LYBROOK

⊕ PRODUCING WELL

⊗ PLUGGED & ABANDONED WELL

Directions from the Intersection of US Hwy 550 & US Hwy 64
in Bloomfield, NM to Encana Oil & Gas (USA) Inc. Lybrook H36-2307 01H
1550' FNL & 280' FEL, Section 36, T23N, R7W, N.M.P.M., Sandoval County, NM

Latitude: 36.18566°N Longitude: 107.51873°W Datum: NAD1983

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 48.2 miles to Mile Marker 103.1;

Go right (South-easterly) for 3.1 miles to fork in road;

Go left (South-westerly) for 1.1 miles to fork in road;

Go left (South-easterly) for 0.3 miles to fork in road;

Go left (North-easterly) for 0.1 miles to fork in road;

Go right (North-easterly) for 0.3 miles to fork in road;

Go right which is straight (Northerly) for 1.0 miles to new access on right-hand side of existing roadway which continues for 1485.0' to staked location.

Well Planning Proposal FOR

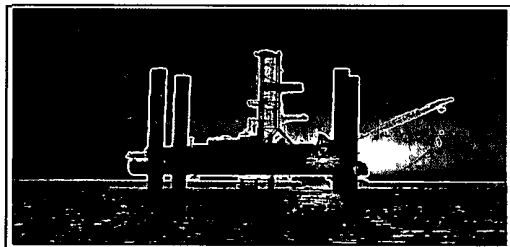
**Encana Oil & Gas (USA) Inc.
Lybrook H36-2307 01H
Sandoval Co., NM**

Well File: Design #1 (9/15/11)

Presented By:

Pat Rasmussen
Regional Manager

Bret Wolford
Well Planner





Encana Oil & Gas
 Project: Sandoval Co., NM
 Site: Sec.36 T23N-R7W
 Well: Lybrook H36-2307 01H
 Wellbore: Wellbore #1
 Design: Design #1
 Lat: 36.185660
 Long: -107.518730
 Pad GL: 7265.00
 KB: WELL @ 7279.00usft

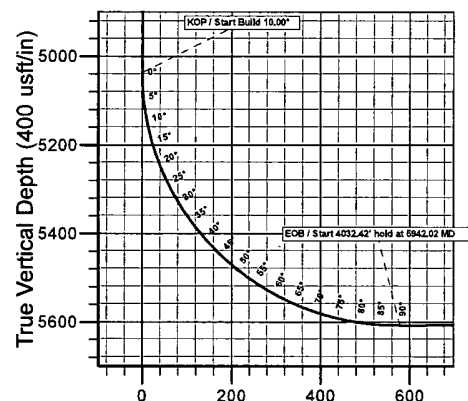


PROJECT DETAILS: Sandoval Co., NM
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone
System Datum: Mean Sea Level

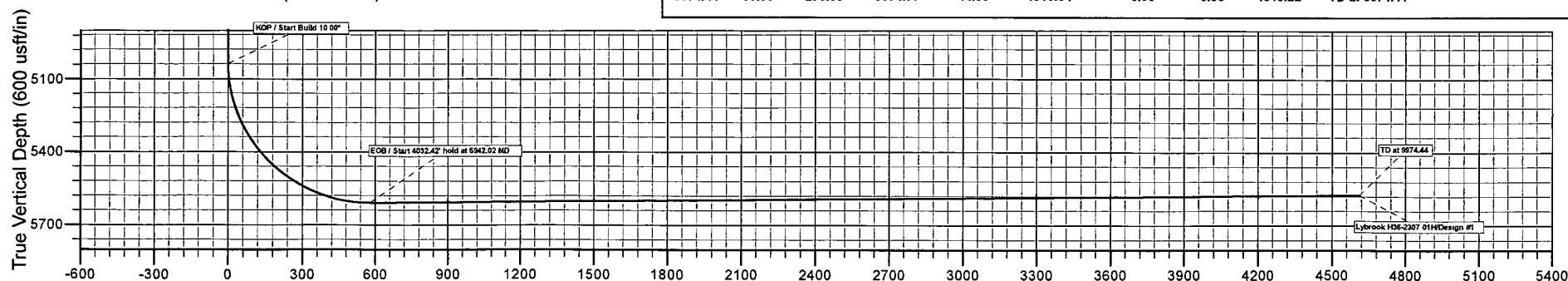
	Azimuths to True North Magnetic North: 9.69°
	Magnetic Field Strength: 50416.8snT Dip Angle: 63.02° Date: 09/15/2011 Model: IGRF2010

WELL DETAILS: Lybrook H36-2307 01H						
+N/-S	+E/-W	Northing	Ground Level: Easting	7265.00 Latitude	Longitude	Slot
0.00	0.00	1889293.542	1266020.822	36.185660	-107.518730	

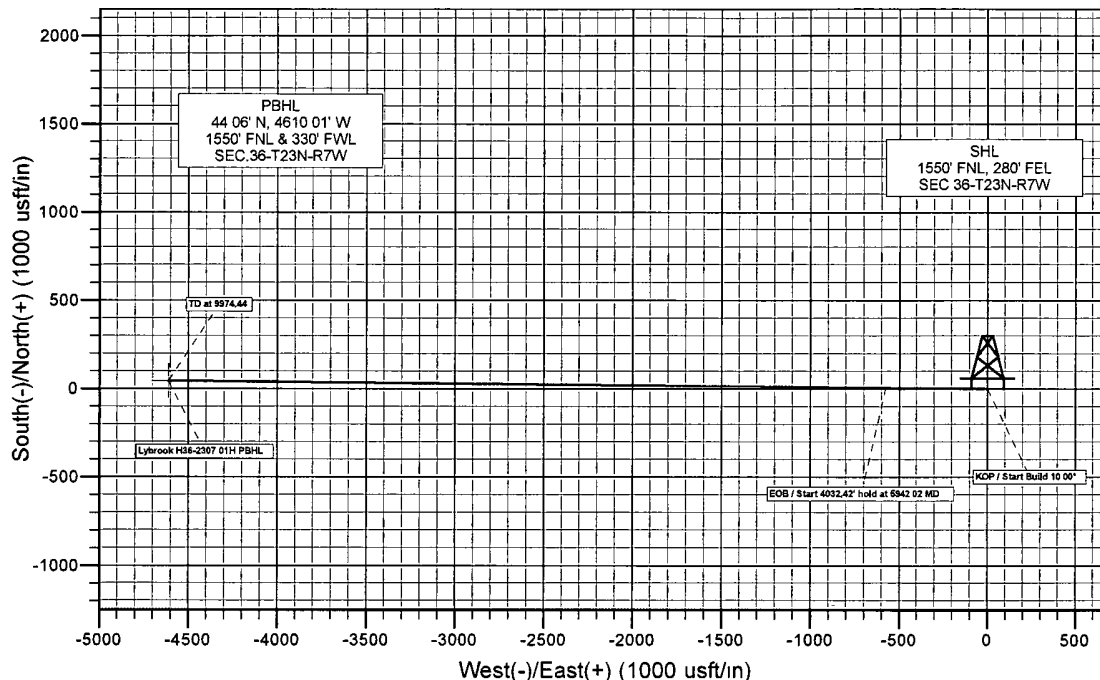
WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Lybrook H36-2307 01H PBHL	5574.77	44.06	-4610.01	36.185780	-107.534350	Point



Vertical Section at 270.55° (400 usft/in)



Vertical Section at 270.55° (600 usft/in)



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5037.02	0.00	0.00	5037.02	0.00	0.00	0.00	0.00	0.00	KOP / Start Build 10.00°
5942.02	90.50	270.55	5609.96	5.52	-577.93	10.00	270.55	577.96	EOB / Start 4032.42° hold at 5942.02 MD
9974.44	90.50	270.55	5574.77	44.06	-4610.01	0.00	0.00	4610.22	TD at 9974.44

Plan: Design #1 (Lybrook H36-2307 01H/Wellbore #1)
Created By: Bret Wolford Date: 10:44, September 15 2011

encanaTM

natural gas

Encana Oil & Gas

Sandoval Co., NM

Sec.36 T23N-R7W

Lybrook H36-2307 01H

Wellbore #1

Plan: Design #1

Standard Planning Report

15 September, 2011



Database:	EDM 5000.1 EDMDBBW	Local Co-ordinate Reference:	Well Lybrook H36-2307 01H
Company:	Encana Oil & Gas	TVD Reference:	WELL @ 7279.00usft
Project:	Sandoval Co., NM	MD Reference:	WELL @ 7279.00usft
Site:	Sec.36 T23N-R7W	North Reference:	True
Well:	Lybrook H36-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Sandoval Co., NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site		Sec.36 T23N-R7W			
Site Position:		Northing:	1,889,293.542 usft	Latitude:	36.185660
From:	Lat/Long	Easting:	1,266,020.822 usft	Longitude:	-107.518730
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	-0.75 °

Well	Lybrook H36-2307 01H					
Well Position	+N-S	0.00 usft	Northing:	1,889,293.542 usft	Latitude:	36.185660
	+E-W	0.00 usft	Easting:	1,266,020.822 usft	Longitude:	-107.518730
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	7,265.00 usft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/15/11	9.69	63.02	50,417

Design		Design #1		
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	5,574.77	0.00	0.00	270.55

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,037.02	0.00	0.00	5,037.02	0.00	0.00	0.00	0.00	0.00	0.00	
5,942.02	90.50	270.55	5,609.96	5.52	-577.93	10.00	10.00	0.00	270.55	Lybrook H36-2307 01
9,974.44	90.50	270.55	5,574.77	44.06	-4,610.01	0.00	0.00	0.00	0.00	Lybrook H36-2307 01

Database:	EDM 5000.1 EDMDBBW	Local Co-ordinate Reference:	Well Lybrook H36-2307 01H
Company:	Encana Oil & Gas	TVD Reference:	WELL @ 7279.00usft
Project:	Sandoval Co., NM	MD Reference:	WELL @ 7279.00usft
Site:	Sec.36 T23N-R7W	North Reference:	True
Well:	Lybrook H36-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP / Start Build 10.00°									
5,037.02	0.00	0.00	5,037.02	0.00	0.00	0.00	0.00	0.00	0.00
5,050.00	1.30	270.55	5,050.00	0.00	-0.15	0.15	10.00	10.00	0.00

Database:	EDM 5000.1 EDMDBBW	Local Co-ordinate Reference:	Well Lybrook H36-2307 01H
Company:	Encana Oil & Gas	TVD Reference:	WELL @ 7279.00usft
Project:	Sandoval Co., NM	MD Reference:	WELL @ 7279.00usft
Site:	Sec.36 T23N-R7W	North Reference:	True
Well:	Lybrook H36-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Buird Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	6.30	270.55	5,099.87	0.03	-3.46	3.46	10.00	10.00	0.00
5,150.00	11.30	270.55	5,149.27	0.11	-11.10	11.10	10.00	10.00	0.00
5,200.00	16.30	270.55	5,197.81	0.22	-23.02	23.02	10.00	10.00	0.00
5,250.00	21.30	270.55	5,245.13	0.37	-39.13	39.13	10.00	10.00	0.00
5,300.00	26.30	270.55	5,290.86	0.57	-59.30	59.30	10.00	10.00	0.00
5,350.00	31.30	270.55	5,334.67	0.80	-83.37	83.38	10.00	10.00	0.00
5,400.00	36.30	270.55	5,376.20	1.06	-111.18	111.18	10.00	10.00	0.00
5,450.00	41.30	270.55	5,415.16	1.36	-142.50	142.50	10.00	10.00	0.00
5,500.00	46.30	270.55	5,451.24	1.69	-177.09	177.10	10.00	10.00	0.00
5,550.00	51.30	270.55	5,484.16	2.05	-214.69	214.70	10.00	10.00	0.00
5,600.00	56.30	270.55	5,513.68	2.44	-255.03	255.04	10.00	10.00	0.00
5,650.00	61.30	270.55	5,539.58	2.85	-297.78	297.79	10.00	10.00	0.00
5,700.00	66.30	270.55	5,561.65	3.27	-342.62	342.64	10.00	10.00	0.00
5,750.00	71.30	270.55	5,579.73	3.72	-389.22	389.24	10.00	10.00	0.00
5,800.00	76.30	270.55	5,593.67	4.18	-437.22	437.24	10.00	10.00	0.00
5,850.00	81.30	270.55	5,603.38	4.65	-486.25	486.27	10.00	10.00	0.00
5,900.00	86.30	270.55	5,608.78	5.12	-535.94	535.96	10.00	10.00	0.00
EOB / Start 4032.42' hold at 5942.02 MD									
5,942.02	90.50	270.55	5,609.96	5.52	-577.93	577.96	10.00	10.00	0.00
6,000.00	90.50	270.55	5,609.45	6.08	-635.91	635.94	0.00	0.00	0.00
6,100.00	90.50	270.55	5,608.58	7.03	-735.90	735.93	0.00	0.00	0.00
6,200.00	90.50	270.55	5,607.70	7.99	-835.89	835.93	0.00	0.00	0.00
6,300.00	90.50	270.55	5,606.83	8.94	-935.88	935.92	0.00	0.00	0.00
6,400.00	90.50	270.55	5,605.96	9.90	-1,035.87	1,035.92	0.00	0.00	0.00
6,500.00	90.50	270.55	5,605.09	10.85	-1,135.86	1,135.92	0.00	0.00	0.00
6,600.00	90.50	270.55	5,604.21	11.81	-1,235.86	1,235.91	0.00	0.00	0.00
6,700.00	90.50	270.55	5,603.34	12.77	-1,335.85	1,335.91	0.00	0.00	0.00
6,800.00	90.50	270.55	5,602.47	13.72	-1,435.84	1,435.91	0.00	0.00	0.00
6,900.00	90.50	270.55	5,601.60	14.68	-1,535.83	1,535.90	0.00	0.00	0.00
7,000.00	90.50	270.55	5,600.72	15.63	-1,635.82	1,635.90	0.00	0.00	0.00
7,100.00	90.50	270.55	5,599.85	16.59	-1,735.81	1,735.89	0.00	0.00	0.00
7,200.00	90.50	270.55	5,598.98	17.54	-1,835.81	1,835.89	0.00	0.00	0.00
7,300.00	90.50	270.55	5,598.11	18.50	-1,935.80	1,935.89	0.00	0.00	0.00
7,400.00	90.50	270.55	5,597.23	19.46	-2,035.79	2,035.88	0.00	0.00	0.00
7,500.00	90.50	270.55	5,596.36	20.41	-2,135.78	2,135.88	0.00	0.00	0.00
7,600.00	90.50	270.55	5,595.49	21.37	-2,235.77	2,235.87	0.00	0.00	0.00
7,700.00	90.50	270.55	5,594.61	22.32	-2,335.76	2,335.87	0.00	0.00	0.00
7,800.00	90.50	270.55	5,593.74	23.28	-2,435.76	2,435.87	0.00	0.00	0.00
7,900.00	90.50	270.55	5,592.87	24.23	-2,535.75	2,535.86	0.00	0.00	0.00
8,000.00	90.50	270.55	5,592.00	25.19	-2,635.74	2,635.86	0.00	0.00	0.00
8,100.00	90.50	270.55	5,591.12	26.14	-2,735.73	2,735.86	0.00	0.00	0.00
8,200.00	90.50	270.55	5,590.25	27.10	-2,835.72	2,835.85	0.00	0.00	0.00
8,300.00	90.50	270.55	5,589.38	28.06	-2,935.71	2,935.85	0.00	0.00	0.00
8,400.00	90.50	270.55	5,588.51	29.01	-3,035.71	3,035.84	0.00	0.00	0.00
8,500.00	90.50	270.55	5,587.63	29.97	-3,135.70	3,135.84	0.00	0.00	0.00
8,600.00	90.50	270.55	5,586.76	30.92	-3,235.69	3,235.84	0.00	0.00	0.00
8,700.00	90.50	270.55	5,585.89	31.88	-3,335.68	3,335.83	0.00	0.00	0.00
8,800.00	90.50	270.55	5,585.02	32.83	-3,435.67	3,435.83	0.00	0.00	0.00
8,900.00	90.50	270.55	5,584.14	33.79	-3,535.66	3,535.83	0.00	0.00	0.00
9,000.00	90.50	270.55	5,583.27	34.74	-3,635.66	3,635.82	0.00	0.00	0.00
9,100.00	90.50	270.55	5,582.40	35.70	-3,735.65	3,735.82	0.00	0.00	0.00
9,200.00	90.50	270.55	5,581.53	36.66	-3,835.64	3,835.81	0.00	0.00	0.00
9,300.00	90.50	270.55	5,580.65	37.61	-3,935.63	3,935.81	0.00	0.00	0.00

Database:	EDM 5000.1 EDMDBBW	Local Co-ordinate Reference:	Well Lybrook H36-2307 01H
Company:	Encana Oil & Gas	TVD Reference:	WELL @ 7279.00usft
Project:	Sandoval Co., NM	MD Reference:	WELL @ 7279.00usft
Site:	Sec.36 T23N-R7W	North Reference:	True
Well:	Lybrook H36-2307 01H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,400.00	90.50	270.55	5,579.78	38.57	-4,035.62	4,035.81	0.00	0.00	0.00
9,500.00	90.50	270.55	5,578.91	39.52	-4,135.61	4,135.80	0.00	0.00	0.00
9,600.00	90.50	270.55	5,578.03	40.48	-4,235.61	4,235.80	0.00	0.00	0.00
9,700.00	90.50	270.55	5,577.16	41.43	-4,335.60	4,335.79	0.00	0.00	0.00
9,800.00	90.50	270.55	5,576.29	42.39	-4,435.59	4,435.79	0.00	0.00	0.00
9,900.00	90.50	270.55	5,575.42	43.34	-4,535.58	4,535.79	0.00	0.00	0.00
TD at 9974.44 - Lybrook H36-2307 01H PBHL									
9,974.44	90.50	270.55	5,574.77	44.06	-4,610.01	4,610.22	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Lybrook H36-2307 01H I	0.00	0.00	5,574.77	44.06	-4,610.01	1,889,397.872	1,261,411.783	36.185780	-107.534350
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,037.02	5,037.02	0.00	0.00	KOP / Start Build 10.00°
5,942.02	5,609.96	5.52	-577.93	EOB / Start 4032.42' hold at 5942.02 MD
9,974.44	5,574.77	44.06	-4,610.01	TD at 9974.44