

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date: July 7, 2014
Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf. Owner	UL	Sec	Twp	N/S	Rng	W/E
30-045-35530-00-00	GOOD TIMES D14 2410	002H	ENCANA OIL & GAS (USA) INC.	G	N	San Juan	F	E	14	24	N	10	W

Application Type:

☐ P&A ☒ Drilling/Casing Change ☐ Recomplete/DHC
☒ Location Change ☒ Other: Project area change

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations

Hold C104 for as drilled plat and directional survey, NSL, and NSP

Pool name/code cannot be changed until Pinon Unit is ratified

NMOCD Approved by Signature

7-31-14
Date

22

22

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUL 09 2014

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM 100807 & NMNM 16760
6. If Indian, Allottee or Tribe Name
N/A

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Encana Oil & Gas (USA) Inc.

3a. Address
370 17th Street, Suite 1700 Denver, CO 80202

3b. Phone No. (include area code)

7. If Unit of CA/Agreement, Name and/or No.
Piñon Unit

8. Well Name and No.
Good Times D14-2410 02H

9. API Well No.
30-045-35530

10. Field and Pool or Exploratory Area
Basin Mancos Gas Pool

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL:1348' FNL and 435' FWL Section 14, T24N, R10W BHL: 2240' FNL and 290' FEL Section 16, T24N, R10W

11. County or Parish, State
San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Well name change	
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Encana recently finalized the formation of a 7,845.44 acre Federal exploratory unit named the Piñon Unit. The Piñon Unit hearing occurred on May 29, 2014 at the Oil Conservation Division in Santa Fe, in which Encana requested an undivided unit be formed that would also encompass its own unique oil pool designation. Therefore, the Good Times D14-2410 02H well will now be a part of the Piñon Unit and we are submitting this sundry application to change the well name from the Good Times D14-2410 02H to the Piñon Unit D14-2410 02H. Encana Oil & Gas (USA) Inc. also submits a revised survey package, Directional Plan, Drilling Plan and Well Summary, which all reflect a change in the bottom hole location. The wellbore lateral was extended into Section 16 as a result of this well being included in the Encana Piñon Unit.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

OIL CONS. DIV DIST. 3

JUL 18 2014

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Shannon Turk

Title Regulatory Analyst

Signature

Date 07/07/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

William Tambekou

Title

Petroleum Engineer

Date

7/16/2014

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

FFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

RECEIVED

1635 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 893-5161 Fax: (575) 893-0720

DISTRICT II

611 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1883 Fax: (505) 748-9780

DISTRICT III

1000 Rio Brazos Rd., Artes, N.M. 87410
Phone: (505) 834-8178 Fax: (505) 834-8170

DISTRICT IV

1820 S. St. Francis Dr., Santa Fe, NM 87506
Phone: (505) 478-3480 Fax: (505) 478-3489

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised August 1, 2011

Submit one copy to appropriate District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87506

JUL 09 2014

13. ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number 30-045-35530		'Pool Code 97232	'Pool Name BASIN MANCOS GAS
'Property Code 313588	'Property Name PIÑON UNIT D14-2410		'Well Number 02H
'OGRID No. 282327	'Operator Name ENCANA OIL & GAS (USA) INC.		'Elevation 6876.4'

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
D	14	24N	10W		1348'	NORTH	436'	WEST	SAN JUAN

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
H	16	24N	10W		2240'	NORTH	290'	EAST	SAN JUAN

28 Dedicated Acres
7845.44 ACRES W/2 OF SEC. 4, SEC. 8-10,
15-18, 21, N/2 OF SEC. 22, & N/2 OF
SEC. 28 - UNDIVIDED UNIT, PENETRATED
SPACING UNITS: N/2 SEC. 15. E/2 SEC. 18

¹² Joint or Infill¹⁴ Consolidation Code

18 Order No.

+ 640 acres

R-13857

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

BOTTOM HOLE

LAT. 36.314636° N (NAD83)
 LONG. 107.893186° W (NAD83)
 LAT. 36.314625° N (NAD27)
 LONG. 107.892568° W (NAD27)

ENTRY POINT

LAT. 36.315068° N (NAD83)
 LONG. 107.875685° W (NAD83)
 LAT. 36.315057° N (NAD27)
 LONG. 107.875067° W (NAD27)

WELL FLAG

LAT. 36.317548° N (NAD83)
 LONG. 107.873083° W (NAD83)
 LAT. 36.317538° N (NAD27)
 LONG. 107.872485° W (NAD27)

BASIS OF BEARINGS

1 LAT. 36.320731° N (NAD83)
 LONG. 107.909819° W (NAD83)
 LAT. 36.320720° N (NAD27)
 LONG. 107.909200° W (NAD27)

3 LAT. 36.320790° N (NAD83)
 LONG. 107.892196° W (NAD83)
 LAT. 36.320779° N (NAD27)
 LONG. 107.891578° W (NAD27)

5 LAT. 36.321248° N (NAD83)
 LONG. 107.874556° W (NAD83)
 LAT. 36.321237° N (NAD27)
 LONG. 107.873938° W (NAD27)

2 LAT. 36.305902° N (NAD83)
 LONG. 107.909819° W (NAD83)
 LAT. 36.305891° N (NAD27)
 LONG. 107.909200° W (NAD27)

4 LAT. 36.306041° N (NAD83)
 LONG. 107.892211° W (NAD83)
 LAT. 36.306030° N (NAD27)
 LONG. 107.891593° W (NAD27)

6 LAT. 36.306694° N (NAD83)
 LONG. 107.874578° W (NAD83)
 LAT. 36.306683° N (NAD27)
 LONG. 107.873960° W (NAD27)

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: Shannon Turk Date: 7/8/14

Printed Name: Shannon Turk

E-mail Address: shannon.turk@encana.com

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.

JUNE 18, 2013

Date of Survey: _____

Signature and Seal of Professional Surveyor: _____

DAVID RUSSELL

Certificate Number 10201

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 898-6161 Fax: (575) 538-0760

DISTRICT II

811 S. First St., Artesia, N.M. 86210
Phone: (575) 740-1863 Fax: (575) 746-8750

DISTRICT III

1000 Rio Brazos Rd., Artesia, N.M. 87410
Phone: (505) 834-6176 Fax: (505) 834-6170

DISTRICT IV

1830 E. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 470-8460 Fax: (505) 470-8468

State of New Mexico
Energy, Minerals & Natural Resources Department

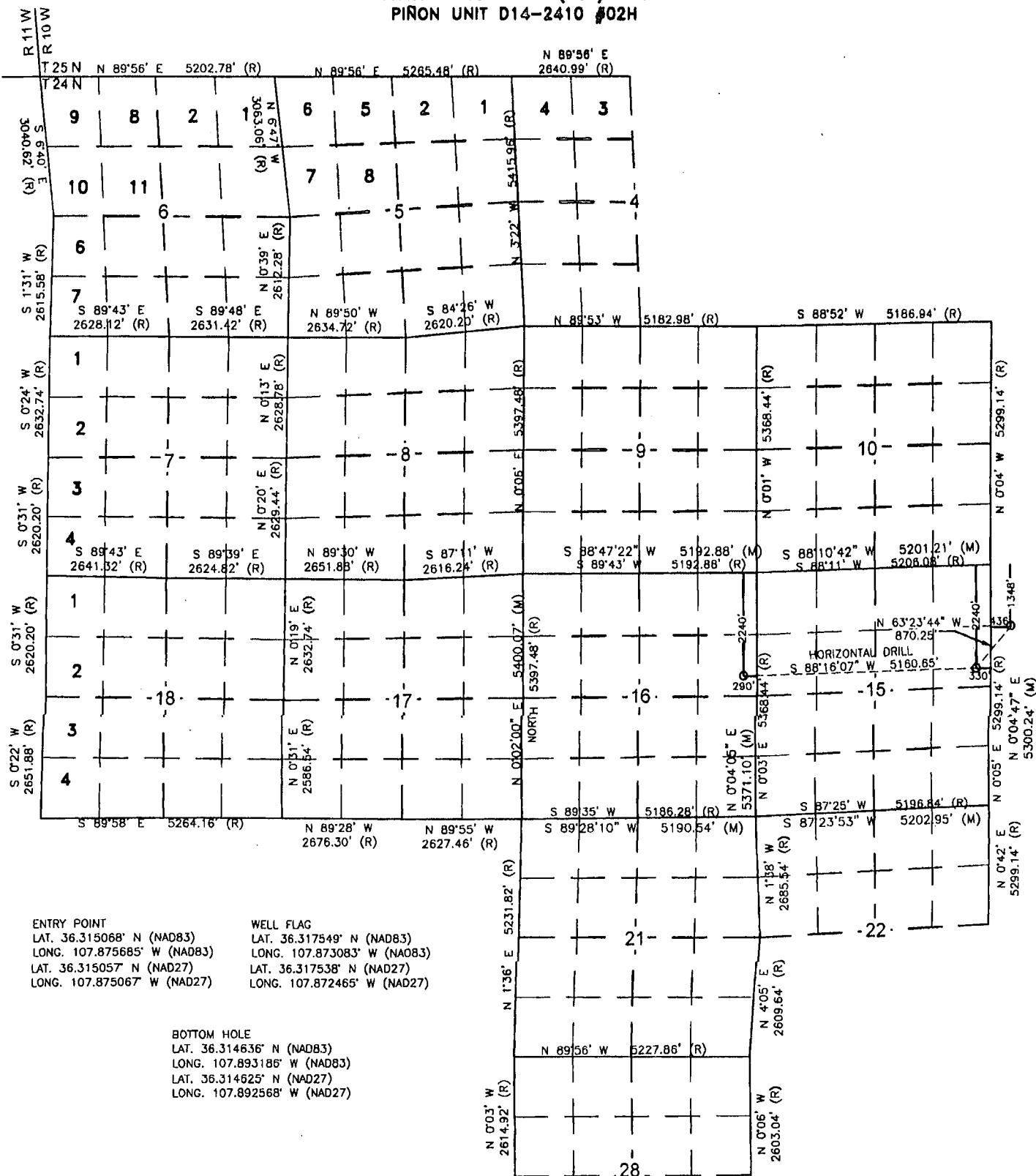
Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

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

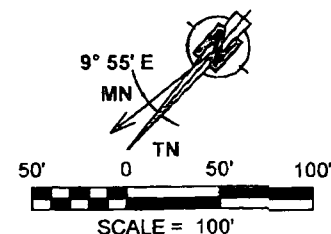
☐ AMENDED REPORT

ENCANA OIL & GAS (USA) INC.
PINON UNIT D14-2410 #02H



WELL FLAG
LATITUDE: 36.317549° N
LONGITUDE: 107.873083° W
DATUM: NAD83

ENCANA OIL & GAS (USA) INC.
PIÑON UNIT D14-2410 #02H
1348' FNL & 436' FWL
LOCATED IN THE NW/4 NW/4 OF SECTION 14,
T24N, R10W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 6878', NAVD 88
FINISHED PAD ELEVATION: 6876.4', NAVD 88



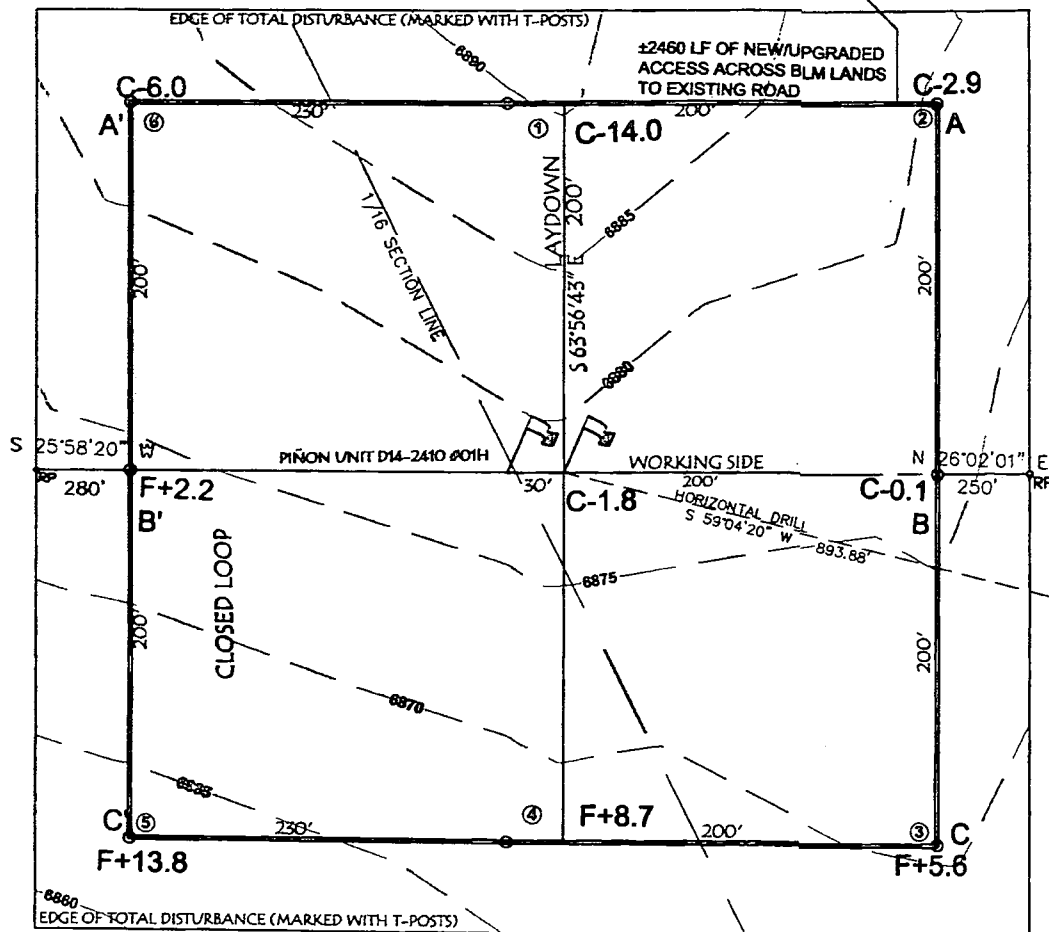
NOTES

1.) BASIS OF BEARING: BETWEEN FOLDED MONUMENTS AT THE NORTHWEST CORNER AND THE NORTHEAST CORNER OF SECTION 14, TOWNSHIP 24 NORTH, RANGE 10 WEST, RULP.M. SAN JUAN COUNTY, NEW MEXICO. LINE BEARS: S 89°55'01" W A DISTANCE OF 5204.44 FEET AS MEASURED BY G.P.S.

2.) LATITUDE, LONGITUDE AND ELLIPSOIDAL HEIGHT BASED ON AZTEC COGS L1 PHASE CENTER. DISTANCES SHOWN ARE GROUND DISTANCES USING A TRANSVERSE MERCATOR PROJECTION FROM A WGS84 ELLIPSOID, CONVERTED TO NAD83. NAVD88 ELEVATIONS AS PREDICTED BY GED0003.

3.) LOCATION OF UNDERGROUND UTILITIES DEPICTED ARE APPROXIMATE. PRIOR TO EXCAVATION UNDERGROUND UTILITIES SHOULD BE FIELD VERIFIED. ALL CONSTRUCTION ACTIVITIES SHOULD BE FIELD VERIFIED WITH NEW MEXICO ONE-CALL AUTHORITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

4.) T-POSTS HAVE BEEN SET TO DEFINE THE EDGE OF DISTURBANCE LIMITS WHICH ARE 50' OFFSETS FROM THE EDGE OF THE STAKED WELL PAD.



~ SURFACE OWNERSHIP ~
 BUREAU OF LAND MANAGEMENT

TOTAL PERMITTED AREA
500' x 530' = 6.08 ACRES
SCALE: 1" = 100'
JOB No.: ENC100
DATE: 05/13/14
DRAWN BY: TWT

NOTE:
 SCORPION SURVEY & CONSULTING, L.L.C. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES. CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED, BURIED PIPELINES OR CABLES ON WELL PAD, IN CONSTRUCTION ZONE AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

SLOPES TO BE CONSTRUCTED TO MATCH THE ORIGINAL CONTOURS AS CLOSE AS POSSIBLE.



Scorpion Survey & Consulting, L.L.C.
 302 South Ash
 Aztec, New Mexico 87410
 (505) 334-4007

LATITUDE: 36.317549° N
LONGITUDE: 107.873083° W
DATUM: NAD 83

ENCANA OIL & GAS (USA) INC.

PIÑON UNIT D14-2410 #02H

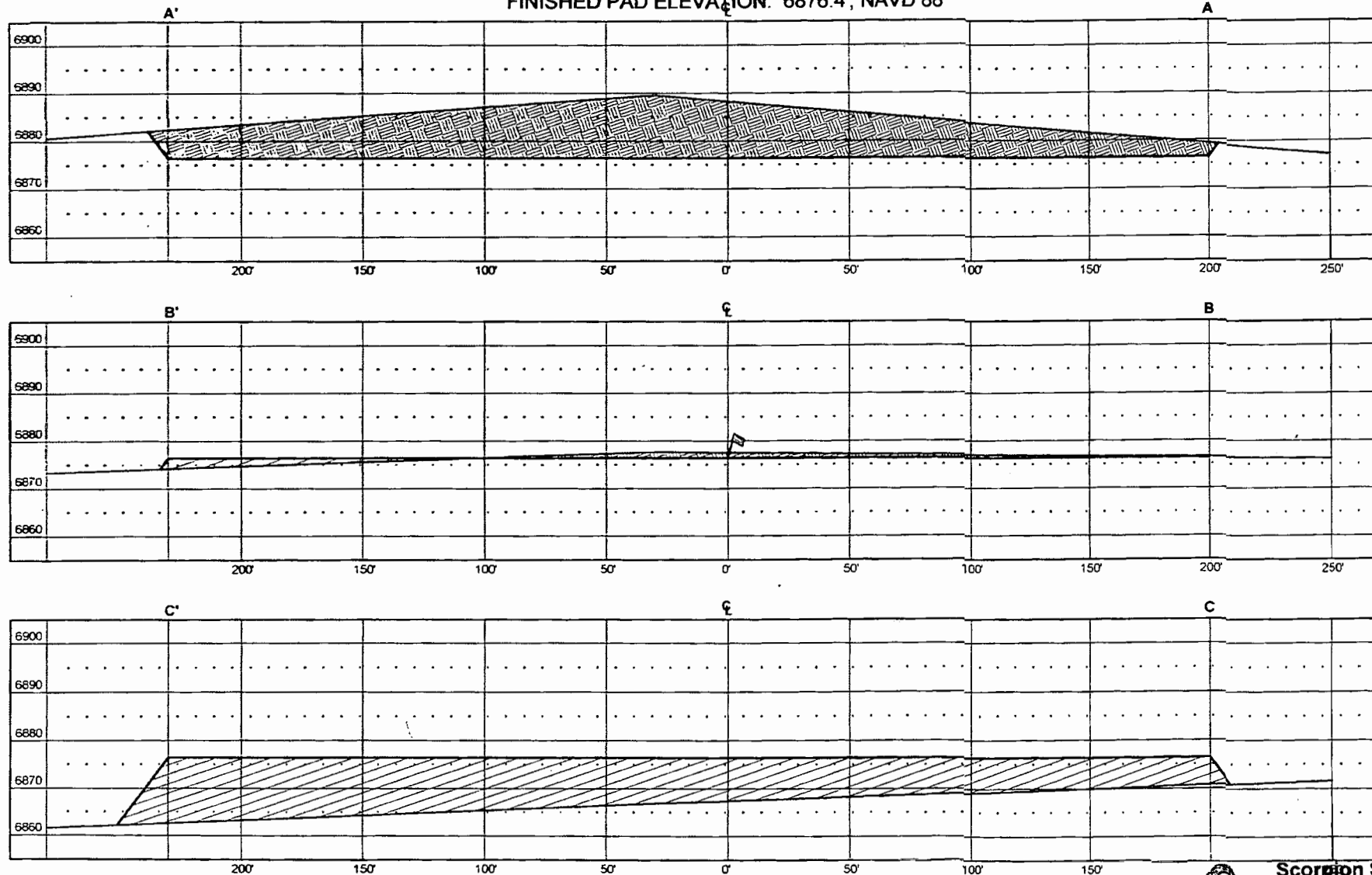
1348' FNL & 436' FWL

LOCATED IN THE NW/4 NW/4 OF SECTION 14, T24N, R10W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

GROUND ELEVATION: 6878', NAVD 88

FINISHED PAD ELEVATION: 6876.4', NAVD 88



VERT. SCALE: 1" = 30'
HORZ. SCALE: 1" = 60'
JOB No.: ENC100
DATE: 05/13/14

THIS DIAGRAM IS AN ESTIMATE
OF DIRT BALANCE AND IS NOT
INTENDED TO BE AN EXACT
MEASURE OF VOLUME



FILL



CUT



**Scorpion Survey &
Consulting, L.L.C.**
302 South Ash
Aztec, New Mexico 87410
(505) 334-4007

LATITUDE: 36.317549° N
LONGITUDE: 107.873083° W
DATUM: NAD 83

ENCANA OIL & GAS (USA) INC.

PIÑON UNIT D14-2410 #02H

1348' FNL & 436' FWL

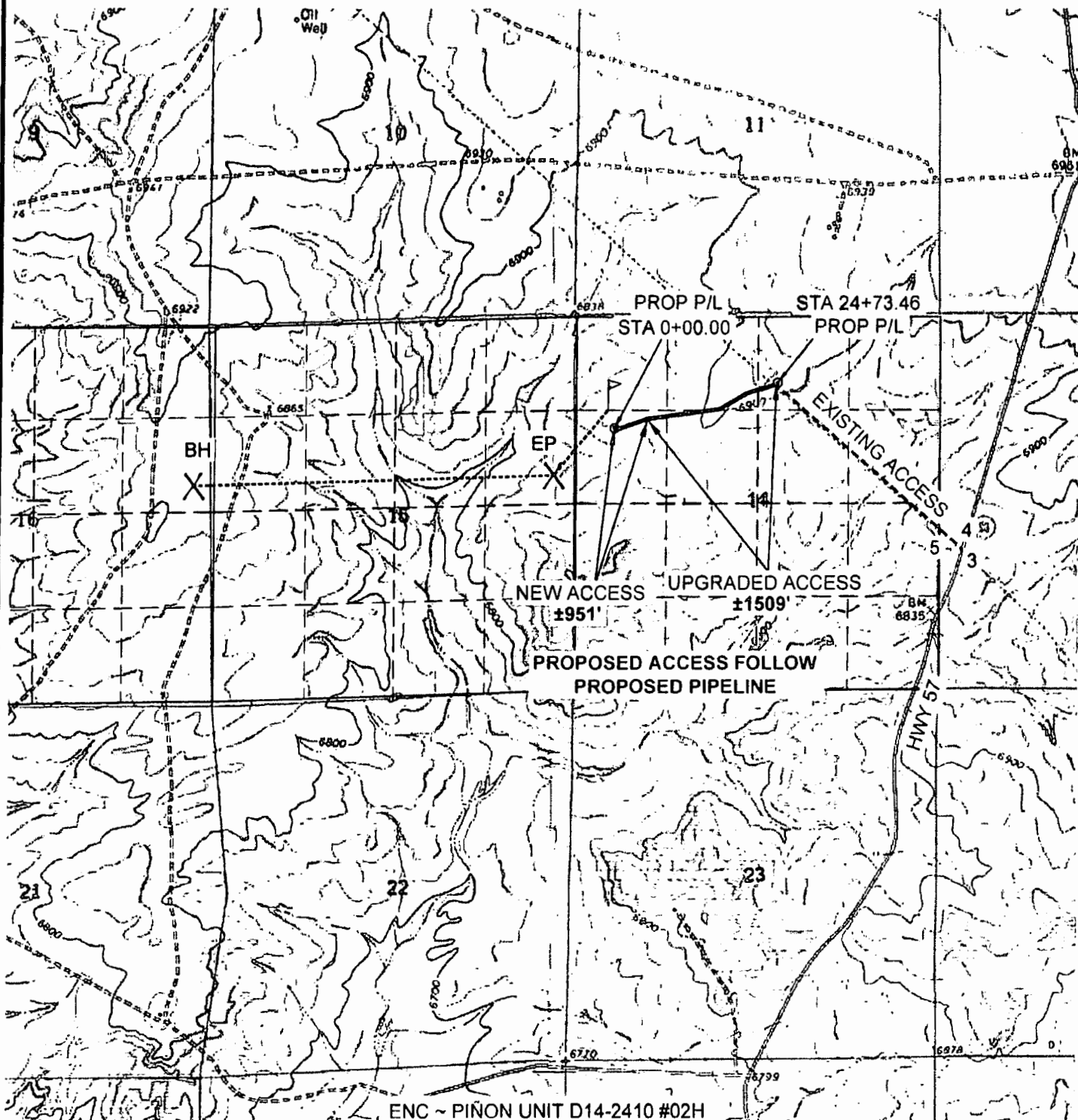
LOCATED IN THE NW/4 NW/4 OF SECTION 14,

T24N, R10W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

GROUND ELEVATION: 6878', NAVD 88

±2460' OF NEW & UPGRADED ACCESS ACROSS BLM LANDS



ENC ~ PIÑON UNIT D14-2410 #02H

±951' OF NEW ACCESS

±1509' OF UPGRADED ACCESS

INSTALL NEW 24" CMP

STA. 24+19.20 - @ PAD

U.S.G.S. QUAD: BLANCO TRADING POST

SCALE: 1" = 2000' (1:24,000)

JOB No.: ENC100

DATE: 05/13/14



**Scorpion Survey &
Consulting, L.L.C.**

302 South Ash

Aztec, New Mexico 87410

(505) 334-4007

ENCANA OIL & GAS (USA) INC.

PIÑON UNIT D14-2410 #02H
1348' FNL & 436' FWL
LOCATED IN THE NW/4 NW/4 OF SECTION 14,
T24N, R10W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 28.2 MILES TO HWY 57 (M.P. 123.4).
- 2) TURN RIGHT ONTO HWY 57 AND GO 4.3 MILES.
- 3) TURN LEFT AND GO THROUGH GATE.
- 4) GO 0.1 MILES AND GO THROUGH SECOND GATE.
- 5) TRAVEL 0.7 MILES WHERE ACCESS IS STAKED ON LEFT SIDE OF ROAD.

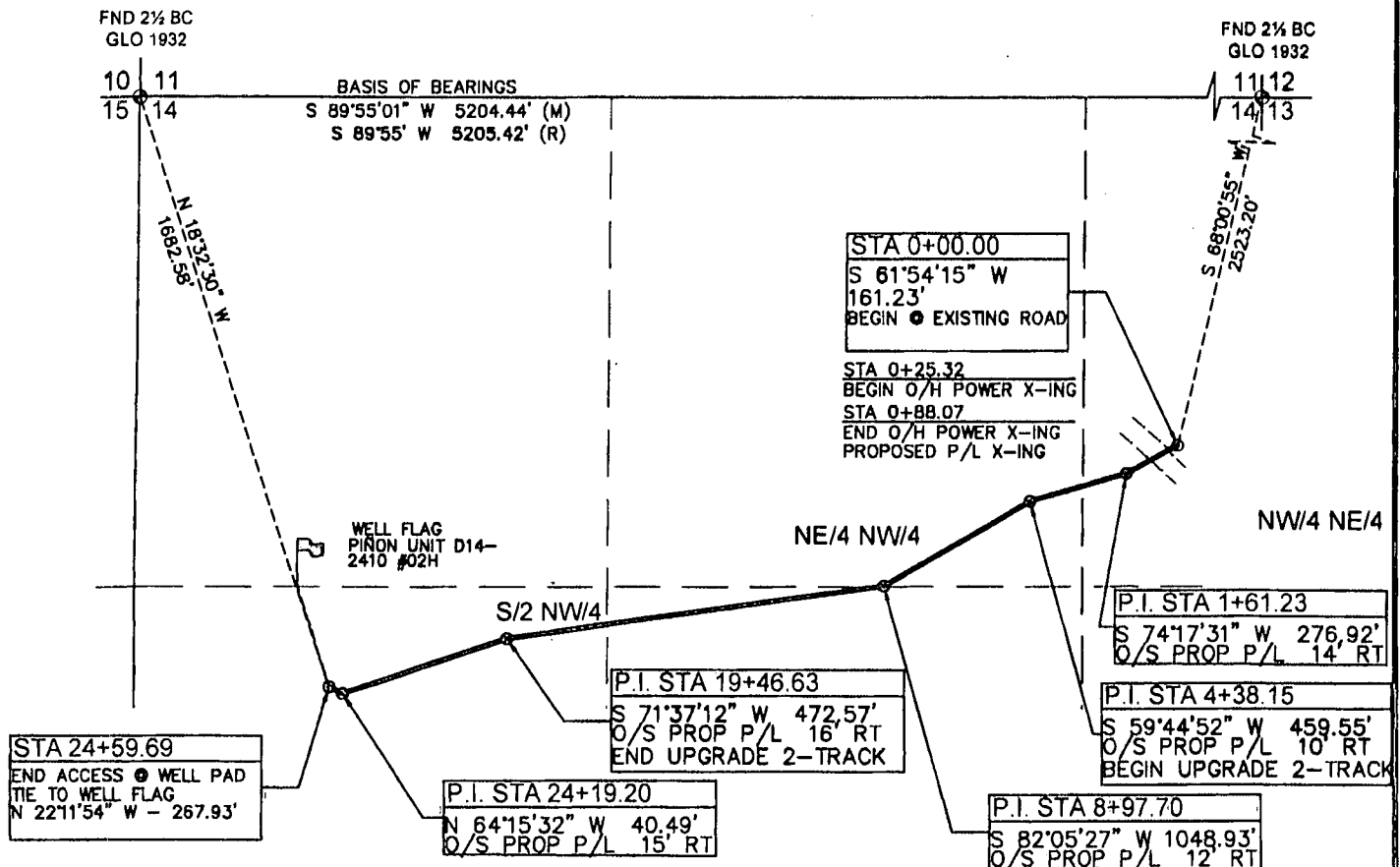
WELL FLAG LOCATED AT LAT. 36.317549° N, LONG. 107.873083° W (NAD 83).



PROPOSED ACCESS FOR
ENCANA OIL & GAS (USA) INC.
 PIÑON UNIT D14-2410 #02H
 LOCATED IN THE NW/4 NE/4, NE/4 NW/4, S/2 NW/4,
 OF SECTION 14,
 T24N, R10W, N.M.P.M.,
 SAN JUAN COUNTY, NEW MEXICO



250' 0 250' 500'
 SCALE = 500



NOTES:

1.) BASIS OF BEARING: BETWEEN FOUND MONUMENTS AT THE NORTHWEST CORNER AND THE NORTHEAST CORNER OF SECTION 14, TOWNSHIP 24 NORTH, RANGE 10 WEST, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO.
 LINE BEARS: S 89°55'01" W A DISTANCE OF 5204.44 FEET AS MEASURED BY G.P.S.

2.) LOCATION OF UNDERGROUND UTILITIES DETECTED ARE APPROXIMATE. PRIOR TO EXCAVATION UNDERGROUND UTILITIES SHOULD BE FIELD VERIFIED. ALL CONSTRUCTION ACTIVITIES SHOULD BE FIELD VERIFIED WITH NEW MEXICO ONE-CALL AUTHORITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

I, DAVID R. RUSSELL, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



~ SURFACE OWNERSHIP ~	
BUREAU OF LAND MANAGEMENT	
SECTION 14	
0+00 TO 24+59.89	
2459.89 FT/ 149.07 RODS	
DATE OF SURVEY	06/18/13 JC

DAVID R. RUSSELL, PLS
 NEW MEXICO L.S. #10201

JOB No.: ENC100

DATE: 05/13/14

DATE: 7-17-13



Scorpion Survey & Consulting, L.L.C.
 302 South Ash
 Aztec, New Mexico 87410
 (505) 334-4007

PROPOSED PIPELINE FOR ENCANA OIL & GAS (USA) INC.

PIÑON UNIT D14-2410 #02H
LOCATED IN THE NW/4 NE/4, NE/4 NW/4, S/2 NW/4,
OF SECTION 14,
T24N, R10W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO



250' 0 250' 500'



SCALE = 500

FND 2 1/4 BC
GLO 1932

FND 2 1/4 BC
GLO 1932

10 11
15 14
BASIS OF BEARINGS
S 89°55'01" W 5204.44' (M)
S 89°55' W 5205.42' (R)

11 12
14 13
N 88°05'21" E 2502.23'

S 18°54'51" E
1617.96'

N 88°05'21" E
2502.23'

WELL FLAG
PIÑON UNIT D14-
2410 #02H

STA 24+73.46
EOL • DUGAN OLYMPIC
TORCH TRUNKLINE

STA 24+84.52
C/L ROAD X-ING

NE/4 NW/4

NW/4 NE/4

S/2 NW/4

STA 0+00.00
S 64°04'29" E
40.74'
TAKEOFF • WELL PAD
TIE TO WELL FLAG
N 24°45'26" W - 258.23'

P.I. STA 0+40.74
Δ 44°46'58" LT
N 71°08'33" E 469.18'
O/S PROP ACCESS 15' RT

P.I. STA 5+09.92
Δ 11°07'53" RT
N 82°16'26" E 1043.35'
O/S PROP ACCESS 16' RT

P.I. STA 15+53.27
Δ 22°19'21" LT
N 59°57'03" E 452.29'
O/S PROP ACCESS 12' RT

P.I. STA 20+05.56
Δ 13°05'35" RT
N 73°02'40" E 430.47'
O/S PROP ACCESS 10' RT

STA 23+59.68
BEGIN O/H POWER X-ING
PROPOSED ACCESS X-ING
STA 24+20.54
END O/H POWER X-ING

P.I. STA 24+36.03
Δ 34°42'43" LT
N 38°19'57" E 37.43'
O/S PROP ACCESS 14' LT

NOTES:

1.) BASIS OF BEARING: BETWEEN FOUND MONUMENTS AT THE NORTHWEST CORNER AND THE NORTHEAST CORNER OF SECTION 14, TOWNSHIP 24 NORTH, RANGE 10 WEST, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO. LINE BEARS: S 89°55'01" W A DISTANCE OF 5204.44 FEET AS MEASURED BY G.P.S.

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~ SURFACE OWNERSHIP ~
BUREAU OF LAND MANAGEMENT
SECTION 14
0+00 TO 24+73.46
2473.46 FT / 149.91 RODS
DATE OF SURVEY 06/18/13 JC

DAVID R. RUSSELL, PLS
NEW MEXICO L.S. #10201

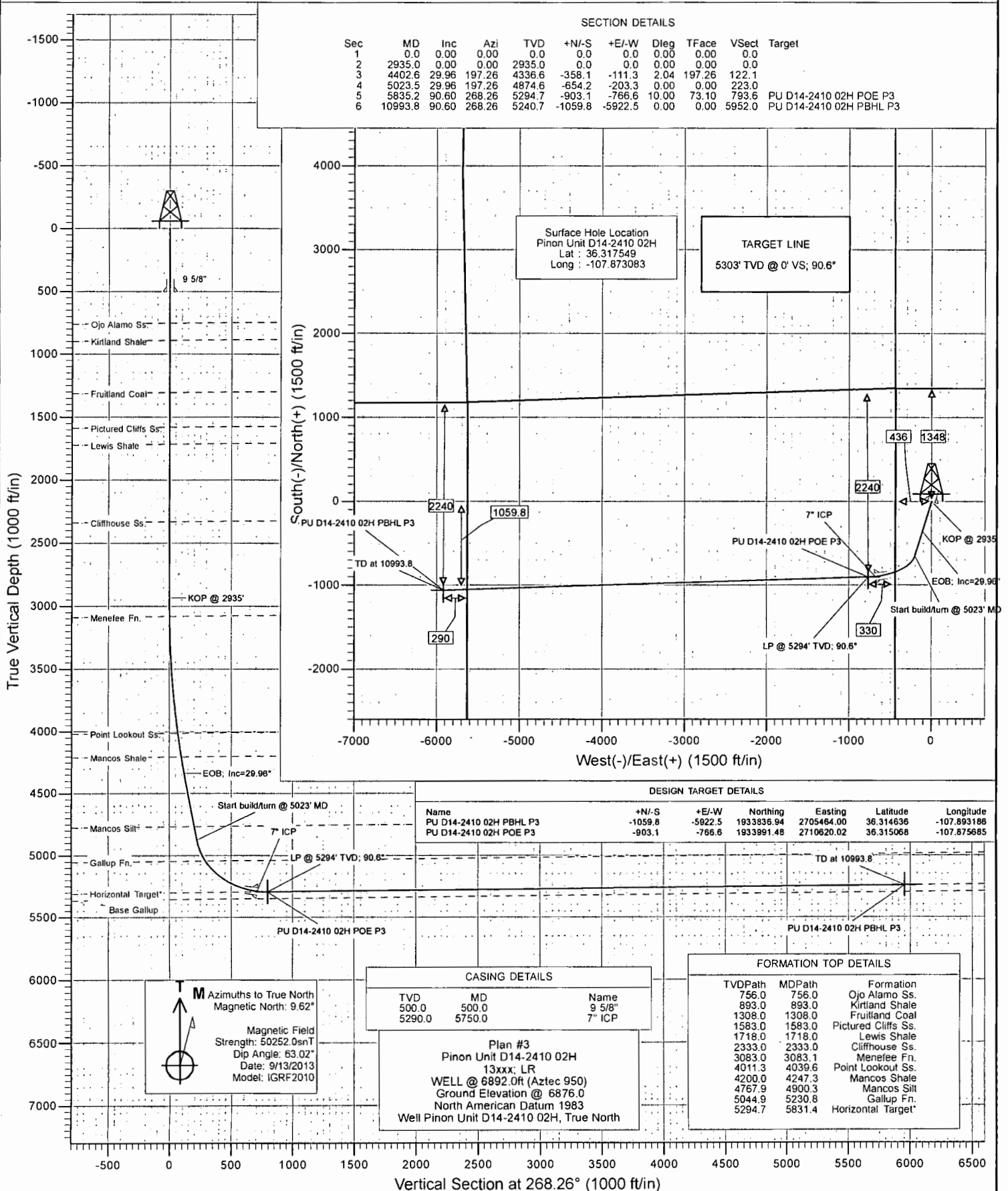
JOB No.: ENC100

DATE: 05/13/14

DATE: 7-30-13



Scorpion Survey &
Consulting, L.L.C.
302 South Ash
Aztec, New Mexico 87410
(505) 334-4007



Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S14-T24N-R10W
Well: Pinon Unit D14-2410 02H
Wellbore: Hz
Design: Plan #3

Local Co-ordinate Reference: Well Pinon Unit D14-2410 02H
TVD Reference: WELL @ 6892.0ft (Aztec 950)
MD Reference: WELL @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project:	San Juan County, NM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site		S14-T24N-R10W			
Site Position:		Northing:	1,934,894.31 ft	Latitude:	36.317549
From:	Lat/Long	Easting:	2,711,386.96 ft	Longitude:	-107.873083
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-0.02 °

Well	Pinon Unit D14-2410 02H					
Well Position	+N/-S	0.0 ft	Northing:	1,934,894.31 ft	Latitude:	36.317549
	+E/-W	0.0 ft	Easting:	2,711,386.96 ft	Longitude:	-107.873083
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,876.0 ft	

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/13/2013	9.62	63.02	50,252

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	268.26

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,935.0	0.00	0.00	2,935.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,402.6	29.96	197.26	4,336.6	-358.1	-111.3	2.04	2.04	0.00	197.26	
5,023.5	29.96	197.26	4,874.6	-654.2	-203.3	0.00	0.00	0.00	0.00	
5,835.2	90.60	268.26	5,294.7	-903.1	-766.6	10.00	7.47	8.75	73.10	PU D14-2410 02H PC
10,993.8	90.60	268.26	5,240.7	-1,059.8	-5,922.5	0.00	0.00	0.00	0.00	PU D14-2410 02H PE

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: San Juan County, NM
 Site: S14-T24N-R10W
 Well: Pinon Unit D14-2410 02H
 Wellbore: Hz
 Design: Plan #3

Local Co-ordinate Reference: Well Pinon Unit D14-2410 02H
 TVD Reference: WELL @ 6892.0ft (Aztec 950)
 MD Reference: WELL @ 6892.0ft (Aztec 950)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	9 5/8"
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
756.0	0.00	0.00	756.0	0.0	0.0	0.0	0.00	0.00	Ojo Alamo Ss.
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
893.0	0.00	0.00	893.0	0.0	0.0	0.0	0.00	0.00	Kirtland Shale
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	
1,308.0	0.00	0.00	1,308.0	0.0	0.0	0.0	0.00	0.00	Fruitland Coal
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	
1,583.0	0.00	0.00	1,583.0	0.0	0.0	0.0	0.00	0.00	Pictured Cliffs Ss.
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	
1,718.0	0.00	0.00	1,718.0	0.0	0.0	0.0	0.00	0.00	Lewis Shale
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	
2,333.0	0.00	0.00	2,333.0	0.0	0.0	0.0	0.00	0.00	Cliffhouse Ss.
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	
2,935.0	0.00	0.00	2,935.0	0.0	0.0	0.0	0.00	0.00	KOP @ 2935'
3,000.0	1.33	197.26	3,000.0	-0.7	-0.2	0.2	2.04	2.04	
3,083.1	3.02	197.26	3,083.0	-3.7	-1.2	1.3	2.04	2.04	Menefee Fn.
3,100.0	3.37	197.26	3,099.9	-4.6	-1.4	1.6	2.04	2.04	
3,200.0	5.41	197.26	3,199.6	-11.9	-3.7	4.1	2.04	2.04	
3,300.0	7.45	197.26	3,299.0	-22.6	-7.0	7.7	2.04	2.04	
3,400.0	9.49	197.26	3,397.9	-36.7	-11.4	12.5	2.04	2.04	
3,500.0	11.53	197.26	3,496.2	-54.1	-16.8	18.5	2.04	2.04	
3,600.0	13.57	197.26	3,593.8	-74.9	-23.3	25.5	2.04	2.04	
3,700.0	15.62	197.26	3,690.6	-98.9	-30.7	33.7	2.04	2.04	
3,800.0	17.66	197.26	3,786.4	-126.3	-39.2	43.1	2.04	2.04	
3,900.0	19.70	197.26	3,881.1	-156.9	-48.7	53.5	2.04	2.04	
4,000.0	21.74	197.26	3,974.6	-190.6	-59.2	65.0	2.04	2.04	
4,039.6	22.55	197.26	4,011.3	-204.9	-63.7	69.9	2.04	2.04	Point Lookout Ss.
4,100.0	23.78	197.26	4,066.8	-227.6	-70.7	77.6	2.04	2.04	
4,200.0	25.82	197.26	4,157.6	-267.6	-83.2	91.2	2.04	2.04	

Planning Report

Database: USA EDM 5000 Multi Users DB
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 Project: San Juan County, NM
 Site: S14-T24N-R10W
 Well: Pinon Unit D14-2410 02H
 Wellbore: Hz
 Design: Plan #3

Local Co-ordinate Reference: Well Pinon Unit D14-2410 02H
 TVD Reference: WELL @ 6892.0ft (Aztec 950)
 MD Reference: WELL @ 6892.0ft (Aztec 950)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,247.3	26.79	197.26	4,200.0	-287.6	-89.4	98.1	2.04	2.04	Mancos Shale
4,300.0	27.86	197.26	4,246.8	-310.8	-96.6	105.9	2.04	2.04	
4,400.0	29.90	197.26	4,334.4	-356.9	-110.9	121.7	2.04	2.04	
4,402.6	29.96	197.26	4,336.6	-358.1	-111.3	122.1	2.04	2.04	EOB; Inc=29.96°
4,500.0	29.96	197.26	4,421.0	-404.6	-125.7	137.9	0.00	0.00	
4,600.0	29.96	197.26	4,507.7	-452.2	-140.5	154.2	0.00	0.00	
4,700.0	29.96	197.26	4,594.3	-499.9	-155.3	170.4	0.00	0.00	
4,800.0	29.96	197.26	4,681.0	-547.6	-170.2	186.7	0.00	0.00	
4,900.0	29.96	197.26	4,767.6	-595.3	-185.0	203.0	0.00	0.00	
4,900.3	29.96	197.26	4,767.9	-595.5	-185.0	203.0	0.00	0.00	Mancos Silt
5,000.0	29.96	197.26	4,854.2	-643.0	-199.8	219.2	0.00	0.00	
5,023.5	29.96	197.26	4,874.6	-654.2	-203.3	223.0	0.00	0.00	Start build/turn @ 5023' MD
5,100.0	32.93	210.81	4,939.9	-690.3	-219.6	240.5	10.00	3.88	
5,200.0	38.59	224.98	5,021.2	-735.9	-255.7	277.9	10.00	5.67	
5,230.8	40.63	228.60	5,044.9	-749.3	-270.0	292.6	10.00	6.62	Gallup Fn.
5,300.0	45.57	235.71	5,095.5	-778.1	-307.4	330.8	10.00	7.13	
5,400.0	53.32	244.04	5,160.5	-815.9	-373.1	397.7	10.00	7.76	
5,500.0	61.55	250.80	5,214.3	-848.0	-450.8	476.4	10.00	8.23	
5,600.0	70.07	256.56	5,255.3	-873.5	-538.3	564.6	10.00	8.51	
5,700.0	78.75	261.72	5,282.2	-891.5	-632.8	659.6	10.00	8.68	
5,750.0	83.12	264.17	5,290.0	-897.5	-681.8	708.7	10.00	8.75	7" ICP
5,800.0	87.51	266.58	5,294.1	-901.6	-731.4	758.5	10.00	8.78	
5,831.4	90.26	268.08	5,294.7	-903.0	-762.7	789.8	10.00	8.78	Horizontal Target*
5,835.2	90.60	268.26	5,294.7	-903.1	-766.6	793.6	10.00	8.78	LP @ 5294' TVD; 90.6°
5,900.0	90.60	268.26	5,294.0	-905.1	-831.3	858.4	0.00	0.00	
6,000.0	90.60	268.26	5,293.0	-908.1	-931.3	958.4	0.00	0.00	
6,100.0	90.60	268.26	5,291.9	-911.2	-1,031.2	1,058.4	0.00	0.00	
6,200.0	90.60	268.26	5,290.9	-914.2	-1,131.2	1,158.4	0.00	0.00	
6,300.0	90.60	268.26	5,289.8	-917.3	-1,231.1	1,258.4	0.00	0.00	
6,400.0	90.60	268.26	5,288.8	-920.3	-1,331.1	1,358.4	0.00	0.00	
6,500.0	90.60	268.26	5,287.7	-923.3	-1,431.0	1,458.4	0.00	0.00	
6,600.0	90.60	268.26	5,286.7	-926.4	-1,531.0	1,558.4	0.00	0.00	
6,700.0	90.60	268.26	5,285.6	-929.4	-1,630.9	1,658.4	0.00	0.00	
6,800.0	90.60	268.26	5,284.6	-932.4	-1,730.9	1,758.4	0.00	0.00	
6,900.0	90.60	268.26	5,283.6	-935.5	-1,830.8	1,858.4	0.00	0.00	
7,000.0	90.60	268.26	5,282.5	-938.5	-1,930.8	1,958.4	0.00	0.00	
7,100.0	90.60	268.26	5,281.5	-941.6	-2,030.7	2,058.4	0.00	0.00	
7,200.0	90.60	268.26	5,280.4	-944.6	-2,130.7	2,158.4	0.00	0.00	
7,300.0	90.60	268.26	5,279.4	-947.6	-2,230.6	2,258.4	0.00	0.00	
7,400.0	90.60	268.26	5,278.3	-950.7	-2,330.6	2,358.4	0.00	0.00	
7,500.0	90.60	268.26	5,277.3	-953.7	-2,430.5	2,458.4	0.00	0.00	
7,600.0	90.60	268.26	5,276.2	-956.7	-2,530.5	2,558.3	0.00	0.00	
7,700.0	90.60	268.26	5,275.2	-959.8	-2,630.4	2,658.3	0.00	0.00	
7,800.0	90.60	268.26	5,274.1	-962.8	-2,730.4	2,758.3	0.00	0.00	
7,900.0	90.60	268.26	5,273.1	-965.8	-2,830.3	2,858.3	0.00	0.00	
8,000.0	90.60	268.26	5,272.0	-968.9	-2,930.3	2,958.3	0.00	0.00	
8,100.0	90.60	268.26	5,271.0	-971.9	-3,030.2	3,058.3	0.00	0.00	
8,200.0	90.60	268.26	5,269.9	-975.0	-3,130.2	3,158.3	0.00	0.00	
8,300.0	90.60	268.26	5,268.9	-978.0	-3,230.1	3,258.3	0.00	0.00	
8,400.0	90.60	268.26	5,267.9	-981.0	-3,330.1	3,358.3	0.00	0.00	
8,500.0	90.60	268.26	5,266.8	-984.1	-3,430.0	3,458.3	0.00	0.00	
8,600.0	90.60	268.26	5,265.8	-987.1	-3,530.0	3,558.3	0.00	0.00	

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: San Juan County, NM
Site: S14-T24N-R10W
Well: Pinon Unit D14-2410 02H
Wellbore: Hz
Design: Plan #3

Local Co-ordinate Reference: Well Pinon Unit D14-2410 02H
TVD Reference: WELL @ 6892.0ft (Aztec 950)
MD Reference: WELL @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,700.0	90.60	268.26	5,264.7	-990.1	-3,629.9	3,658.3	0.00	0.00	
8,800.0	90.60	268.26	5,263.7	-993.2	-3,729.8	3,758.3	0.00	0.00	
8,900.0	90.60	268.26	5,262.6	-996.2	-3,829.8	3,858.3	0.00	0.00	
9,000.0	90.60	268.26	5,261.6	-999.3	-3,929.7	3,958.3	0.00	0.00	
9,100.0	90.60	268.26	5,260.5	-1,002.3	-4,029.7	4,058.3	0.00	0.00	
9,200.0	90.60	268.26	5,259.5	-1,005.3	-4,129.6	4,158.3	0.00	0.00	
9,300.0	90.60	268.26	5,258.4	-1,008.4	-4,229.6	4,258.3	0.00	0.00	
9,400.0	90.60	268.26	5,257.4	-1,011.4	-4,329.5	4,358.3	0.00	0.00	
9,500.0	90.60	268.26	5,256.3	-1,014.4	-4,429.5	4,458.2	0.00	0.00	
9,600.0	90.60	268.26	5,255.3	-1,017.5	-4,529.4	4,558.2	0.00	0.00	
9,700.0	90.60	268.26	5,254.2	-1,020.5	-4,629.4	4,658.2	0.00	0.00	
9,800.0	90.60	268.26	5,253.2	-1,023.5	-4,729.3	4,758.2	0.00	0.00	
9,900.0	90.60	268.26	5,252.1	-1,026.6	-4,829.3	4,858.2	0.00	0.00	
10,000.0	90.60	268.26	5,251.1	-1,029.6	-4,929.2	4,958.2	0.00	0.00	
10,100.0	90.60	268.26	5,250.1	-1,032.7	-5,029.2	5,058.2	0.00	0.00	
10,200.0	90.60	268.26	5,249.0	-1,035.7	-5,129.1	5,158.2	0.00	0.00	
10,300.0	90.60	268.26	5,248.0	-1,038.7	-5,229.1	5,258.2	0.00	0.00	
10,400.0	90.60	268.26	5,246.9	-1,041.8	-5,329.0	5,358.2	0.00	0.00	
10,500.0	90.60	268.26	5,245.9	-1,044.8	-5,429.0	5,458.2	0.00	0.00	
10,600.0	90.60	268.26	5,244.8	-1,047.8	-5,528.9	5,558.2	0.00	0.00	
10,700.0	90.60	268.26	5,243.8	-1,050.9	-5,628.9	5,658.2	0.00	0.00	
10,800.0	90.60	268.26	5,242.7	-1,053.9	-5,728.8	5,758.2	0.00	0.00	
10,900.0	90.60	268.26	5,241.7	-1,056.9	-5,828.8	5,858.2	0.00	0.00	
10,993.8	90.60	268.26	5,240.7	-1,059.8	-5,922.5	5,952.0	0.00	0.00	TD at 10993.8

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Good Times D14-2410 0 - plan misses target center by 443.4ft at 5814.5ft MD (5294.6 TVD, -902.3 N, -745.9 E) - Point	0.00	0.00	5,295.9	-459.4	-766.6	1,934,435.23	2,710,620.21	36.316287	-107.875685
Good Times D14-2410 0 - plan misses target center by 13.0ft at 5835.3ft MD (5294.7 TVD, -903.1 N, -766.7 E) - Point	0.00	0.00	5,281.7	-903.1	-766.6	1,933,991.48	2,710,620.02	36.315068	-107.875685
PU D14-2410 02H PBH - plan hits target center - Point	0.00	0.00	5,240.7	-1,059.8	-5,922.5	1,933,836.94	2,705,464.00	36.314636	-107.893186
Good Times D14-2410 0 - plan misses target center by 15.0ft at 10373.4ft MD (5247.2 TVD, -1041.0 N, -5302.4 E) - Point	0.00	0.00	5,234.1	-1,048.3	-5,302.1	1,933,848.22	2,706,084.46	36.314668	-107.891080
PU D14-2410 02H POE - plan hits target center - Point	0.00	0.00	5,294.7	-903.1	-766.6	1,933,991.48	2,710,620.02	36.315068	-107.875685
Good Times D14-2410 0 - plan misses target center by 472.3ft at 10359.8ft MD (5247.3 TVD, -1040.5 N, -5288.8 E) - Point	0.00	0.00	5,248.3	-568.5	-5,303.2	1,934,328.01	2,706,083.56	36.315986	-107.891084

Planning Report

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Wellbore: Hz
Design: Plan #3

Local Co-ordinate Reference: Well Pinon Unit D14-2410 02H
TVD Reference: WELL @ 6892.0ft (Aztec 950)
MD Reference: WELL @ 6892.0ft (Aztec 950)
North Reference: True
Survey Calculation Method: Minimum Curvature

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
500.0	500.0	9 5/8"	0.000	0.000
5,750.0	5,290.0	7" ICP	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
756.0	756.0	Ojo Alamo Ss.		-0.60	268.26
893.0	893.0	Kirtland Shale		-0.60	268.26
1,308.0	1,308.0	Fruitland Coal		-0.60	268.26
1,583.0	1,583.0	Pictured Cliffs Ss.		-0.60	268.26
1,718.0	1,718.0	Lewis Shale		-0.60	268.26
2,333.0	2,333.0	Cliffhouse Ss.		-0.60	268.26
3,083.1	3,083.0	Menefee Fn.		-0.60	268.26
4,039.6	4,012.0	Point Lookout Ss.		-0.60	268.26
4,247.3	4,201.0	Mancos Shale		-0.60	268.26
4,900.3	4,770.0	Mancos Silt		-0.60	268.26
5,230.8	5,048.0	Gallup Fn.		-0.60	268.26
5,831.4	5,303.0	Horizontal Target*		-0.60	268.26

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,935.0	2,935.0	0.0	0.0	KOP @ 2935'
4,402.6	4,336.6	-358.1	-111.3	EOB; Inc=29.96°
5,023.5	4,874.6	-654.2	-203.3	Start build/turn @ 5023' MD
5,835.2	5,294.7	-903.1	-766.6	LP @ 5294' TVD; 90.6°
10,993.8	5,240.7	-1,059.8	-5,922.5	TD at 10993.8

Pinon Unit D14-2410 02H
SHL: SWNW 14 24N 10W
1348 FNL 43~~4~~ FWL
BHL: SENE 16 24N 10W
2240 FNL 290 FEL
San Juan, New Mexico

Encana Oil & Gas (USA) Inc. Drilling Plan

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD) units = feet
Ojo Alamo Ss.	756
Kirtland Shale	893
Fruitland Coal	1,308
Pictured Cliffs Ss.	1,583
Lewis Shale	1,718
Cliffhouse Ss.	2,333
Menefee Fn.	3,083
Point Lookout Ss.	4,012
Mancos Shale	4,201
Mancos Silt	4,770
Gallup Fn.	5,048

The referenced surface elevation is 6876', KB 6892'

2. ESTIMATED DEPTH OF POTENTIAL WATER, OIL, GAS, & OTHER MINERAL BEARING FORMATIONS

Substance	Formation	Depth (TVD) units = feet
Water/Gas	Fruitland Coal	1,308
Oil/Gas	Pictured Cliffs Ss.	1,583
Oil/Gas	Cliffhouse Ss.	2,333
Gas	Menefee Fn.	3,083
Oil/Gas	Point Lookout Ss.	4,012
Oil/Gas	Mancos Shale	4,201
Oil/Gas	Mancos Silt	4,770
Oil/Gas	Gallup Fn.	5,048

All shows of fresh water and minerals will be reported and protected.

3. PRESSURE CONTROL

- Pressure control equipment and configuration will be designed to meet 2M standards.
- Working pressure on rams and BOPE will be 3,000 psi.
- Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
- The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
- Blind and Pipe Rams/BOP will be tested against a test plug to 100 percent of rated working pressure.
- Pressure tests are required before drilling out from under all casing strings set and cemented in place.

Pinon Unit D14-2410 02H
 SHL: SWNW 14 24N 10W
 1348 FNL 43 FWL
 BHL: SENE 16 24N 10W
 2240 FNL 290 FEL
 San Juan, New Mexico

- g) BOP controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned.
- h) BOP testing procedures and testing frequency will conform to Onshore Order No. 2.
- i) BOP remote controls shall be located on the rig floor at a location readily accessible to the driller. Master controls shall be on the ground at the accumulator and shall have the capability to function all preventers.
- j) The kill line shall be 2-inch minimum and contain two kill line valves, one of which shall be a check valve.
- k) The choke line shall be a 2-inch minimum and contain two choke line valves (2-inch minimum).
- l) The choke and manifold shall contain two adjustable chokes.
- m) Hand wheels shall be installed on all ram preventers.
- n) Safety valves and wrenches (with subs for drill string connections) shall be available on the rig floor at all
- o) Inside BOP or float sub shall also be available on the rig floor at all times.

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

The proposed casing and cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

- a) The proposed casing design is as follows:

Casing	Depth (MD)	Hole Size	Csg Size	Weight	Grade
Conductor	0'-60'	30"	20"	94#	
Surface	0'-500'	12 1/4"	9 5/8"	36#	J55, STC New
Intermediate	0'-5750'	8 3/4"	7"	26#	J55, LTC New
Production Liner	5550'-10994'	6 1/8"	4 1/2"	11.6#	B80*, LTC New

Casing String				Casing Strength Properties			Minimum Design Factors		
Size	Weight (ppf)	Grade	Connection	Collapse (psi)	Burst (psi)	Tensile (1000lbs)	Collapse	Burst	Tension
9 5/8"	36	J55	STC	2020	3520	394	1.125	1.1	1.5
7"	26	J55	LTC	4320	4980	367	1.125	1.1	1.5
4.5"	11.6	B80	LTC	6350	7780	201	1.125	1.1	1.5

*B80 pipe specifications are attached

Casing design is subject to revision based on geologic conditions encountered

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

Pinon Unit D14-2410 02H
 SHL: SWNW 14 24N 10W
 1348 FNL 430 FWL
 BHL: SENE 16 24N 10W
 2240 FNL 290 FEL
 San Juan, New Mexico

b) The proposed cementing program is as follows

Casing	Depth (MD)	Cement Volume (sacks)	Cement Type & Yield	Designed TOC	Centralizers
Conductor	0'-60'	100 sks	Type I Neat 16 ppg	Surface	None
Surface	0'-500'	314 sks	HALCEM™ SYSTEM + 2% CaCl ₂ + 0.125lbm/sk Poly-E-Flake. 15.8 ppg, 1.174 cuft/sk	Surface	1 per joint on bottom 3 joints
Intermediate	0'-5750'	30% open hole excess Stage 1 Lead: 344 sks Stage 1 Tail: 406 sks Stage 2 Lead: 171 sks	Stage 1 Lead: HALCEM™ SYSTEM + 0.2% HR-5 + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly-E-Flake. 12.3 ppg, 1.948 cuft/sk Stage 1 Tail: VARICEM™ CEMENT + .15% CFR-3 + 5lbm/sk Kol-Seal + 0.125% Poly-E-Flake. 13.5 ppg, 1.308 cuft/sk. Stage 2 Contingency: HALCEM™ SYSTEM + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly-E-Flake. 12.3 ppg,	Surface	1 every 3 joints through water bearing zones
Production Liner	5550'-10994'	None - External Casing Packers	N/A	N/A	N/A

*Production liner clarification: Utilizing external swell casing packer system for zonal isolation will not use cement in the production liner

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed horizontal well will have a kick off point of 2935'. Directional plans are attached.

Description	Proposed Depth (TVD/MD)	Formation
Horizontal Lateral TD	5241'/10994'	Gallup

Pinon Unit D14-2410 02H
 SHL: SWNW 14 24N 10W
 1348 FNL 434 FWL
 BHL: SENE 16 24N 10W
 2240 FNL 290 FEL
 San Juan, New Mexico

6. DRILLING FLUIDS PROGRAM

a) Surface through Intermediate Casing Point:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
30"	0-60'/60'	Fresh Water	8.3-9.2	38-100	4-28
12 1/4"	0'-500'/500'	Fresh Water	8.3-10	60-70	NC
8 3/4"	500'/500'-5290'/5750'	Fresh Water LSND	8.3-10	40-50	8-10

b) Intermediate Casing Point to TD:

Hole Size (in)	Depth (TVD/MD)	Mud Type	Density (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
6 1/8"	5290'/5750'- 5241'/10994'	Fresh Water LSND	8.3-10	15-25	<15

- c) There will be sufficient mud on location to control a blowout should one occur. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers. Mud tests shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.
- d) A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystems, Inc. The location will be lined in accordance with the Surface Use Plan of Operations.

7. TESTING, CORING, & LOGGING

- a) Drill Stem Testing - None anticipated.
- b) Coring - None anticipated.
- c) Mudd Logging - Mud loggers will be on location from kick off point to TD.
- d) Logging - See below

Cased Hole:
 CBL/CCL/GR/VDL will be run as needed for perforating control

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2482 psi based on a 9.0 ppg at 5303' TVD of the horizontal lateral target. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H₂S is encountered, the guidelines in Onshore Order No. 6 will be followed.

Pinon Unit D14-2410 02H
SHL: SWNW 14 24N 10W
1348 FNL 436 FWL
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9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on November 16, 2014. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

It is anticipated that the drilling of this well will take approximately 20 days.

LOC: SE/4 NE/4 15 24N 10W 2240FNL 7				Encana Natural Gas				ENG: 0		7/8/14	
County: San Juan				WELL SUMMARY				RIG: Aztec 950			
WELL: Pinon Unit D14-2410 02H								GLE: 6876.4			
								RKBE: 6892.4			
MWD	OPEN HOLE	FORM	DEPTH			HOLE	CASING	MW	DEVIATION		
LWD	LOGGING		TVD	MD						SIZE	SPECS
			60	60'		30	16" 42.09# 100sx Type I Neat 16.0ppg cmt	Fresh wtr 8.3-9.2			
Multi-Well pad - take survey every stand and run anti- collision report prior to spud	None					12 1/4	9 5/8" 36ppf J55 STC	Fresh wtr	Vertical <1°		
		Nacimiento 9 5/8" Csg	0 500	500.00			TOC Surface with 100% OH Excess: 314 sks of HALCEM™ SYSTEM + 2% CaCl2 + 0.125lbm/sk Poly-E-Flake. Mixed at 15.8 ppg. Yield 1.174 cuft/sk.	8.3-10			
Survey Every 60'-120', updating anticollision report after surveys. Stop operations and contact drilling engineer if separation factor approaches 1.5	No OH logs	Ojo Alamo Ss. Kirtland Shale	756 893	Stage tool @ ~ 1,768	8 3/4	7" 26ppf J55 LTC	Fresh Wtr	Vertical <1°			
		Fruitland Coal	1,308			TOC @ surface (30% OH excess) Stage 1 Total: 750sks If necessary, Stage 2 Total: 171sks	8.3-10				
		Pictured Cliffs Ss. Lewis Shale	1,583 1,718			Stage 1 Lead: 344 sks HALCEM™ SYSTEM + 0.2% HR-5 + 5lbm/sk Kol- Seal + 0.125lbm/sk Poly-E-Flake. Mixed at 12.3 ppg. Yield 1.948 cuft/sk.					
		Cliffhouse Ss. Menefee Fn.	2,333 3,083			Stage 1 Tail: 406 sks VARICEM™ CEMENT + .15% CFR-3 + 5lbm/sk Kol- Seal + 0.125% Poly-E-Flake. Mixed at 13.5 ppg. Yield 1,308 cuft/sk.					
Surveys every 30' through the curve	Mud logger onsite	Point Lookout Ss. Mancos Shale	4,012 4,201			Stage 2: 171 sks HALCEM™ SYSTEM + 5lbm/sk Kol-Seal + 0.125lbm/sk Poly- E-Flake. Mixed at 12.3 ppg. Yield 1,946 cuft/sk.					
		KOP	2,935			2,935					
		Mancos Silt	4,770								
Surveys every stand to TD unless directed otherwise by Geologist	No OH Logs	Gallup Fn.	5,048			200' overlap at liner top		Horiz Inc/TVD 90.6°deg/5303.4ft TD = 10993.8 MD			
		7" Csg	5,290			5,750'	5244' Drilled Lateral				
		Horizontal Target TD	5,303 5,241			10,994	4 1/2" 11.6ppf SB80 LTC		WBM 8.3-10		
MWD Gamma Directional		Base Gallup	5,359			Running external swellable csg packers for isolation of prod string					

NOTES:

- 1) Drill with 30" bit to 60', set 20" 94# conductor pipe
- 2) Drill surface to 500', R&C 9 5/8" casing
- 3) N/U BOP and surface equipment
- 4) Drill to KOP of 2935', 8 3/4 inch holesize
- 5) Start curve at 10deg/100' build rate
- 6) Drill to csg point of 5750' MD
- 7) R&C 7" csg, circ cmt to surface, switch to WBM
- 8) Land at 90 deg, drill lateral to 10994' run 4 1/2 inch liner with external swellable csg packers