

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**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.
NMNM0175774

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
LUSK 28 WEST FED COM 2H9. API Well No.
30-025-41256-00-X110. Field and Pool, or Exploratory
LUSK11. County or Parish, and State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
OCCIDENTAL PERMIAN LPContact: JENNIFER A DUARTE
E-Mail: jennifer_duarte@oxy.com

3a. Address

MIDLAND, TX 79710

3b. Phone No. (include area code)

Ph: 713-513-6640

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 28 T19S R32E SESW 865FSL 1645FWL

JUN 20 2014

RECEIVED

12. CHECK 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
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

OCCIDENTAL PERMIAN LP RESPECTFULLY REQUEST TO MOVE LUSK 28 WEST FED COM #2H WELL TO THE REVISED LOCATION ABOVE. THE MOVE IS NEEDED BECAUSE THERE HAVE BEEN ELECTRICAL LINES INSTALLED TOO CLOSE TO THE OLD LOCATION TO ALLOW US TO PUT A RIG TO DRILL. IN THE ATTACHED, PLEASE FIND THE REVISED PLATS, CORRECTIONS TO THE DRILLING PLAN AND THE REVISED DIRECTIONAL PLAN. SHOULD YOU HAVE ANY QUESTIONS OR NEED ANY ADDITIONAL INFORMATION, PLEASE FEEL FREE TO CONTACT ME AT ANY TIME.

Previous COAs Apply CRW 6/3/14

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #247769 verified by the BLM Well Information System

For OCCIDENTAL PERMIAN LP, sent to the Hobbs

Committed to AFMSS for processing by CHRISTOPHER WALLS on 06/03/2014 (14CRW0182SE)

Name (Printed/Typed) JENNIFER A DUARTE

Title REGULATORY SPECIALIST

Signature (Electronic Submission)

Date 06/02/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

FIELD MANAGER

Title

Date

6/9/14

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.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212. make it a crime for any person know States any false, fictitious or fraudulent statements or representations as to any matter within its jur

CARLSBAD FIELD OFFICE

Office

E-PERMITTING - CSNG

P&A

TA

COMP

NEW WELL

LOC CHG

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** BLM REVISED ** BLM REVISED ** BLM REVISED

JUN 24 2014

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0121
District II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6179
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87503
Phone: (505) 476-3460 Fax: (505) 476-3462

HOBBS OCD

JUN 20 2014

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WELL LOCATION AND ACREAGE DEDICATION PLAT

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 August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

API Number 30-025-41256	Pool Code 414100	Pool Name Lusk; Bone Spring South
Property Code 40005	Property Name LUSK "28" WEST FED. COM	Well Number 2H
OGRID No. 157984	Operator Name Occidental Permian LP.	Elevation 3558.6'

Surface Location

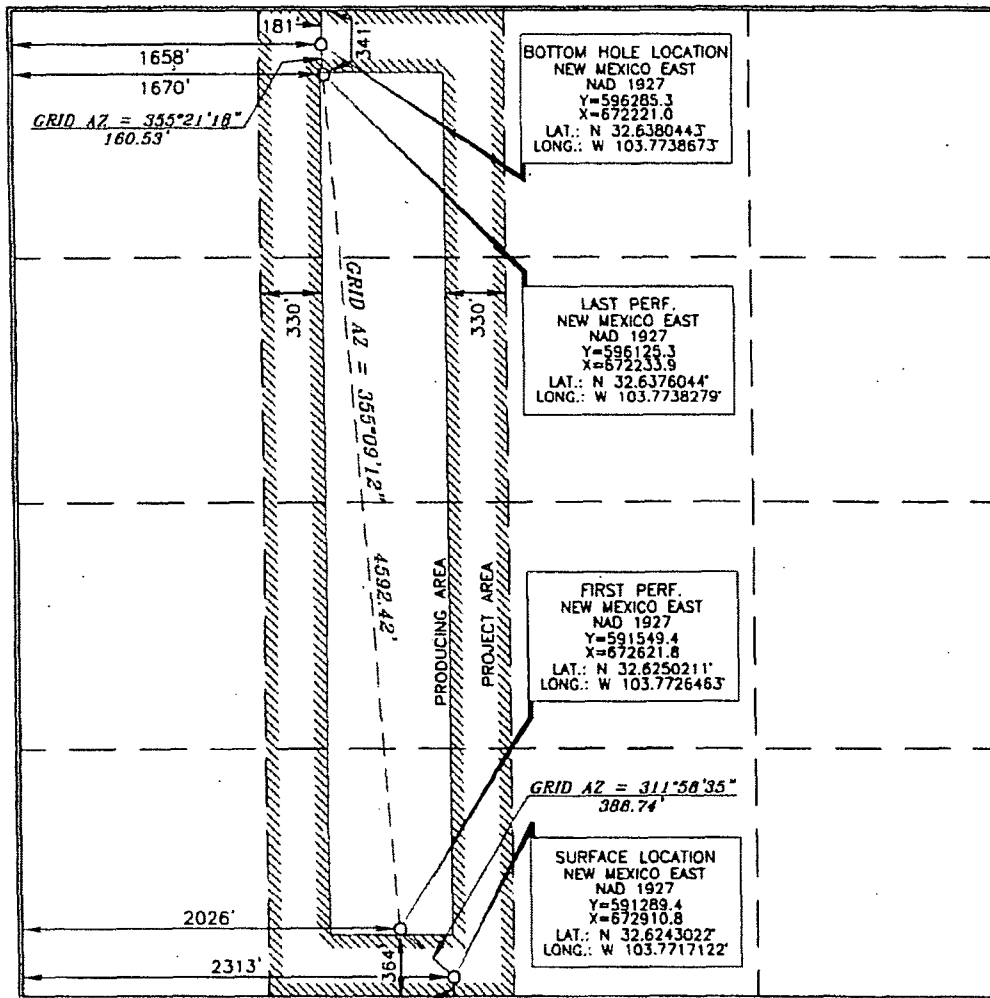
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	28	19 SOUTH	32 EAST, N.M.P.M.		103'	SOUTH	2313'	WEST	LEA

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
C	28	19 SOUTH	32 EAST, N.M.P.M.		181'	NORTH	1658'	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
1600			

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.

Accepted and entered by the division:

Jennifer Duarte 6/2/14
Signature Date
Jennifer Duarte
Printed Name
jennifer.duarte@oxy.com
Email Address

SURVEYOR CERTIFICATION

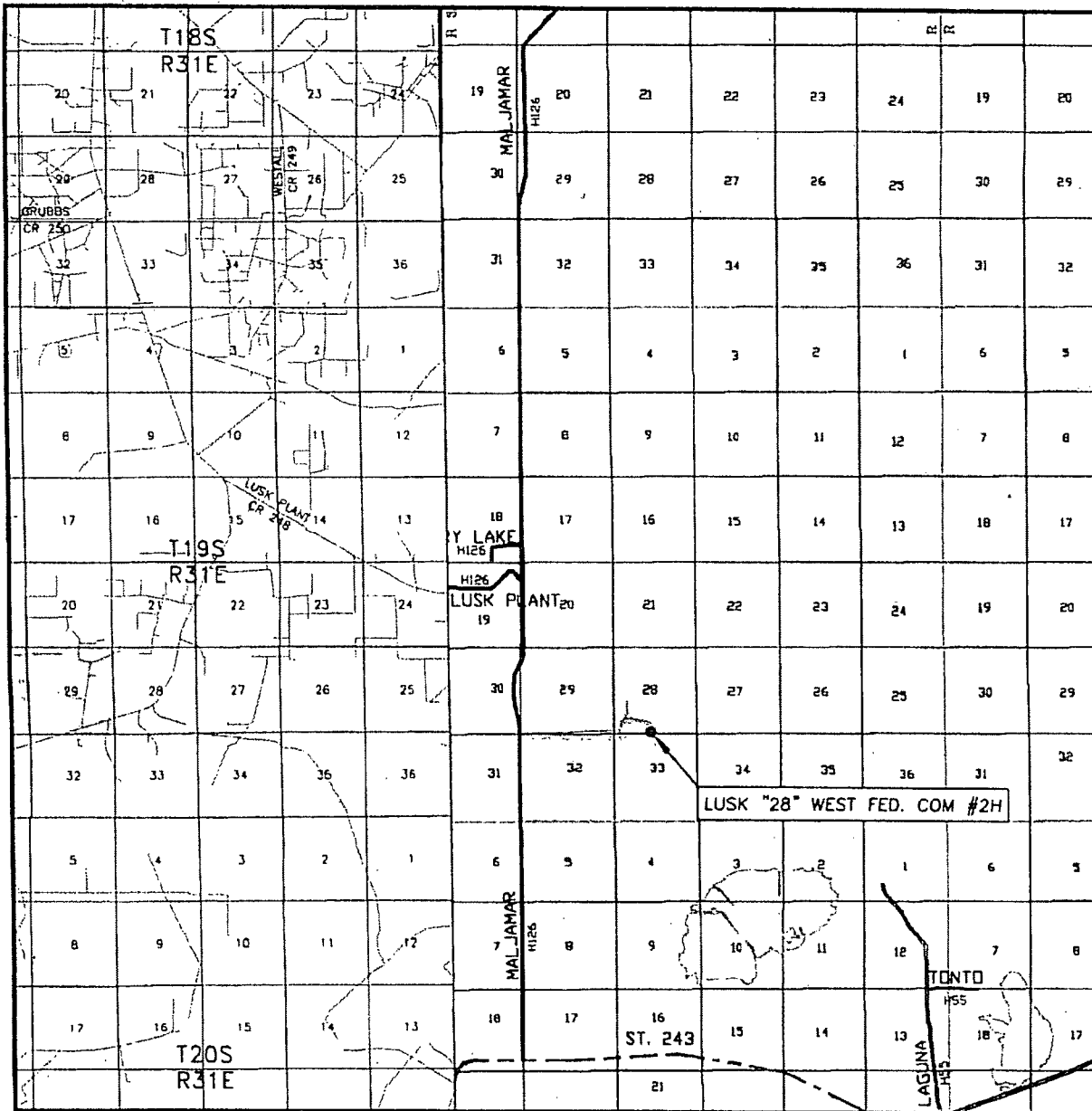
I hereby certify that the location shown on this plat was plotted from field notes and surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey **MAY 28 2014**

Signature and Seal
Professional Surveyor

Jeffrey A. Noel 5/30/2014
Certificate Number 15079

VICINITY MAP



SEC. 28 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 103' FSL & 2313' FWL

ELEVATION 3558.6'

OPERATOR *Occidental Permian LP*

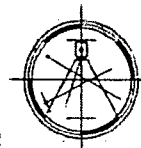
LEASE LUSK "28" WEST FED. COM #2H

DIRECTIONS BEGINNING AT THE INTERSECTION OF U.S. HWY. #62/180 AND STATE HWY. #176, GO NORTHEAST ON STATE HWY. #176 FOR 3.0 MILES, GO EAST FOR 0.8 MILES, TURN LEFT ON COUNTY ROAD #126A AND GO NORTH FOR 3.8 MILES, TURN RIGHT ON CALICHE ROAD AND GO EAST FOR 1.1 MILES, TURN LEFT AND GO NORTHEAST FOR 0.2 MILES, GO EAST FOR 0.2 MILES, TURN RIGHT AND GO SOUTHEAST/SOUTH FOR 0.2 MILES, TURN RIGHT ON PROPOSED ROAD AND GO NORTH FOR 146.8 FEET TO LOCATION.

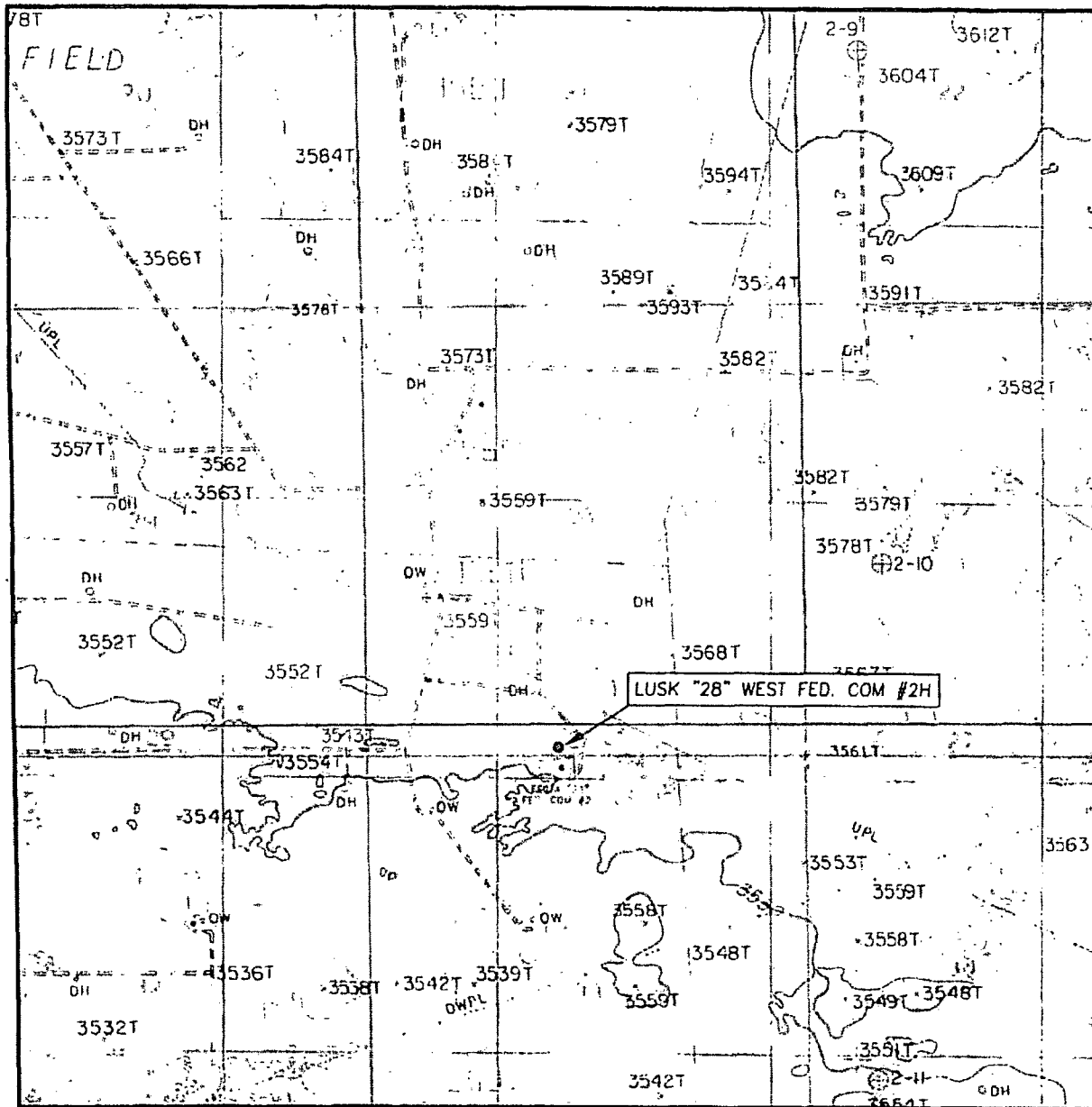
SCALE: 1" = 2 MILES

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 28 TWP. 19-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 103' FSL & 2313' FWL

ELEVATION 3558.6'

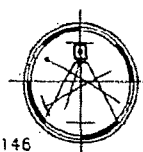
OPERATOR *Occidental Permian LP*

LEASE LUSK "28" WEST FED. COM #2H

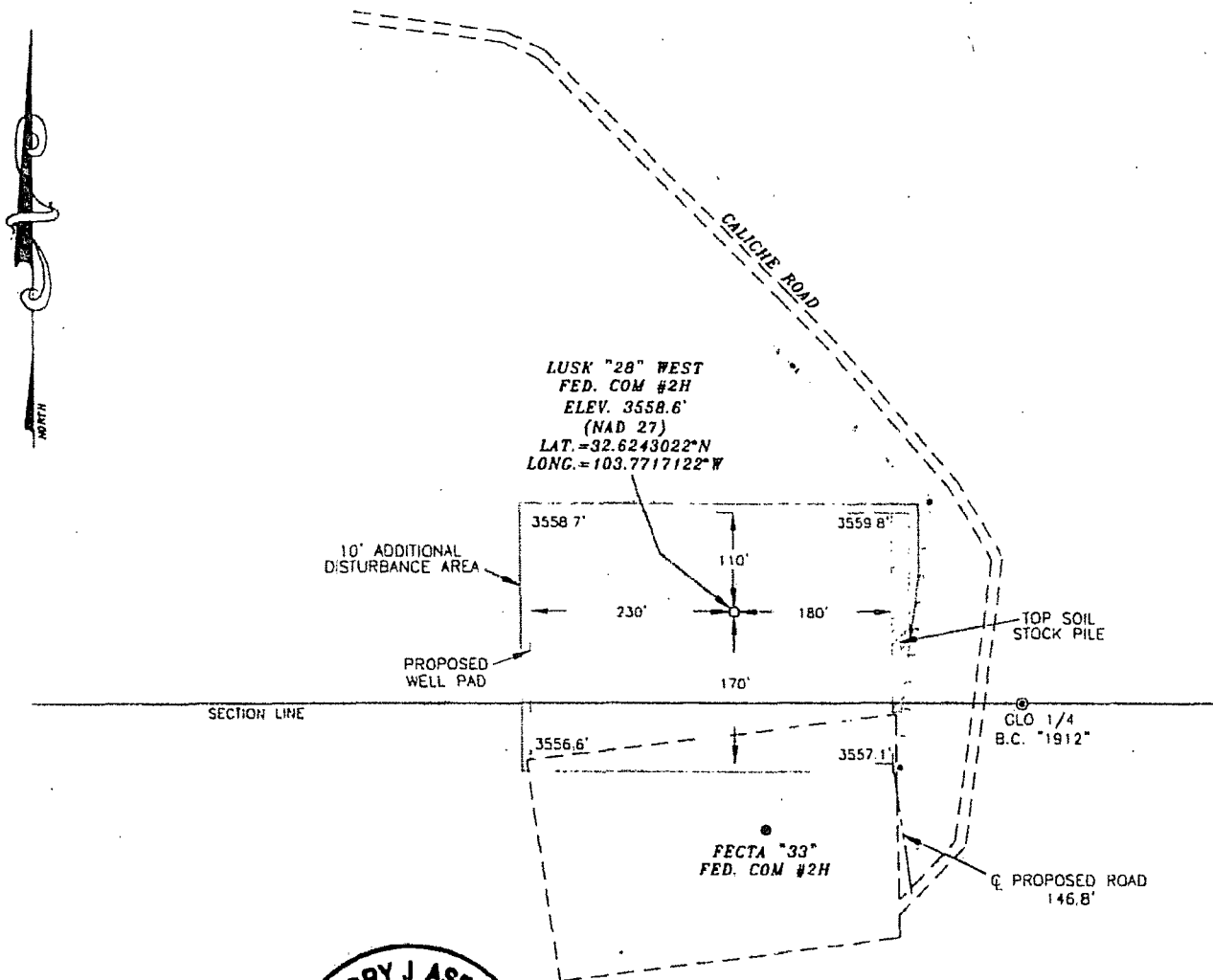
U.S.G.S. TOPOGRAPHIC MAP
WILLIAMS SINK, N.M.

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



OXY USA INC. LUSK "28" WEST FED. COM #2H SITE PLAN



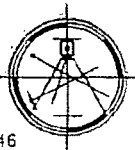
SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY 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 MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 5/30/2014
Terry J. Asel, N.M. R.P.L.S. No. 15079

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



LEGEND

- DENOTES STOCK PILE AREA
- DENOTES PROPOSED WELL PAD
- DENOTES PROPOSED ROAD

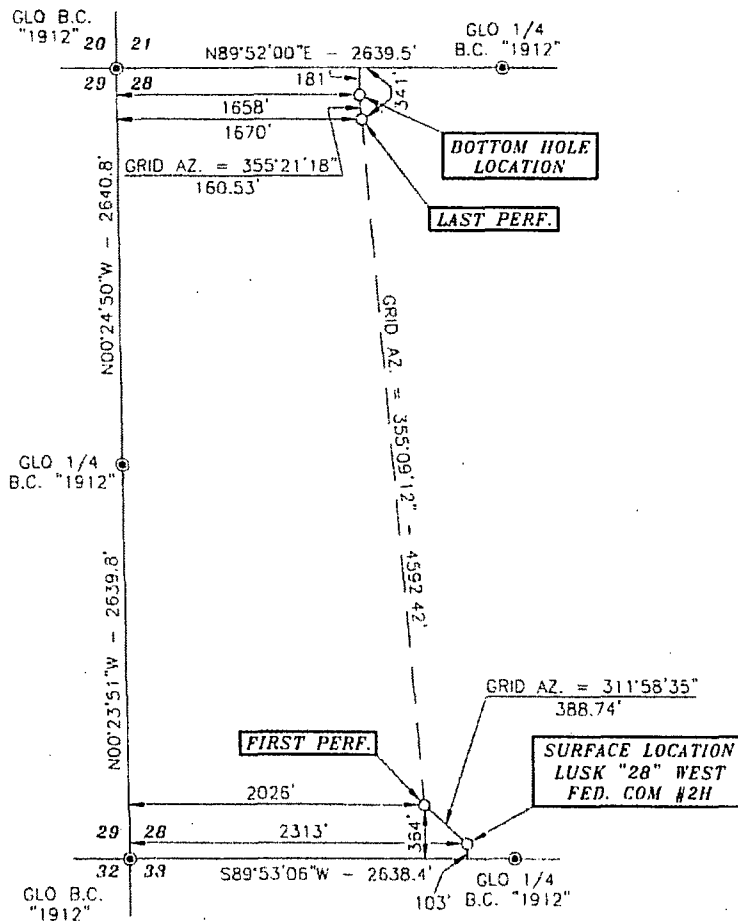
200' 0 200' 400' FEET
SCALE: 1"=200'

Occidental Permian LP

LUSK "28" WEST FED. COM #2H WELL PAD
LOCATED AT 103' FSL & 2313' FWL IN
SECTION 28, TOWNSHIP 19 SOUTH, RANGE 32
EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 05/28/14	Sheet 1 of 1 Sheets
W.O. Number: 120614WL-b (Rev. 8)	Drawn By: KA Rev: B
Date: 05/29/14	120614WL-b Scale: 1"=200'

SECTION 28, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY
NEW MEXICO



Bas of Bearings - GPS Geodetic Measurements
NW East Zone (03) North American Datum of 1983

DRIVING DIRECTIONS:
BEGINNING AT THE INTERSECTION OF U.S.
HWY. #62/180 AND STATE HWY. #176, GO
NORTHEAST ON STATE HWY. #176 FOR 3.0
MILES, GO EAST FOR 0.8 MILES, TURN
LEFT ON COUNTY ROAD #126A AND GO
NORTH FOR 3.8 MILES, TURN RIGHT ON
CALICHE ROAD AND GO EAST FOR 1.1
MILES, TURN LEFT AND GO NORTHEAST
FOR 0.2 MILES, GO EAST FOR 0.2 MILES,
TURN RIGHT AND GO SOUTHEAST/SOUTH
FOR 0.2 MILES, TURN RIGHT ON
PROPOSED ROAD AND GO NORTH FOR
146.8 FEET TO LOCATION



SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR
NO. 15079, DO HEREBY 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 MEETS THE 'MINIMUM STANDARDS FOR
SURVEYING IN NEW MEXICO' AS ADOPTED BY THE NEW
MEXICO STATE BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 5/30/2014
Terry J. Asel, N.M. R.P.L.S. No. 15079

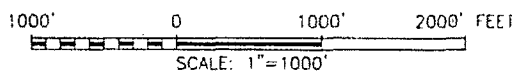
Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



LEGEND

● - DENOTES FOUND MONUMENT AS NOTED



Occidental Permian LP

LUSK "28" WEST FED. COM #2H LOCATED
AT 103' FSL & 2313' FWL IN SECTION 28,
TOWNSHIP 19 SOUTH, RANGE 32 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 05/28/14	Sheet 1 of 1 Sheets
W.O. Number: 120614WL-b (Rev. B)	Drawn By: KA Rev: B
Date: 05/29/14	120614WL-b Scale: 1"=1000'

OXY USA Inc
LUSK 28 WEST FEDERAL COM #2H APD SUNDRY Data

Oxy, respectfully requests a dispensation from the approved permit as follows:

NEW BOTTOM HOLE LOCATION LOCATED IN WELL PLAT (c102)

GREATEST PROJECTED TD "LATERAL LP": 9714' MD / 9372' TVD
GREATEST PROJECTED TD "LATERAL TOE": 14362' MD/ 9345' TVD

1. CASING PROGRAM (ALL NEW CASING)

Production Casing ran in a 7.875" hole filled with 9.2 ppg mud

Hole Size (in)	Interval (ft)	OD (in)	Wt (ppf)	Grade	Conn	ID (in)	Tension (klb)	Burst (psi)	Collapse (psi)	Burst SF	Coll SF	Ten SF
7.875	14362	5.500	17	L80	BTC	4.892	397	7740	6290	1.21	1.42	1.68

2. CEMENT PROGRAM:

Production Interval

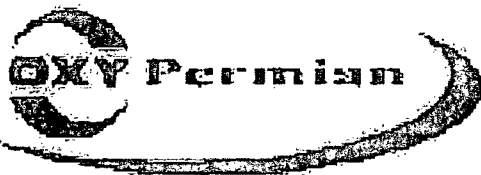
Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft ³ /sk	24 Hr Comp
Lead: 0' – 8700' (100% Excess)	800	8700	TUNED LIGHT (TM) SYSTEM 3 lbm/sk Kol-Seal, 0.125 lbm/sk Poly-E-Flake, 0.25 lbm/sk HR-800	16.05	9.8	3.45	700
Tail: 8700' – 14362' (40% Excess)	820	5662	Super H Cement, 0.5 % Halad(R)- 344, 0.4 % CFR-3, 3 lbm/sk Salt, 0.3 % HR-601, 0.125 lbm/sk Poly-E- Flake, 5 lbm/sk Kol-Seal	8.33	13.2	1.68	1527
CONTINGENCY DV TOOL SET AT 4350'. If no cement to surface during primary cementing operation, DV cancellation cone will be run and 2nd stage cancelled. Contingency recipe for 2nd stage as follows:							
Stage 2 Lead: 0' – 3850' (10% Excess)	370	3850	Halliburton Light Premium Plus cement with 3 lbm/sk Salt	11.39	12.4	2.05	450 (500 psi in 26 hrs)
Stage 2 Tail: 3850' – 4350' (50% Excess)	100	500	94 lbm/sk Premium Plus Cement	6.34	14.8	1.33	1849

***Description of Cement Additives:**

Bentonite: Light Weight Additive
Calcium Chloride: Accelerator
CFR-3: Dispersant
Halad-344: Low Fluid Loss Control
HR-601: Retarder
HR-800: Retarder
Kol-Seal: Lost Circulation Additive
Poly-E-Flake: Lost Circulation Additive
Welllife 734: Cement Enhancer

The volumes indicated above may be revised depending on caliper measurement.

3. DIRECTIONAL PLAN - Please see attached



OXY

Lea County, New Mexico
Lusk 28 West Fed Com 2H
Alt Location #5

Wellbore #1

Plan: Design #2

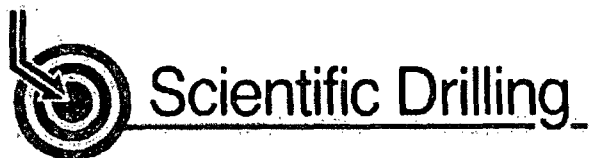
Standard Planning Report

28 May, 2014

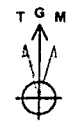
HOBBS OCD

JUN 20 2014

RECEIVED

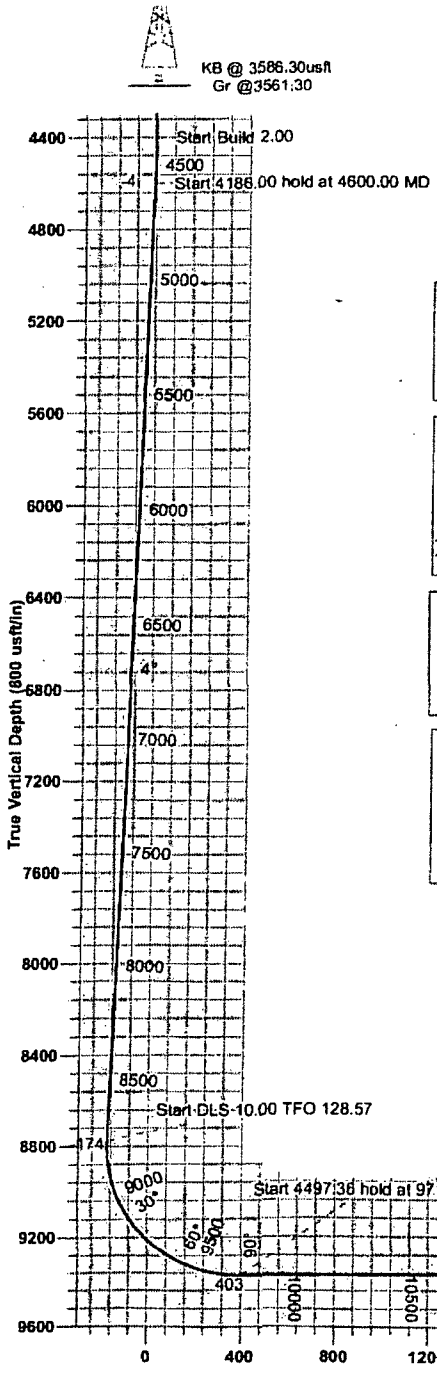


www.scientificdrilling.com



To convert a Magnetic Direction to a Grid Direction, Add 7.04°
To convert a True Direction to a Grid Direction, Subtract 0.30°

True North: -0.30°
Magnetic North: 7.04°
Magnetic Field
Strength: 48538.95pT
Dip Angle: 60.45°
Date: 05/28/2014
Model: IGRF2010



Lusk 28 West Fed Com 2H
Alt Location #5
Northing: 591289.50
Easting: 672910.80
Design #2

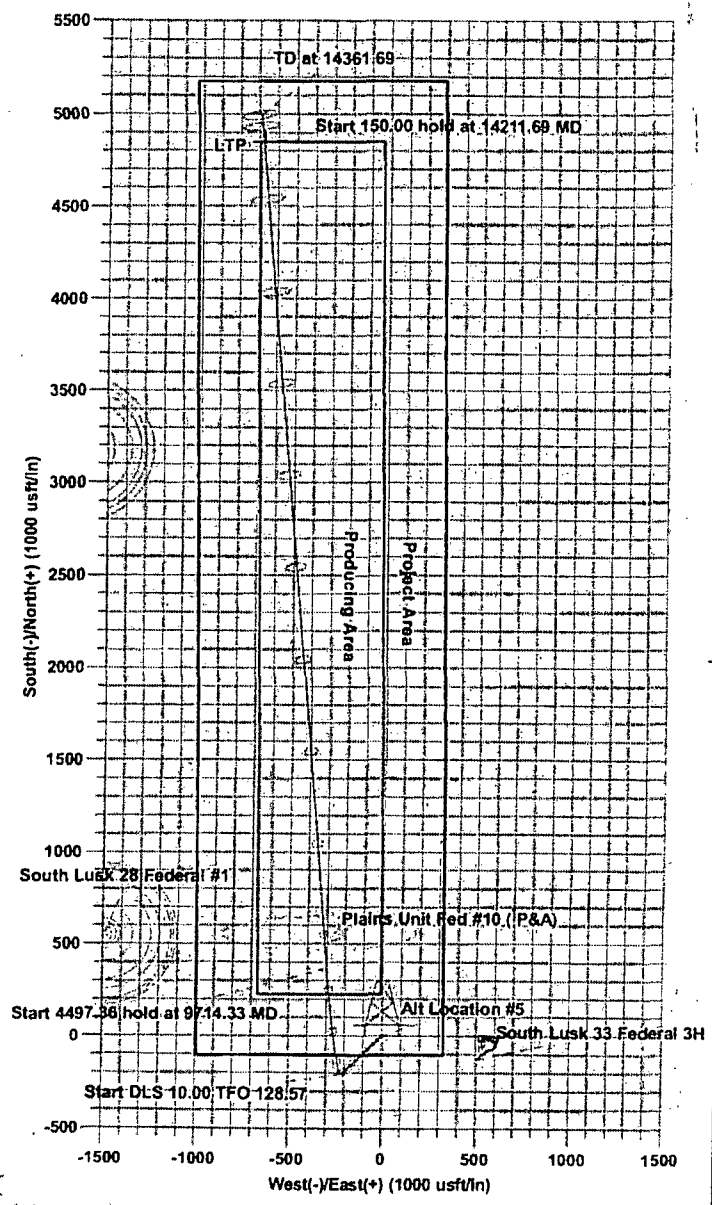
WELL DETAILS							Alt Location #5	
Ground Level: 3561.30								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	591289.50	672910.80	32.624302	-103.771712			

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	0.00	
4800.00	4.00	226.50	4599.84	-4.80	-5.06	2.00	226.50	-4.07	
8786.00	4.00	226.50	8775.64	-205.80	-216.87	0.00	0.00	-174.19	
9714.33	90.34	355.16	9372.66	365.14	-298.12	10.00	128.57	402.50	
14211.69	90.34	355.16	9346.30	4846.40	-677.50	0.00	0.00	4893.52	LTP
14361.69	90.34	355.16	9345.42	4995.86	-690.15	0.00	0.00	5043.31	

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
L28WFC 2H LTP	9346.30	4846.40	-677.50	596135.90	672233.30

SITE DETAILS:
Lusk 28 West Fed Com 2H
Site Centre Northing: 592050.40
Easting: 672261.69
Positional Uncertainty: 0.00
Convergence: 0.30
Local North: Grid

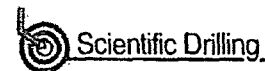
PROJECT DETAILS:
Lea County, New Mexico
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



Vertical Section at 352.13" (800 usf/in)



Scientific Drilling Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well Alt Location #5
Company:	OXY	TVD Reference:	KB @ 3586.30usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3586.30usft
Site:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Well:	Alt Location #5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project:	Lea County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

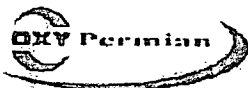
Site:	Lusk 28 West Fed Com 2H				
Site Position:		Northing:	592,050.40 usft	Latitude:	32.626403
From:	Map	Easting:	672,261.69 usft	Longitude:	-103.773808
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.30°

Well:	Alt Location #5					
Well Position	+N/-S	-760.90 usft	Northing:	591,289.50 usft	Latitude:	32.624302
	+E/-W	649.11 usft	Easting:	672,910.80 usft	Longitude:	-103.771712
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,561.30 usft

Wellbore:	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	05/28/14	(°)	(°)	(nT)
			7.34	60.45	48,539

Design:	Design #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	352.13

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.00	0.00	0.00	0.00	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	
4,600.00	4.00	226.50	4,599.84	-4.80	-5.06	2.00	2.00	0.00	226.50	
8,786.00	4.00	226.50	8,775.64	-205.80	-216.87	0.00	0.00	0.00	0.00	
9,714.33	90.34	355.16	9,372.66	365.14	-298.12	10.00	9.30	13.86	128.57	
14,211.69	90.34	355.16	9,346.30	4,846.40	-677.50	0.00	0.00	0.00	0.00	L28WFC 2H LTP
14,361.69	90.34	355.16	9,345.42	4,995.86	-690.15	0.00	0.00	0.00	0.00	



Scientific Drilling Planning Report

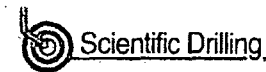


Database:	CompassC	Local Co-ordinate Reference:	Well Alt Location #5
Company:	OXY	TVD Reference:	KB @ 3586.30usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3586.30usft
Site:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Well:	Alt Location #5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	2.00	226.50	4,499.98	-1.20	-1.27	-1.02	2.00	2.00	0.00
4,600.00	4.00	226.50	4,599.84	-4.80	-5.06	-4.07	2.00	2.00	0.00
4,700.00	4.00	226.50	4,699.59	-9.61	-10.12	-8.13	0.00	0.00	0.00
4,800.00	4.00	226.50	4,799.35	-14.41	-15.18	-12.19	0.00	0.00	0.00
4,900.00	4.00	226.50	4,899.11	-19.21	-20.24	-16.26	0.00	0.00	0.00
5,000.00	4.00	226.50	4,998.86	-24.01	-25.30	-20.32	0.00	0.00	0.00
5,100.00	4.00	226.50	5,098.62	-28.81	-30.36	-24.39	0.00	0.00	0.00
5,200.00	4.00	226.50	5,198.38	-33.61	-35.42	-28.45	0.00	0.00	0.00
5,300.00	4.00	226.50	5,298.13	-38.42	-40.48	-32.51	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well Alt Location #5
Company:	OXY	TVD Reference:	KB @ 3586.30usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3586.30usft
Site:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Well:	Alt Location #5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
5,400.00	4.00	226.50	5,397.89	-43.22	-45.54	-36.58	0.00	0.00	0.00
5,500.00	4.00	226.50	5,497.65	-48.02	-50.60	-40.64	0.00	0.00	0.00
5,600.00	4.00	226.50	5,597.40	-52.82	-55.66	-44.71	0.00	0.00	0.00
5,700.00	4.00	226.50	5,697.16	-57.62	-60.72	-48.77	0.00	0.00	0.00
5,800.00	4.00	226.50	5,796.91	-62.42	-65.78	-52.84	0.00	0.00	0.00
5,900.00	4.00	226.50	5,896.67	-67.23	-70.84	-56.90	0.00	0.00	0.00
6,000.00	4.00	226.50	5,996.43	-72.03	-75.90	-60.96	0.00	0.00	0.00
6,100.00	4.00	226.50	6,096.18	-76.83	-80.96	-65.03	0.00	0.00	0.00
6,200.00	4.00	226.50	6,195.94	-81.63	-86.02	-69.09	0.00	0.00	0.00
6,300.00	4.00	226.50	6,295.70	-86.43	-91.08	-73.16	0.00	0.00	0.00
6,400.00	4.00	226.50	6,395.45	-91.23	-96.14	-77.22	0.00	0.00	0.00
6,500.00	4.00	226.50	6,495.21	-96.04	-101.20	-81.28	0.00	0.00	0.00
6,600.00	4.00	226.50	6,594.97	-100.84	-106.26	-85.35	0.00	0.00	0.00
6,700.00	4.00	226.50	6,694.72	-105.64	-111.32	-89.41	0.00	0.00	0.00
6,800.00	4.00	226.50	6,794.48	-110.44	-116.38	-93.48	0.00	0.00	0.00
6,900.00	4.00	226.50	6,894.24	-115.24	-121.44	-97.54	0.00	0.00	0.00
7,000.00	4.00	226.50	6,993.99	-120.04	-126.50	-101.60	0.00	0.00	0.00
7,100.00	4.00	226.50	7,093.75	-124.85	-131.56	-105.67	0.00	0.00	0.00
7,200.00	4.00	226.50	7,193.50	-129.65	-136.62	-109.73	0.00	0.00	0.00
7,300.00	4.00	226.50	7,293.26	-134.45	-141.68	-113.80	0.00	0.00	0.00
7,400.00	4.00	226.50	7,393.02	-139.25	-146.74	-117.86	0.00	0.00	0.00
7,500.00	4.00	226.50	7,492.77	-144.05	-151.80	-121.93	0.00	0.00	0.00
7,600.00	4.00	226.50	7,592.53	-148.86	-156.86	-125.99	0.00	0.00	0.00
7,700.00	4.00	226.50	7,692.29	-153.66	-161.92	-130.05	0.00	0.00	0.00
7,800.00	4.00	226.50	7,792.04	-158.46	-166.98	-134.12	0.00	0.00	0.00
7,900.00	4.00	226.50	7,891.80	-163.26	-172.04	-138.18	0.00	0.00	0.00
8,000.00	4.00	226.50	7,991.56	-168.06	-177.10	-142.25	0.00	0.00	0.00
8,100.00	4.00	226.50	8,091.31	-172.86	-182.16	-146.31	0.00	0.00	0.00
8,200.00	4.00	226.50	8,191.07	-177.67	-187.22	-150.37	0.00	0.00	0.00
8,300.00	4.00	226.50	8,290.82	-182.47	-192.28	-154.44	0.00	0.00	0.00
8,400.00	4.00	226.50	8,390.58	-187.27	-197.34	-158.50	0.00	0.00	0.00
8,500.00	4.00	226.50	8,490.34	-192.07	-202.40	-162.57	0.00	0.00	0.00
8,600.00	4.00	226.50	8,590.09	-196.87	-207.46	-166.63	0.00	0.00	0.00
8,700.00	4.00	226.50	8,689.85	-201.67	-212.52	-170.69	0.00	0.00	0.00
8,786.00	4.00	226.50	8,775.64	-205.80	-216.87	-174.19	0.00	0.00	0.00
8,800.00	3.31	245.80	8,789.61	-206.31	-217.59	-174.59	10.00	-4.91	137.87
8,850.00	5.00	316.51	8,839.51	-205.32	-220.41	-173.22	10.00	3.37	141.41
8,900.00	9.43	335.95	8,889.11	-199.99	-223.59	-167.51	10.00	8.87	38.88
8,950.00	14.24	342.72	8,938.03	-190.37	-227.08	-157.50	10.00	9.62	13.54
9,000.00	19.15	346.09	8,985.91	-176.53	-230.89	-143.27	10.00	9.81	6.75
9,050.00	24.10	348.13	9,032.38	-158.57	-234.96	-124.92	10.00	9.89	4.07
9,100.00	29.06	349.50	9,077.08	-136.63	-239.27	-102.60	10.00	9.92	2.75
9,150.00	34.03	350.50	9,119.68	-110.87	-243.80	-78.47	10.00	9.95	2.00
9,200.00	39.01	351.28	9,159.85	-81.50	-248.50	-46.73	10.00	9.96	1.55
9,250.00	43.99	351.90	9,197.29	-48.73	-253.33	-13.61	10.00	9.97	1.25
9,300.00	48.98	352.42	9,231.70	-12.82	-258.27	22.64	10.00	9.97	1.04
9,350.00	53.97	352.87	9,262.84	25.96	-263.27	61.74	10.00	9.98	0.89
9,400.00	58.95	353.26	9,290.45	67.31	-268.30	103.40	10.00	9.98	0.79
9,450.00	63.95	353.61	9,314.34	110.93	-273.32	147.29	10.00	9.98	0.71
9,500.00	68.94	353.94	9,334.32	156.48	-278.28	193.09	10.00	9.98	0.65
9,550.00	73.93	354.24	9,350.24	203.61	-283.16	240.44	10.00	9.98	0.61
9,600.00	78.92	354.53	9,361.97	251.97	-287.91	288.99	10.00	9.98	0.58
9,650.00	83.91	354.81	9,369.43	301.18	-292.50	338.37	10.00	9.98	0.56
9,700.00	88.91	355.08	9,372.56	350.87	-296.90	388.20	10.00	9.99	0.55



Scientific Drilling
Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well Alt Location #5
Company:	OXY	TVD Reference:	KB @ 3586.30usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3586.30usft
Site:	Lusk 28 West Fed Com 2H	North Reference:	Grid
Well:	Alt Location #5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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)
9,714.33	90.34	355.16	9,372.66	365.14	-298.12	402.50	10.00	9.99	0.55
9,800.00	90.34	355.16	9,372.16	450.51	-305.34	488.06	0.00	0.00	0.00
9,900.00	90.34	355.16	9,371.57	550.15	-313.78	587.91	0.00	0.00	0.00
10,000.00	90.34	355.16	9,370.98	649.79	-322.22	687.77	0.00	0.00	0.00
10,100.00	90.34	355.16	9,370.40	749.43	-330.65	787.63	0.00	0.00	0.00
10,200.00	90.34	355.16	9,369.81	849.08	-339.09	887.49	0.00	0.00	0.00
10,300.00	90.34	355.16	9,369.22	948.72	-347.52	987.35	0.00	0.00	0.00
10,400.00	90.34	355.16	9,368.64	1,048.36	-355.96	1,087.21	0.00	0.00	0.00
10,500.00	90.34	355.16	9,368.05	1,148.00	-364.39	1,187.07	0.00	0.00	0.00
10,600.00	90.34	355.16	9,367.47	1,247.64	-372.83	1,286.93	0.00	0.00	0.00
10,700.00	90.34	355.16	9,366.88	1,347.29	-381.26	1,386.78	0.00	0.00	0.00
10,800.00	90.34	355.16	9,366.29	1,446.93	-389.70	1,486.64	0.00	0.00	0.00
10,900.00	90.34	355.16	9,365.71	1,546.57	-398.14	1,586.50	0.00	0.00	0.00
11,000.00	90.34	355.16	9,365.12	1,646.21	-406.57	1,686.36	0.00	0.00	0.00
11,100.00	90.34	355.16	9,364.54	1,745.85	-415.01	1,786.22	0.00	0.00	0.00
11,200.00	90.34	355.16	9,363.95	1,845.49	-423.44	1,886.08	0.00	0.00	0.00
11,300.00	90.34	355.16	9,363.36	1,945.14	-431.88	1,985.94	0.00	0.00	0.00
11,400.00	90.34	355.16	9,362.78	2,044.78	-440.31	2,085.80	0.00	0.00	0.00
11,500.00	90.34	355.16	9,362.19	2,144.42	-448.75	2,185.66	0.00	0.00	0.00
11,600.00	90.34	355.16	9,361.61	2,244.06	-457.19	2,285.51	0.00	0.00	0.00
11,700.00	90.34	355.16	9,361.02	2,343.70	-465.62	2,385.37	0.00	0.00	0.00
11,800.00	90.34	355.16	9,360.43	2,443.35	-474.06	2,485.23	0.00	0.00	0.00
11,900.00	90.34	355.16	9,359.85	2,542.99	-482.49	2,585.09	0.00	0.00	0.00
12,000.00	90.34	355.16	9,359.26	2,642.63	-490.93	2,684.95	0.00	0.00	0.00
12,100.00	90.34	355.16	9,358.68	2,742.27	-499.36	2,784.81	0.00	0.00	0.00
12,200.00	90.34	355.16	9,358.09	2,841.91	-507.80	2,884.67	0.00	0.00	0.00
12,300.00	90.34	355.16	9,357.50	2,941.55	-516.24	2,984.53	0.00	0.00	0.00
12,400.00	90.34	355.16	9,356.92	3,041.20	-524.67	3,084.38	0.00	0.00	0.00
12,500.00	90.34	355.16	9,356.33	3,140.84	-533.11	3,184.24	0.00	0.00	0.00
12,600.00	90.34	355.16	9,355.75	3,240.48	-541.54	3,284.10	0.00	0.00	0.00
12,700.00	90.34	355.16	9,355.16	3,340.12	-549.98	3,383.96	0.00	0.00	0.00
12,800.00	90.34	355.16	9,354.57	3,439.76	-558.41	3,483.82	0.00	0.00	0.00
12,900.00	90.34	355.16	9,353.99	3,539.41	-566.85	3,583.68	0.00	0.00	0.00
13,000.00	90.34	355.16	9,353.40	3,639.05	-575.29	3,683.54	0.00	0.00	0.00
13,100.00	90.34	355.16	9,352.82	3,738.69	-583.72	3,783.40	0.00	0.00	0.00
13,200.00	90.34	355.16	9,352.23	3,838.33	-592.16	3,883.26	0.00	0.00	0.00
13,300.00	90.34	355.16	9,351.64	3,937.97	-600.59	3,983.11	0.00	0.00	0.00
13,400.00	90.34	355.16	9,351.06	4,037.61	-609.03	4,082.97	0.00	0.00	0.00
13,500.00	90.34	355.16	9,350.47	4,137.26	-617.46	4,182.83	0.00	0.00	0.00
13,600.00	90.34	355.16	9,349.89	4,236.90	-625.90	4,282.69	0.00	0.00	0.00
13,700.00	90.34	355.16	9,349.30	4,336.54	-634.34	4,382.55	0.00	0.00	0.00
13,800.00	90.34	355.16	9,348.71	4,436.18	-642.77	4,482.41	0.00	0.00	0.00
13,900.00	90.34	355.16	9,348.13	4,535.82	-651.21	4,582.27	0.00	0.00	0.00
14,000.00	90.34	355.16	9,347.54	4,635.47	-659.64	4,682.13	0.00	0.00	0.00
14,100.00	90.34	355.16	9,346.95	4,735.11	-668.08	4,781.99	0.00	0.00	0.00
14,200.00	90.34	355.16	9,346.37	4,834.75	-676.51	4,881.84	0.00	0.00	0.00
14,211.69	90.34	355.16	9,346.30	4,846.40	-677.50	4,893.52	0.00	0.00	0.00
14,300.00	90.34	355.16	9,345.78	4,934.39	-684.95	4,981.70	0.00	0.00	0.00
14,361.69	90.34	355.16	9,345.42	4,995.86	-690.15	5,043.31	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well Alt Location #5
Company:	OXY	TVD Reference:	KB @ 3586.30usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3586.30usft
Site:	Lusk 28 West Fed Corn 2H	North Reference:	Grid
Well:	Alt Location #5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Design Targets									
Target Name	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
L28WFC 2H LTP	0.00	0.00	9,346.30	4,846.40	-677.50	596,135.90	672,233.30	32.637634	-103.773830
- plan hits target center									
- Point									