

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

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

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address OXY USA Inc P.O. BOX 50250 Midland, TX 79710		² OGRID Number 16696
		³ Reason for Filing Code/ Effective Date Test Allowable - 2/2017
⁴ API Number 30-015-43708	⁵ Pool Name Pierce Crossing Bone Spring, East	⁶ Pool Code 96473
⁷ Property Code: 316106	⁸ Property Name: Cedar Canyon 22 Federal Com	⁹ Well Number: 4H

II. ¹⁰ Surface Location

UL or lot no. I	Section 22	Township 24S	Range 29E	Lot Idn	Feet from the 2540	North/South Line South	Feet from the 260	East/West line East	County Eddy
¹¹ Bottom Hole Location					Top Perf- 2494 FSL 529 FEL Bottom Perf- 2562 FSL 336 FWL				
UL or lot no. L	Section 22	Township 24S	Range 29E	Lot Idn	Feet from the 2567	North/South line South	Feet from the 160	East/West line West	County Eddy
¹² Lse Code F	¹³ Producing Method Code : F		¹⁴ Gas Connection Date: TBD		¹⁵ C-129 Permit Number		¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date

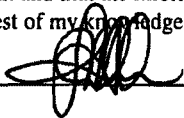
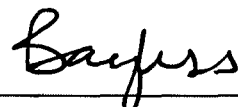
III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
239284	OCCIDENTAL ENERGY TRANSPORTATION (BRIDGER LLC)	O
151618	ENTERPRISE FIELD SERVICES LLC	G

IV. Well Completion Data

²¹ Spud Date 10/25/16	²² Ready Date 1/26/17	²³ TD 13435'M 8728'V	²⁴ PBDT 13372'M 8730'V	²⁵ Perforations 8827-13265'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set		³⁰ Sacks Cement	
14-3/4"	10-3/4"	488'		382	
9-7/8"	7-5/8"	8197'		2886	
6-3/4"	5-1/2" X 4-1/2"	13424'		500	

V. Well Test Data

³¹ Date New Oil 1/29/17	³² Gas Delivery Date TBD	³³ Test Date 1/31/17	³⁴ Test Length 24 hrs.	³⁵ Tbg. Pressure ---	³⁶ Csg. Pressure 1140
³⁷ Choke Size 25/64	³⁸ Oil 629	³⁹ Water 1245	⁴⁰ Gas 462		⁴¹ Test Method F
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: 			OIL CONSERVATION DIVISION		
Printed name: Jana Mendiola			Approved by: 		
Title: Regulatory Coordinator			Title: DDI SUPERVISOR		
E-mail Address: janalyn_mendiola@oxy.com			Approval Date: 01 FEB 17		
Date: 1/31/17		Phone: 432-685-5936	TEST ALLOWABLE		

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, Amos, NM 87416
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1720 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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
(As-Drilled)

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-43708	Pool Code 96473	Pool Name Pierce Crossing Bone Spring, East
Property Code 316106	Property Name CEDAR CANYON "22" FEDERAL COM	Well Number 4H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 2958.4'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
1	22	24 SOUTH	29 EAST, N.M.P.M.		2540'	SOUTH	260'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
L	22	24 SOUTH	29 EAST, N.M.P.M.		2570' 2567'	SOUTH	80' 160'	WEST	EDDY
Dedicated Acres 160	Joint or Infill Y	Consolidation Code	Order No. - NSL 7389	BP-2562 FSL 336 FWL TP-2494 FSL 529 FEL					

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

OPERATOR CERTIFICATION

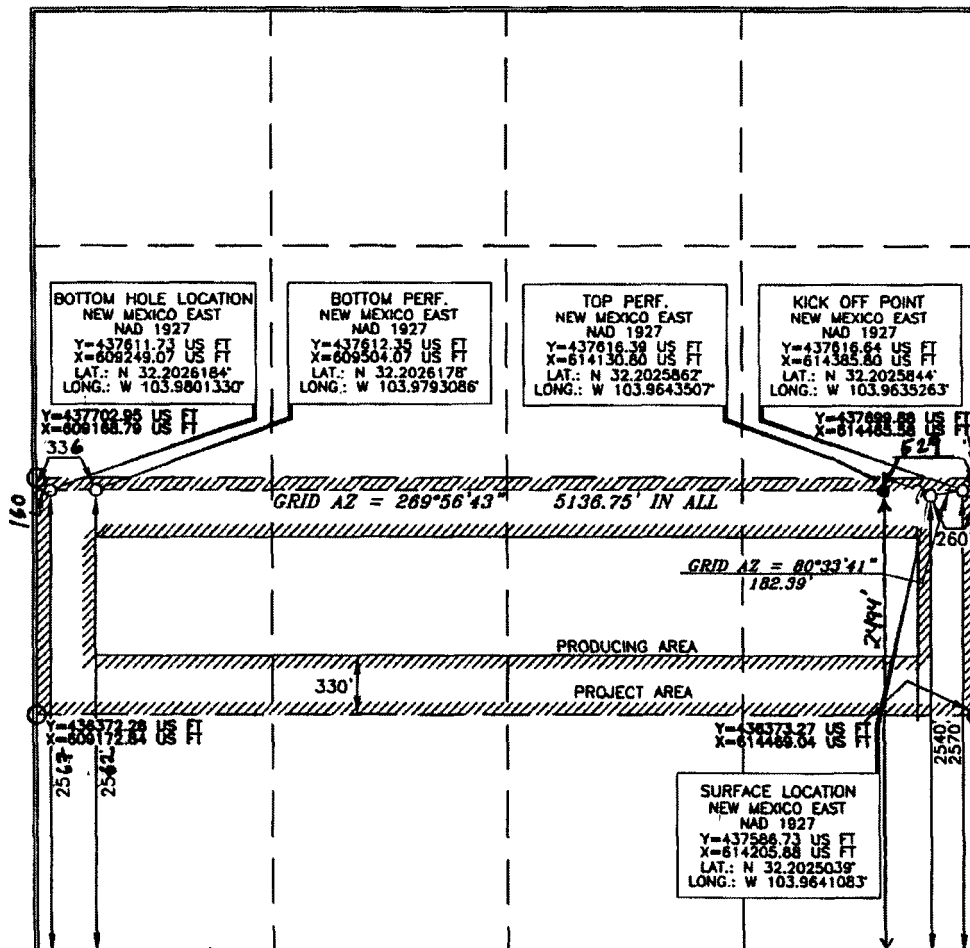
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

Signature: *[Signature]* Date: **1/31/17**
Printed Name: **Jana Mendiola**
E-mail Address: **jana.mendiola@oxy.com**

SURVEYOR CERTIFICATION

I hereby certify that the plat shown on this plat was prepared from the best of my knowledge and belief, and that the same is true and correct to the best of my belief.

Date of Survey: **15079**
Signature and Seal: *[Signature]*
Professional Surveyor: **15079**



State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Tony Delfin
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



February 18, 2016

OXY USA INC.
Attn: Mr. David Stewart

ADMINISTRATIVE NON-STANDARD LOCATION

Administrative Order NSL-7389
Administrative Application Reference No. pMAM1604839461

OXY USA INC
OGRID 16696
Cedar Canyon "22" Federal Well No. 4 H
API No. 30-015-PENDING

Proposed Location:

	<u>Footages</u>	<u>Unit</u>	<u>Sec.</u>	<u>Twsp</u>	<u>Range</u>	<u>County</u>
Surface	2540' FSL & 260' FEL	I	22	24S	29E	Eddy
Penetration Point	2570' FSL & 335' FEL	I	22	24S	29E	Eddy
Final perforation	2570' FSL & 335' FWL	L	22	24S	29E	Eddy
Terminus	2570' FSL & 80' FWL	L	22	24S	29E	Eddy

Proposed Project Area:

<u>Description</u>	<u>Acres</u>	<u>Pool</u>	<u>Pool Code</u>
N/2 S/2 of Section 22	160	Pierce Crossing; Bone Spring, East	96473

Reference is made to your application received on January 19, 2016.

You have requested to drill and complete this horizontal well at an unorthodox oil well location described above in the referenced pool or formation. This location is governed by statewide Rule 19.15.15.9.A NMAC, which provides for 40-acre units, with wells located at least 330 feet from a unit outer boundary, and Rule 19.15.16.14.B(2) NMAC concerning directional wells in designated project areas. This location is unorthodox because portions of the proposed completed interval are closer to outside boundaries of the proposed project area than any location that would be a standard location under the applicable pool rules.

Your application has been duly filed under the provisions of Division Rules 19.15.15.13 NMAC and 19.15.4.12.A(2) NMAC.

It is our understanding that you are seeking this location to allow efficient spacing for horizontal wells and thereby preventing waste.

It is also understood that you have given due notice of this application to all operators or owners who are "affected persons," as defined in Rule 19.15.4.12 A (2) NMAC, in all adjoining units towards which the proposed location encroaches.

Pursuant to the authority conferred by Division Rule 9.15.15.13 (B) NMAC, the above-described unorthodox location is hereby approved.

This approval is subject to your being in compliance with all other applicable Division rules, including, but not limited to Division Rule 19.15.5.9 NMAC.

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on February 18, 2016.



DAVID R. CATANACH
Director

DRC/mam

cc: New Mexico Oil Conservation Division – Artesia
Bureau Land Management - Carlsbad

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

December 16, 2016

Oxy USA Incorporated
5 Greenway Plaza Ste 110
Houston, TX 77046-0521

Re:

22, 24S, 29E, Eddy NM
-32.20250 -103.96411

CLIENT: Oxy USA Incorporated
WELL: Cedar Canyon 22 Federal Com 4H
FIELD: Pierce Crossing

RIG: H&P639
COUNTY: Eddy
API NO: 30-015-43708
JOB NO: 16MLD2121

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Jonathan Schuba FE	Cedar Canyon 22 Federal Com 4H Original Hole	494.00 Ft to 13394.00 Ft	October 28, 2016 to December 15, 2016	TelePacer SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Dana Carlos
Field Service Manager

Schlumberger

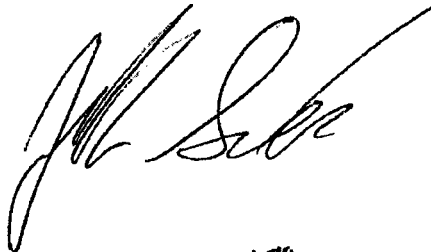
Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

Well Reference:

22, 24S, 29E, Eddy NM
-32.20250 -103.96411

I, Jonathan Schuba certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of October 28, 2016 through December 15, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 494.00 feet to a depth of 13394.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Oxy USA Incorporated for the Cedar Canyon 22 Federal Com 4H Well (Original Hole) API No. 30-015-43708 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Jonathan Schuba
FE



Subscribed and Sworn to before me this 17th day of December (month) 2016 (yr)

My Commission expires:

April 15, 2018

Notary Public

(County State)

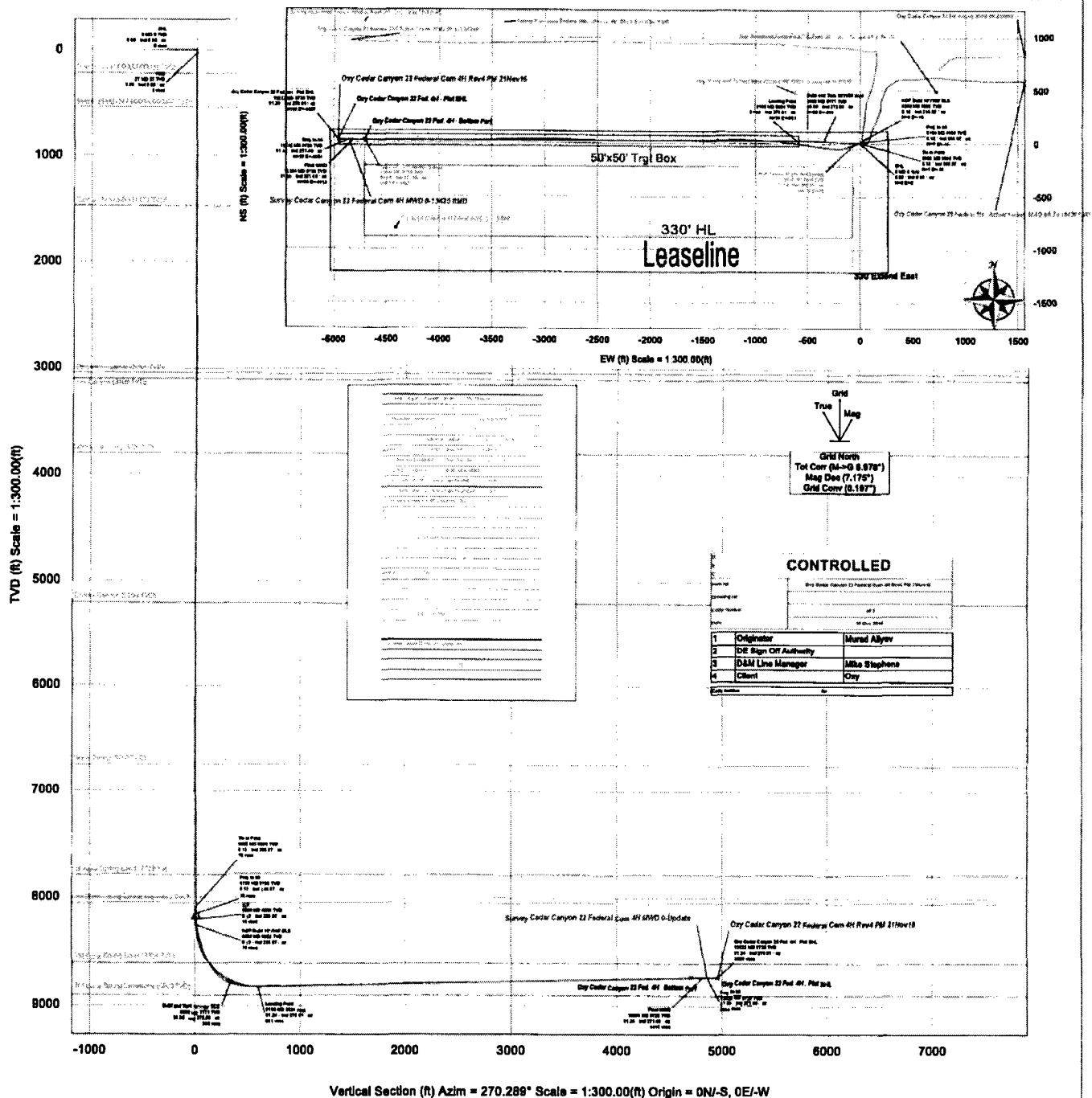


MIGUEL ANGEL ALMAGUER
My Commission Expires (signature)
April 15, 2018

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Cedar Canyon 22 Federal Com 4H	NM Eddy County (NAD 27)	Oxy Cedar Canyon 22 Federal Com 4H
Country & Mapgrid Parameters	Survey Location	Well Location	Well Location
Mapgrid: 17175	Mapgrid: 17175	Mapgrid: 17175	Mapgrid: 17175
Mapgrid: 17175	Mapgrid: 17175	Mapgrid: 17175	Mapgrid: 17175

Critical Points

Comments	Survey MD (ft)	Inclination (deg)	Azimuth (deg)	IVD (ft)	Sub-Sea IVD	VS (ft)	NS (ft)	EW (ft)	Latitude (deg)	Longitude (deg)	Easting (ftUS)	Northing (ftUS)	DLS (ft/100ft)	Tool Face (deg)		
Tie in Point	8085.00	0.13	336.57	8084.92	5100.02	15.40	7.31	-15.36	N 32.12	9.087	W 103.57	50.968	614190.52	437594.04	0.05	336.57
Proj to bit	8150.00	0.13	336.57	8149.92	5165.02	15.46	7.44	-15.42	N 32.12	9.088	W 103.57	50.969	614190.46	437594.17	0.00	336.57
ICP	8200.08	0.13	336.57	8200.00	5215.10	15.50	7.55	-15.47	N 32.12	9.089	W 103.57	50.970	614190.42	437594.28	0.00	336.57
KOP Build 10°/100' DLS	8252.08	0.13	336.57	8252.00	5267.10	15.55	7.66	-15.51	N 32.12	9.090	W 103.57	50.970	614190.37	437594.39	0.00	-0.19
2nd Bone Spring Sand	8631.28	37.98	272.10	8604.00	5619.10	136.79	12.50	-136.73	N 32.12	9.142	W 103.57	52.381	614069.16	437599.23	10.00	272.00
Build and Turn 10°/100' DLS	8901.52	65.00	272.00	8770.72	5785.82	346.20	19.95	-346.10	N 32.12	9.223	W 103.57	54.817	613859.81	437606.68	10.00	-4.49
Landing Point	9164.66	91.24	270.01	8824.41	5839.51	601.42	24.21	-601.31	N 32.12	9.274	W 103.57	57.787	613604.62	437610.94	10.00	
Oxy Cedar Canyon 22 Fed 4H - Plat BHL	13521.57	91.24	270.01	8729.90	5745.00	4957.26	25.00	-4957.20	N 32.12	9.426	W 103.58	48.479	609249.07	437611.73	0.00	





Survey Cedar Canyon 22 Federal Com 4H MWD 0-13435 ftMD Survey **Geodetic Report** **(Def Survey)**

Report Date:	December 18, 2016 - 09 07 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	OXY	Vertical Section Azimuth:	270.289 ° (Grid North)
Field:	NM Eddy County (NAD 27)	Vertical Section Origin:	0 000 ft, 0 000 ft
Structure / Slot:	Oxy Cedar Canyon 22 Federal Com 4H / Oxy Cedar Canyon 22 Fed Com 4H	TVD Reference Datum:	RKB
Well:	Oxy Cedar Canyon 22 Federal Com 4H	TVD Reference Elevation:	2984 900 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	2958 400 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	7.182 °
Survey Name:	Survey Cedar Canyon 22 Federal Com 4H MWD 0-13435 ftMD	Total Gravity Field Strength:	998.4673mgn (9 80685 Based)
Survey Date:	November 21, 2016	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	155.301 ° / 4877 976 ft / 6 062 / 0 553	Total Magnetic Field Strength:	48191.260 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.050 °
Location Lat / Long:	N 32° 12' 9.01410" W 103° 57' 50.78983"	Declination Date:	October 25, 2016
Location Grid N/E Y/X:	N 437586 730 NUS E 614205 880 NUS	Magnetic Declination Model:	HDGM 2016
CRA Grid Convergence Angle:	0.1968 °	North Reference:	Grid North
Grid Scale Factor:	0.9992403	Grid Convergence Used:	0.1968 °
Version / Patch:	2 10 254 0	Total Corr Mag North->Grid North:	6.9856 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	437586 73	614205 88	N 32 12 9 01 W	103 57 50 79
RKB	26 50	0.00	0.00	26 50	0.00	0.00	0.00	0.00	437586 73	614205 88	N 32 12 9 01 W	103 57 50.79
	494 00	0.46	330 71	493 99	0.93	1.84	-0.92	0.10	437586 37	614204 96	N 32 12 9 03 W	103 57 50.80
	509 00	1.05	175 96	508 99	0.95	1.55	-0.94	9.86	437588 28	614204 84	N 32 12 9 03 W	103 57 50.80
	690 00	0.00	0.00	689 99	0.82	-0.10	-0.82	0.58	437586 63	614205 06	N 32 12 9 01 W	103 57 50.80
	871 00	0.07	71 74	870 98	0.72	-0.07	-0.72	0.04	437586 66	614205 16	N 32 12 9 01 W	103 57 50.80
	1334 00	0.00	0.00	1333 98	0.45	0.02	-0.45	0.02	437586 75	614205 43	N 32 12 9 01 W	103 57 50.80
	1428 00	0.09	300 32	1427 98	0.51	0.06	-0.51	0.10	437586 78	614205 37	N 32 12 9 01 W	103 57 50.80
	1522 00	0.11	289 41	1521 98	0.66	0.13	-0.66	0.03	437586 86	614205 22	N 32 12 9 02 W	103 57 50.80
	1804 00	0.04	280 25	1803 98	1.01	0.23	-1.01	0.03	437586 96	614204 87	N 32 12 9 02 W	103 57 50.80
	1993 00	0.15	326 74	1992 98	1.22	0.45	-1.21	0.07	437587 16	614204 67	N 32 12 9 02 W	103 57 50.80
	2087 00	0.22	325 16	2086 98	1.39	0.70	-1.38	0.07	437587 43	614204 50	N 32 12 9 02 W	103 57 50.81
	2181 00	0.35	328 08	2180 98	1.64	1.09	-1.64	0.14	437587 82	614204 24	N 32 12 9 02 W	103 57 50.81
	2276 00	0.51	327 56	2275 98	2.03	1.70	-2.02	0.17	437588 43	614203 86	N 32 12 9 03 W	103 57 50.81
	2653 00	0.00	181 96	2652 97	2.93	3.11	-2.92	0.14	437589 84	614202 96	N 32 12 9 05 W	103 57 50.82
	2936 00	0.29	296 05	2935 97	3.58	3.43	-3.56	0.10	437590 16	614202 32	N 32 12 9 05 W	103 57 50.83
	3218 00	0.00	115 57	3217 97	4.22	3.74	-4.20	0.10	437590 47	614201 68	N 32 12 9 05 W	103 57 50.84
	3500 00	0.04	229 42	3499 97	4.30	3.68	-4.28	0.01	437590 41	614201 80	N 32 12 9 05 W	103 57 50.84
	3595 00	0.04	284 67	3594 97	4.35	3.66	-4.34	0.04	437590 39	614201 55	N 32 12 9 05 W	103 57 50.84
	4065 00	0.02	0.00	4064 97	4.51	3.79	-4.49	0.01	437590 52	614201 39	N 32 12 9 05 W	103 57 50.84
	4537 00	0.07	83 11	4536 97	4.23	3.90	-4.21	0.01	437590 83	614201 67	N 32 12 9 05 W	103 57 50.84
	5006 00	0.06	0.00	5007 97	3.94	4.19	-3.92	0.02	437590 92	614201 96	N 32 12 9 06 W	103 57 50.84
	5490 00	0.13	268 38	5479 97	4.48	4.42	-4.46	0.03	437591 15	614201 42	N 32 12 9 06 W	103 57 50.84
	5762 00	0.11	327 18	5761 97	4.95	4.64	-4.92	0.04	437591 37	614200 96	N 32 12 9 06 W	103 57 50.85
	5857 00	0.07	141 34	5856 97	4.96	4.67	-4.94	0.19	437591 40	614200 94	N 32 12 9 06 W	103 57 50.85
	6045 00	0.04	109 21	6044 97	4.83	4.56	-4.80	0.02	437591 29	614201 08	N 32 12 9 06 W	103 57 50.85
	6139 00	0.11	254 65	6138 97	4.88	4.52	-4.86	0.15	437591 25	614201 02	N 32 12 9 06 W	103 57 50.85
	6234 00	0.18	294 96	6233 97	5.11	4.58	-5.08	0.13	437591 29	614200 80	N 32 12 9 06 W	103 57 50.85
	6423 00	0.20	220 87	6422 97	5.59	4.44	-5.57	0.12	437591 17	614200 31	N 32 12 9 06 W	103 57 50.85
	6611 00	0.20	272 54	6610 97	6.13	4.20	-6.11	0.09	437590 93	614199 77	N 32 12 9 06 W	103 57 50.86
	6894 00	1.01	293 15	6893 95	8.92	5.21	-8.90	0.29	437591 93	614196 98	N 32 12 9 07 W	103 57 50.89
	7083 00	0.44	278 03	7082 93	11.18	5.94	-11.15	0.32	437592 67	614194 73	N 32 12 9 07 W	103 57 50.92
	7271 00	0.37	286 51	7270 93	12.48	6.18	-12.45	0.05	437592 81	614193 43	N 32 12 9 08 W	103 57 50.93
	7553 00	0.35	281 07	7552 92	14.20	6.61	-14.17	0.01	437593 34	614191 71	N 32 12 9 08 W	103 57 50.95
	7742 00	0.15	306 05	7741 92	14.97	6.87	-14.93	0.12	437593 59	614190 95	N 32 12 9 08 W	103 57 50.96
	7930 00	0.07	311 12	7929 92	15.26	7.09	-15.22	0.04	437593 82	614190 68	N 32 12 9 08 W	103 57 50.97
	8085 00	0.13	336 57	8084 92	15.40	7.31	-15.36	0.05	437594 04	614190 52	N 32 12 9 09 W	103 57 50.97
	8232 00	3.94	227 88	8231 81	19.20	4.07	-19.18	2.71	437590 80	614186 71	N 32 12 9 06 W	103 57 51 01
	8294 00	12.56	240 62	8293 11	28.64	-0.67	-28.64	14.13	437586 06	614179 24	N 32 12 9 01 W	103 57 51 10
	8366 00	18.96	252 82	8365 55	50.12	-10.21	-50.17	7.63	437576 62	614155 71	N 32 12 8 91 W	103 57 51 37
	8482 00	16.44	257 50	8473 10	77.66	-17.60	-77.75	3.08	437569 13	614126 13	N 32 12 8 94 W	103 57 51 70
	8575 00	27.15	246 48	8559 36	110.02	-28.95	-110.16	12.28	437567 78	614095 73	N 32 12 8 73 W	103 57 52 07
	8669 00	35.39	256 68	8639 69	156.21	-43.82	-156.43	10.39	437542 91	614049 48	N 32 12 8 59 W	103 57 52 61
	8763 00	45.30	270 59	8711 39	216.34	-49.77	-216.59	14.19	437536 96	613989 30	N 32 12 8 53 W	103 57 53 31
	8860 00	64.83	277 05	8778 12	311.49	-42.77	-311.71	17.28	437543 96	613964 20	N 32 12 8 50 W	103 57 54 42
	8975 00	76.62	277 89	8808 42	400.30	-31.11	-400.46	12.44	437555 82	613905 45	N 32 12 8 72 W	103 57 55 45
	9030 00	85.32	278 99	8818 05	454.01	23.14	-454.14	15.94	437563 59	613751 79	N 32 12 8 80 W	103 57 56 08
	9135 00	91.86	277 59	8820 54	557.90	-8.02	-557.95	6.48	437578 71	613647 97	N 32 12 8 95 W	103 57 57 28
	9229 00	90.93	275 70	8818 17	651.29	2.86	-651.28	2.29	437589 59	613554 85	N 32 12 9 06 W	103 57 58 37
	9322 00	90.72	274 89	8816 83	743.92	11.44	-743.98	0.90	437598 17	613462 06	N 32 12 9 15 W	103 57 59 45
	9415 00	90.48	274 82	8815 85	836.82	19.31	-836.54	0.27	437606 04	613369 41	N 32 12 9 23 W	103 58 0 52
	9509 00	91.34	274 92	8814 36	930.31	27.29	-930.19	0.92	437614 01	613275 77	N 32 12 9 32 W	103 58 1 61
	9603 00	91.69	273 34	8811 88	1024.06	34.05	-1023.91	1.72	437620 78	613182 05	N 32 12 9 39 W	103 58 2 70
	9696 00	91.24	270 38	8806 50	1116.99	37.07	-1116.82	3.22	437623 80	613069 15	N 32 12 9 42 W	103 58 3 79
	9790 00	90.55	269 04	8808 03	1210.97	36.59	-1210.80	1.60	437623 32	612995 17	N 32 12 9 42 W	103 58 4 88
	9884 00	90.83	269 40	8806 90	1304.95	36.32	-1304.78	0.49	437622 04	612901 20	N 32 12 9 41 W	103 58 5 97
	9977 00	91.07	269 14	8805 36	1397.92	34.13	-1397.78	0.38	437620 85	612808 23	N 32 12 9 40 W	103 58 7 06
	10164 00	91.00	269 48	8801 98	1584.96	31.85	-1584.72	0.18	437618 57	612621 28	N 32 12 9 38 W	103 58 8 23
	10258 00	90.59	269 02	8800 67	1678.83	30.60	-1678.70	0.64	437617 33	612527 31	N 32 12 9 37 W	103 58 10 32
	10352 00	91.27	269 14	8799 15	1772.80	29.09	-1772.68	0.73	437615 82	612433 34	N 32 12 9 36 W	103 58 11 42
	10445 00	92.58	269 22	8798 02	1865.73	27.76	-1865.61	1.41	437614 49	612340 41	N 32 12 9 35 W	103 58 12 50
	10632 00	90.96	269 17	8790 25	2052.60	25.13	-2052.50	0.87	437611 86	612153 54	N 32 12 9 33 W	103 58 14 68
	10726 00	91.13	269 36	8788 53	2146.57	23.93	-2146.47	0.27	437610 66	612059 57	N 32 12 9 32 W	103 58 15 77
	10813 00	91.00	271 22	8785 06	2333.53	24.86	-2333.43	1.00	437611 60	611872 63	N 32 12 9 34 W	103 58 17 94
	11006 00	92.51	271 20	8782 21	2426.47	26.84	-2426.36	1.62	437613 57	611779 70	N 32 12 9 36 W	103 58 19 03
	11101 00	91.21	271 23	8779 13	2521.40	28.85	-2521.29	1.37	437615 58	611684 79	N 32 12 9 38 W	103 58 20 13
	11195 00	90.89	271 49	8777 40	2615.37	31.08	-2615.25	0.44	437617 81	611590 84	N 32 12 9 41 W	103 58 21 22
	11289 00	90.41	272 27	8776 34	2709.33	34.17	-2709.19	0.97	437620 89	611496 90	N 32 12 9 44 W	103 58 22 32
	11382 00	90.34	272 04	8775 73	2802.26	37.66	-2802.12	0.26	437624 39	611403 98	N 32 12 9 46 W	103 58 23 40
	11477 00	91.92	270 72	8773 85	2897.24	39.95	-2897 07	2.17	437626 68	611309 03	N 32 12 9 51 W	103 58 24 50
	11664 00	90.79	269 44	8769 43	3064.18	40.21	-3064 01	0.81	437628 94	611122 11	N 32 12 9 52 W	103 58 25 66

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	OLS (ft/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	11759.00	89.55	269.39	8768.15	3179.18	39.24	-3179.01	1.31	437825.97	611027.12	N 32 12 9.61	W 103 58 27.78
	11853.00	90.89	268.91	8768.95	3273.14	37.85	-3272.99	1.32	437824.57	610933.14	N 32 12 9.50	W 103 58 28.88
	11947.00	91.68	269.17	8767.01	3367.10	36.27	-3366.96	1.09	437823.00	610839.18	N 32 12 9.46	W 103 58 29.97
	12041.00	91.72	267.14	8764.22	3460.99	33.25	-3460.86	2.16	437819.97	610745.29	N 32 12 9.46	W 103 58 31.06
	12134.00	92.10	267.40	8761.12	3553.81	28.82	-3553.71	0.50	437815.55	610652.45	N 32 12 9.42	W 103 58 32.15
	12228.00	91.68	269.31	8758.02	3647.70	26.12	-3647.61	2.08	437812.85	610558.55	N 32 12 9.39	W 103 58 33.24
	12322.00	91.51	268.90	8755.40	3741.64	24.88	-3741.58	0.47	437811.38	610464.61	N 32 12 9.38	W 103 58 34.33
	12416.00	91.96	269.29	8752.56	3835.58	23.17	-3835.51	0.63	437809.90	610370.67	N 32 12 9.37	W 103 58 35.43
	12510.00	91.27	269.04	8749.91	3929.52	21.80	-3929.48	0.78	437808.53	610276.73	N 32 12 9.36	W 103 58 36.52
	12604.00	91.10	269.13	8747.97	4023.48	20.30	-4023.43	0.20	437807.03	610182.77	N 32 12 9.35	W 103 58 37.61
	12698.00	90.76	268.58	8746.44	4117.44	18.42	-4117.40	0.69	437805.15	610088.80	N 32 12 9.33	W 103 58 38.71
	12792.00	91.41	269.10	8744.88	4211.39	16.52	-4211.36	0.89	437803.25	609994.85	N 32 12 9.32	W 103 58 39.80
	12885.00	91.41	270.04	8742.37	4304.35	15.82	-4304.33	1.01	437802.55	609901.89	N 32 12 9.31	W 103 58 40.88
	12979.00	91.20	270.98	8740.23	4398.33	15.66	-4398.30	1.02	437803.39	609807.92	N 32 12 9.33	W 103 58 41.97
	13073.00	90.76	271.03	8738.62	4492.31	16.31	-4492.27	0.47	437805.04	609713.96	N 32 12 9.34	W 103 58 43.07
	13168.00	91.48	271.27	8736.80	4585.28	20.17	-4585.23	0.82	437806.90	609621.00	N 32 12 9.37	W 103 58 44.15
	13260.00	92.23	271.25	8733.76	4679.21	22.24	-4679.16	0.80	437808.97	609527.08	N 32 12 9.39	W 103 58 45.24
	13354.00	91.79	271.58	8730.48	4773.14	24.56	-4773.07	0.58	437811.29	609433.18	N 32 12 9.42	W 103 58 46.34
Final MWD	13394.00	91.34	271.49	8729.37	4813.11	25.63	-4813.04	1.15	437812.36	609393.21	N 32 12 9.43	W 103 58 46.80
Proj. to bit	13435.00	91.34	271.49	8728.41	4854.09	26.70	-4854.02	0.00	437813.42	609352.24	N 32 12 9.44	W 103 58 47.28

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG Depth Only	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD 0-13435 ftMD
	1	26.500	494.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	494.000	871.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	871.000	1334.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	1334.000	2276.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	2276.000	2653.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	2653.000	3595.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	3595.000	4065.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	4065.000	4065.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	4065.000	4537.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	4537.000	4537.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	4537.000	5008.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	5008.000	5008.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	5008.000	5480.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD
	1	5480.000	13435.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Survey Cedar Canyon 22 Federal Com 4H MWD